



SOCIETY FOR INDUSTRIAL ARCHEOLOGY

NEWSLETTER

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SIA IN THE TWIN CITIES 2013 ANNUAL CONFERENCE REVIEW

Over 200 SIA members converged on Minneapolis-St. Paul for the SIA's 42nd Annual Conference, May 30 to June 2. This was the SIA's second visit to the Twin Cities, the first being at the 12th Annual Conference in 1983. Conference participants received a friendly welcome from the local host committee and volunteers who organized a full slate of tours and paper sessions. The conference headquarters was the historic St. Paul Hotel, which opened in 1910 and was restored to elegance in 1982.

At the Thursday evening opening reception, Stephen Elliott, Director of the Minnesota Historical Society, welcomed the SIA, and Larry Millett, author and historian, offered a presentation on the industrial heritage of the Twin Cities. This heritage is closely tied to the Mississippi River. St. Paul was an active riverboat landing well before the first steam locomotive arrived in 1861, while the St. Anthony

Falls, straddled by Minneapolis, powered sawmills and flour mills, giving rise to industry giants Pillsbury and General Mills. Railroads, particularly James J. Hill's Great Northern Ry., linked the Twin Cities to farm communities across the northern tier of the U.S. from Minnesota to Montana, spurring the cities' rapid growth. Fittingly, the SIA reception was held at the Minnesota Club, where Hill and other leaders of business and industry often met to socialize and eat when they were in the city.

The schedule of this year's conference followed the traditional format of pre-conference tours on Thursday, tours on Friday, paper sessions and the Annual Business Meeting on Saturday, and post-conference tours on Sunday. Nearly a dozen members graciously volunteered to report for *SIAN*, resulting in the following tour summaries and photographs.

Thursday Tour 1: Summit Avenue and James J. Hill House. Beginning in the 1880s, Summit Ave., located high above

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Marc Bélanger

Rahr Malting.

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the Mississippi on the west side of St. Paul, became a prime address of the city's well-to-do, who built a succession of grand houses along the broad, tree-lined street. Grandest of all was the massive **Richardsonian Romanesque mansion completed in 1891 to the design of Peabody, Stearns & Furber of Boston for the railroad baron James J. Hill** (1838-1916). With 13 bathrooms, 22 fireplaces, and a 2-story art gallery fitted with a pipe organ and skylight, it was once the largest private residence in Minnesota. Our knowledgeable guide, Joanne Dolney, shared stories of the Hill family as she showed off the lavish carved oak and mahogany woodwork (much of it executed by German artists working under Johannes Kirchmayer), copious stained glass, leather wall coverings, and the desk Hill used in his Great Northern Ry. office. We inspected the sophisticated (for their time) heating, lighting (gas and electric), plumbing, communication, and security systems throughout the 42-room, 36,000-sq.-ft. house, which is a National Historic Landmark. Our guide then led us on a walking tour of Summit Ave., providing commentary on its array of architectural styles, from Italianate to Prairie School.

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; couple \$55; full-time student \$20; institutional \$50; 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; e-mail: SIA@mtu.edu; 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.

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Although it was impressive to our eyes, St. Paul native F. Scott Fitzgerald, our guide told us, derided the assemblage as "the architecture of the gloomy nineties."

Thursday Tour 2: Heart of the City and Landmark Center. This guided walking tour started in St. Paul's historic theater district with visits to two operating theaters, the **Park Square** and the **Paramount**, the latter in its Spanish Baroque splendor. We stopped in the **Hamm Building** (1915), home of the Capitol Theater, exceptional for its ornate terra cotta and original light fixtures. We then heard about the **Lowry Building's** transformation. Constructed on the site of an 1870s car barn, the Lowry was built in 1911 as a department store and medical building; now it is condominiums. The tour culminated in the stunning **Landmark Center**, which opened in 1902 as a federal courthouse and post office. We saw the ornate courtrooms that have been returned to their original state with raised woodwork on the walls carved by furniture makers. Supreme Court Justices Berger and Blackman clerked in this building. We heard colorful stories of Prohibition trials, with J. Edgar Hoover allegedly calling St. Paul "the cesspool of the country."

Thursday Tour 3: Ford Steam Plant. The tour departed the St. Paul Hotel for the **Steam Station of the Ford Motor Co.'s Twin Cities Assembly Plant**, an immense operation that turned out over six million automobiles ranging from Model Ts during its early days to Ford Ranger trucks in the years leading up to its closure in 2011. As we headed west from downtown toward the Mississippi, tour leader and local architectural historian Brian McMahon provided a wonderful prologue describing the early history of Ford in Minneapolis and St. Paul.

The now-inactive steam plant was built in the mid-1920s along the eastern bank of the Mississippi, below and across a parkway from the rest of the massive assembly complex. The building itself with its large industrial windows resembles a small, industrial cathedral complete with a smokestack *campanile*. Several Ford employees who had worked at the site, including a former head engineer, met us at the gate

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Deborah Van Steen

James J. Hill House.

Minutes of the SIA's 42nd Annual Business Meeting

June 1, 2013

President Duncan Hay called the Annual Business Meeting to order at 12:15 p.m. in the St. Paul Hotel at 350 Market Street in St. Paul, Minn.

President's Report. President Hay recognized Pat Malone and Vance Packard for having attended the SIA's first conference at New York City's Cooper Union in 1972, the eleven members who had attended the previous Twin Cities conference in 1983, and twenty-two first-time attendees. He noted an upswing in annual meeting attendance, attributing this to the uptick in the economy and the content of the conference. He also recognized Wally and Lita Elvers of New York City, whose first conference was in 1986, and Grace and Ken McIver of Scotia, N.Y., who have been attending since 1987. Grace is 90, and Wally turned 90 on the Monday before this year's conference.

He thanked Vice President Amanda Gronhovd, her husband Tim Tumberg, and the local organizing team for a very successful conference. The Gronhovds' daughters, Elsa, eleven, and Nora, nine, were at the opening reception. When President Hay remarked that life would be getting back to normal after their father finished his Ph.D. dissertation and their mother finished the conference, Nora asked, "What's normal?" President Hay also thanked Events Coordinator Ron Petrie and Office Manager Don Durfee, who unfortunately could not attend, but whose behind-the-scenes work keeps the conference and the organization running. Vice President Gronhovd welcomed attendees to Minnesota and thanked the "fabulous" organizing committee.

President Hay noted that Amanda and her team did a number of new things for this conference. One was soliciting sponsorship. SIA usually funds itself, but this year was different because of collaboration with the Historic Bridge Foundation, which included financial support, serving on the program committee, and co-sponsoring the Historic Bridge Symposium. He hopes that this collaboration continues. President Hay thanked Mead & Hunt, particularly Bob Frame, an organizer from 1983, for their support of Friday's boat tour on the Mississippi. Other organizations that provided financial and staff support included the Minnesota Historical Society, the Minnesota Archaeological Society, Summit EnviroSolutions, and Two Pines Resource Group. He thanked these sponsors and thanked Amanda and Tim for going out and asking; it resulted in a much stronger and more robust conference.

He gave further thanks to the program committee, chaired by Erin Timms, who solicited and vetted abstracts and arranged them in sessions and tracks that made sense. Erin was assisted by Kitty Henderson, Maryellen Russo, and Justin M. Spivey.

SIA has awarded scholarships to allow students to attend this year's conference. Student Scholarships Committee Chair Patrick Harshbarger could not attend, but President Hay recognized his efforts. President Hay recognized this

year's student scholarships recipients: John Arnold, who received an M.S. from the University of Oregon and is now starting his Ph.D. in the Industrial Archeology program at Michigan Tech; Nathan Holth, who is studying in the historic bridges program at Lansing Community College; Kaitlin O'Shea from the University of Vermont; and Miles Shugar from the University of Massachusetts-Boston. He thanked them for attending and encouraged all students to keep submitting papers and talking to IA journal editor Fred Quivik about getting them published.

Secretary's Report. Secretary Justin M. Spivey stated that minutes of the previous year's Annual Business Meeting were published in *SIA* Vol. 41, No. 3 (Summer 2012). He asked for amendments or corrections; none were forthcoming.

President Hay called for a motion to approve the 2012 Annual Business Meeting minutes as published. Vance Packard so moved, Fred Quivik seconded the motion, and it passed unanimously.

Treasurer's Report. Treasurer Nanci K. Batchelor read her report: The SIA maintains its books and records on a cash basis, and maintains a calendar year for tax and reporting purposes. The 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 December 31, 2012.

We began 2012 with a total fund balance of \$234,011. Cash receipts for the year totaled \$100,708. The majority of our annual income comes from the various membership-dues categories. In 2012 the total dues received were \$75,800. The remaining balance comprises interest income, contributions in both general and restricted funds of \$24,908, publication sales, excess proceeds from tours and conferences, and a grant that we received last year from the J. M. Kaplan Fund.

Total expenses for the year were \$108,700. The production costs of our publications, the newsletter and the journal, combined for a total of \$51,595. \$40,896 was spent on labor, postage was \$2,812, insurance, prizes, awards, and scholarships totaled \$4,311, and the preservation grants program \$6,000. Office overhead and a few miscellaneous items made up the rest.

The Society closed 2012 with excess expenses over revenues of \$7,992. This was expected, as we are in the process of catching up on issues of the journal. We anticipate a similar result for 2013. The total fund balance was \$229,293, of which \$42,778 is in restricted funds.

Through March 2013, the Society has had a total of \$20,234 in cash receipts and has spent \$14,854. As previously noted, with the continued additional journal printings in 2013, we expect our expenses to exceed our income again for this year.

Headquarters Report. President Hay summarized the headquarters report, which is usually delivered by Office

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and guided us around the plant. They generously provided detailed information about the operations within the building, which was constructed to turn river water into high-pressure steam for heat and power. (Excavations for traffic tunnels next to the building additionally provided high quality silica, which was used by Ford in glass production at the assembly plant.) As we traversed stairs and catwalks, our guides shared entertaining stories about their own experiences working for Ford. We were allowed to explore almost all of the steam plant, including the interior of an arched bridge that dramatically linked an upper level of the building to the bluff and eventually the rest of the factory above.

After touring the interior of the Steam Station, we had the opportunity to walk around the outside of the building for great views of **Lock & Dam Number One** (constructed for Ford) framed by the Ford Parkway Bridge in the distance. Before returning to conference headquarters, we made a brief (unauthorized) final stop to look at part of the exterior of the assembly plant believed to have been designed by Albert Kahn (which unfortunately was significantly altered over time and is scheduled for demolition later this year). A bas-relief in the wall of a nearby modern addition to the building contained a Fordism that applied to the afternoon: "Excellence is Never Granted to Man but is the Reward of Labor." The labor that went into the tour definitely rewarded the participants with an excellent excursion.

Thursday Tour 4: District Energy. **District Energy St. Paul** currently heats 80 percent of the buildings in downtown St. Paul and adjacent areas. It is the largest hot water district heating system in North America. Established in 1983 in response to the prior decade's energy crisis, this is a thoroughly modern facility employing some innovative technologies, especially in the area of "green" energy, although heir to American District Steam's 1905 system. The tour began with a presentation describing the operation of the facility and the services provided to customers, including



Marc Belanger

SIA members are provided an explanation of the manufacturing of noise-reducing doors for airports at PEM Millwork.

the Minnesota State Capitol. The plant produces electricity with a wood-chip-fired turbine, and waste heat from this process is used to produce hot water. Solar panels are used to produce additional hot water. Hot water is now considered more efficient to use than steam for heating, which in the past had been the more common method in the U.S. and remains in use in many places. The facility also produces and provides the downtown area with chilled water for cooling systems. Following the presentation, tour participants were guided through the plant where we sweated in the heat of the noisy turbine room and were close enough to the operations to have to move out of the way of a truck bringing in a load of wood chips. The plant does not employ a large control room with wall-sized panels of switches as found in some older plants; instead a few computers have

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Duncan Hay



At Thousand Hills Cattle Co., SIA's herd met a herd of a different breed.



Robert M. Frame

2013 SIA General Tools Award Recipient

This year's recipient of the General Tools Award, Robert M. Frame, has contributed to the cause of industrial archeology through research, community service, and projects that have elevated professional and public understanding of industrial property types, and has provided dedicated and sustained service to the SIA.

In a long career, Bob has led research, documentation, and preservation efforts on a variety of industrial properties, with a special focus on historic bridges and flour-milling and grain-handling facilities. One of the nation's leading historic bridge experts, he has completed in-depth studies of truss, concrete arch, and movable bridges, including Minnesota's first historic bridge survey. He has authored Multiple Property Documents for a variety of bridge types and prepared National Register and Historic American Engineering Record (HAER) documentation for a vast number and wide variety of bridge types. He has assisted in the statewide historic bridge surveys of Wisconsin, Indiana, Nebraska, North Dakota, South Dakota, West Virginia, Louisiana, and Texas. He routinely collaborates with engineers on historic bridge rehabilitation projects to identify bridge preservation solutions that meet functionality and safety needs in addition to complying with the *Secretary of the Interior's Standards*.

Bob's interest in historic flourmills and grain elevators dates back to a flourmill study and survey he completed for the Minnesota Historical Society in the mid-1970s. That project led to his Ph.D. thesis on the history of flour milling in Minnesota (which he is now expanding into a book). It also led him to an issue of the *SIA Newsletter*, then edited by Robert Vogel, whose lively prose and legendary enthusiasm for IA prompted him to join the cause as an active member. He is the author of several published works on the subject and has presented on the topic at multiple conferences. Bob's expertise contributed to the establishment of the Mill City Museum in Minneapolis, built in the ruins of the landmark Washburn A Mill, which focuses on the founding and growth of the city in the context of flour milling and other industries that used water power from St. Anthony Falls.

Bob was born and raised in Harrisburg, Pa., where his parents took him to every historic house and site they could



Robert M. Frame, 2013 General Tools Award Recipient, left, with General Tools & Instrument Co. Chairman Gerry Weinstein.

find, establishing a lifelong obsession. After high school, Bob enlisted in the U.S. Army, where his service included 18 months in Thailand. Following military service, he went on to receive his B.A. from Shippensburg University, his M.A. and Ph.D. from the University of Minnesota, and a Master's degree in Public Administration from the Kennedy School of Government at Harvard. After studying at the Institute of Archives Administration at the National Archives, Bob served as an associate curator of the papers of railroad legend James J. Hill in St. Paul.

Bob's past employment has included stints as a private preservation consultant, with the Minnesota Historic Preservation Office, and as executive director of the Preservation Alliance of Minnesota. Since 2004, he has been senior historian with the engineering and architectural firm of Mead & Hunt, where he has worked on several award-winning historic bridge projects.

Over the years, Bob has served the SIA in many capacities. He served as a director from 1977 to 1979 and as the editor of the *SIA Newsletter* from 1983 to 1996. In 1991, he chaired the Norton Prize Committee (since renamed the Vogel Prize Committee), and in 1991 and 1992, he chaired the "Award Development Committee." That committee originated the General Tools Award and codified its policies and procedures. Bob has authored articles appearing in the Society's journal, *IA*; he routinely presents at annual conferences; and he served as program chair for the 1983 SIA Annual Conference in the Twin Cities. Thirty years later, he was actively involved in the planning for this year's conference and conducted a splendid tour of historic bridges on the Mississippi River.

In addition to SIA, Bob has been active in numerous other preservation organizations. He has served in a variety of roles for the City of St. Paul Heritage Preservation Commission, the Preservation Alliance of Minnesota, and the Historic Preservation Legislative Task Force for the City of St. Paul. He chaired the City of St. Paul Task Force overseeing the design of the new Wabasha Street Bridge over the Mississippi. In addition to state and local historical societies, Bob is a longtime member of the Society for the Preservation of Old Mills, the Country Grain Elevator Historical Society, the International Molinological Society, and Public Art St. Paul. In 1996, the Preservation Alliance of Minnesota honored him with its prestigious Honor Award in recognition of his contributions to historic preservation in Minnesota.

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programs displaying graphics and diagrams that allow workers to monitor and control the various systems.

Friday Tour 1: Mighty Mississippi. “A Twin Cities Riverboat Cruise with the Experts” certainly lived up to its name. The tour guides took a team approach with respect to the many bridges, applying their collective knowledge in engineering, geology, history, and contemporary issues. In addition, we had along with us a tugboat captain. So you could say we had a whole team of bridge experts and one person who has made a career of steering around their interests.

Before boarding the boat, our tour started by walking the **James J. Hill Stone Arch Bridge**, built in 1883, as it provides a good view of the Minneapolis milling district. Of the sights that have changed since the 1983 conference, none is more striking than the flour-milling district. Three decades ago, it was all but abandoned. The conversion of the arch bridge from rail to pedestrian was the catalyst that transformed the whole neighborhood. Now the district is full of pedestrians. We then took a short bus ride to view the **Seventh Street Improvement Arches**, which were built in 1884 to carry a road across two rail lines, a challenge being the road crossings not at a right angle. The helicoid or skew design, the arch’s stones laid in a spiraling pattern, was an elegant solution. We did not have to worry about a train while walking through, as the arches currently span a park path.

Our river tour took us through a deep gorge that was responsible for keeping Minneapolis and St. Paul separate for decades, as the steep banks discouraged development. For most of our day we passed by forested parkland punctuated by an occasional bridge. For the most part, we could not see other structures atop the bluffs. At one point, we spotted a great blue heron at river level, and then looked above to see the great blue sign of the Ford assembly plant. The boarding point was the top of the Upper Lock, which was just one of several special arrangements our tour guides provided. Extending navigation from St. Paul to above the falls required four dams, and we locked through each of



Jack McKinnon

SIA Friday Tour 5 group photo, St. Paul Depot.

them. These days, commercial traffic ventures to the top of the system of locks only twice a day to serve gravel and scrap-iron terminals above the falls.

A variety of arches, trusses, girders, and movable bridges—of varying scale and aesthetic interest—filled out the remainder of the tour. The citizens of the Twin Cities have sought, and often received, highway bridges of stature appropriate to the upper limit of navigation of the “Great River.” A desire for monumental scale and clean lines suggested arches. Our tour included six grand concrete-arch bridges. One, the **Cappelen (Franklin Avenue) Bridge**, built in 1919-23, has the distinction of having had the longest single span in the world at 400 ft. until surpassed in 1931. It was named after its Norwegian engineer Frederick William Cappelen, who died before the bridge was completed. It is scheduled for rehabilitation next year.

The port of St. Paul, just downstream of downtown, is our tug captain’s home territory. The scrap iron dock was active this day, with a backhoe unloading a barge. The



Duncan Hay

Faribault Woolen Co.



John Reap

Northern Pacific #30, a Russell-type snow plow at the Minnesota Transportation Museum.

Paul J. White—2013 Vogel Prize Recipient

This year the Vogel Prize is awarded to Paul J. White for his paper “The Rise and Fall of the California Stamp: Historical and Archeological Perspectives on the Aging of a Technology,” published in *IA: The Journal of the Society for Industrial Archeology*, Vol. 36, No. 1, pp. 65-83. Here Paul addresses an area in the history of technology where skillfully collected material evidence fills a gap left when the documentary record fails us. Writers in engineering journals typically focus on new technique; older methods that might be considered obsolete by the engineering profession but which can fill a useful economic niche are rarely accorded attention in the publications intended for practicing engineers and managers that are often the primary resource used by historians. Nor are accounts of the adaptive re-use of past techniques likely to be mentioned in company reports. Paul shows us how a detailed examination of an abandoned mill can reveal the ingenuity with which artisans made obsolete equipment economically viable.

The Skidoo mill in California processed hard-rock gold ore from 1908 through 1915 with methods that had been in use in the western gold fields for half a century. Despite its obsolescence when it was closed, several entrepreneurs found the remaining Skidoo mill machinery useful in intermittent operation for another 20 years. We are fortunate that the location of the mill on an arid hillside adjacent to Death Valley allowed for the preservation of the milling equipment that was not removed for use elsewhere.

Paul’s detailed documentation of the stamps that processed the gold ore reveal how these machines were repaired and modified so as to keep them economically viable long after they would otherwise have been scrapped. He carefully constructed his paper with an introduction to hard-rock milling technique that allows readers not expert in extractive metallurgy to understand the detail of the stamp machinery that he then presents. Paul’s paper shows his careful scholarship and his skillful exposition through effective use of photographs and an extensive set of notes. It is also gratifying to see a HAER recording project serve as the basis of an interpretive paper that addresses a significant problem in the history of technology.

Each year the SIA recognizes outstanding scholarship in the field of industrial archeology with the Robert M. Vogel Prize. Named for SIA co-founding and distinguished member Robert Vogel, the award honors the author of the best article to appear in the journal IA within the past three years. The prize consists of a cash award and a wooden foundry pattern bearing a plaque engraved with the recipient’s name. Articles selected must have a clearly stated thesis and well-constructed narrative. Analysis of material culture and high-quality illustration that support the thesis and conclusion are also important measures of scholarship worthy of the prize. Selection is made by the Vogel Prize Committee consisting of five members appointed by the president, who serve five-year terms. ■

fertilizer dock had just completed its busy season. Other shipping includes coal, caustic soda, potash, and molasses. St. Paul also boasts grain terminals, although the largest one is in nearby Savage on the Minnesota River. Our guide commented there are “too many” barges tied up in various places, comparing the situation to factories idled by market conditions. Grain shipping was down because of last year’s drought. Our boat ride ended at a small dock on Harriet Island across the river from our base of operations in the St Paul Hotel.

Friday Tour 2: Rice County. This tour, led by SIA’s Fred Quivik, ventured into the countryside south of the Twin Cities to examine examples of the types of industries that once flourished in the rural towns of the Upper Midwest. First stop was the **Faribault Woolen Mill Co.**, a firm well known for fine wool blankets. The tour examined carding, spinning, dyeing, and weaving departments using a combination of vintage and modern machinery. The company dates to 1865, beginning as a simple carding mill. Next stop was **Northfield Machinery Builders**, a firm that has been producing woodworking machinery since 1920. We toured Northfield’s machine shop of lathes, milling machines, grinders, drills, planers and the like, which turn out new and rehabilitated woodworking machinery including band saws, table saws, and shapers. Lunch was had on the banks

of the Cannon River in the town of Northfield overlooking the historic Ames Mill where Malt-O-Meal is made. Following lunch, the tour visited the **Thousand Hills Cattle Co.** in Cannon Falls, an enterprise that specializes in the high-end market for grass-fed beef. After a tour of their warehouse, we had the rare opportunity to visit the slaughterhouse of **Lorentz Meats**. Because Lorentz has installed a glass-enclosed walkway that allows public tours, which are prevented in most slaughterhouses by USDA food-safety regulations, we were able to view the processing floor.

Friday Tour 3: Geology and Twin Cities Industry. This tour was conducted under the capable leadership of geologist and expert cave explorer Greg Brick. It included several of the sites that were also part of the Thursday and Sunday tours. The first stop was at St. Anthony Falls to take in a grand view of both the “Horseshoe” Falls and the historic milling district. Flour milling was once the Twin Cities’ defining industry, with nearly every major company located here, including Pillsbury, General Mills, and Ceresota. Ironically, the very success of the industry in the area contributed to its decline, as milling concerns moved away from the area in the late-20th century in favor of coastal locations that allowed them to ship worldwide. Though fire claimed much of the historic Washburn-Crosby “A” (later General Mills)

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Lita Elvers



SIA members aboard the river-tour boat.



Peter Stott

A vintage bus delivers conference participants to the Wabasha Street Caves for the Annual Banquet on Saturday night. The caves were hollowed out in the mid-19th century by silica mining and later used for mushroom farming, cheese storage, and a Prohibition-era night club.

mill in the 1990s, enough was left of the structure to form the basis for the historic **Mill Ruins Park** and the **Mill City Museum**, an interactive multimedia establishment.

After touring the mill district, the group headed to **Lock and Dam No. 1**, built by the Army Corps of Engineers in 1917, and then to the **Metropolitan Waste Treatment Plant**, constructed in the mid-1930s as a Public Works Administration project. Known as the “Pigs Eye Treatment Center” for its location at Pigs Eye Lake, it is supplied by interceptor tunnels cut 200-ft. deep into the bedrock under the Twin Cities. It is one of the ten largest water treatment plants in the U.S. The raw water goes through numerous stages here, beginning with bar screening, to remove larger objects, rags, etc. Sand and dirt are removed at the next stage, followed by solids and bacteria. The group then proceeded to the hydroelectric plant of the Ford Twin Cities Assembly to view the turbines, which several SIA members commented were in the best working order they had ever

seen for turbines of their age and type. The tour ended with a drive through **Mushroom Valley**, home to many natural caves used for growing mushrooms and aging blue cheese, and a stop at the **Omaha Swing Bridge**, where a combination of unplanned events allowed us to view the bridge as it swung open to accommodate a boat, then closed to allow a freight train to pass over, all in a matter of minutes.

Friday Tour 4: Railroads, Windows and Steel. **Andersen Windows** was founded in 1903 by Danish immigrant Hans Andersen and his family in Hudson, Wis., where logs arrived via the St. Croix River. Today, Andersen Corp. is a major international corporation with its headquarters in Bayport, Minn., east of St. Paul. Our group toured Andersen’s massive, 65-acre Bayport manufacturing facility. The factory processes include material receipt, ripping and milling, manufacturing of components for sashes and frames, and final assembly and shipping. Our guide pointed out numerous examples of reuse and recycling of materials.

Lisa Schrenk



Ford Steam Plant.



Nathan Holth

Locks and bridges on the SIA river tour.

SIA Awards Industrial Heritage Grants for 2013

The SIA's Industrial Heritage Preservation Grants (IHPG) are made to nonprofit organizations and qualified individuals for the study, documentation, recordation, or preservation of significant historic industrial sites, structures, and objects. Grants in the amount of \$1,000 to \$3,000 are awarded once a year and announced at the SIA Annual Business Meeting. Applications are due each year by March 1. This year SIA received 12 highly qualified applications. With matching funds from the Kaplan Foundation, the SIA was able to offer grants to four of the applicants.

The **Quincy Mine Hoist Association** in Hancock, Mich., (tour site—1997 Annual Conference, Houghton) received a grant to assist with production of engineering documents for the preservation and restoration of critical components of the hoist house and the world's largest steam-powered hoist, which served the copper mine's Shaft No. 2 from 1918 to 1933. This funding is the first phase of an estimated \$200,000 restoration project.

The **Public Library of Steubenville and Jefferson County, Ohio**, received a grant to assist with the Upper Ohio Valley Steel Documentary Traveling Exhibit Project. The funds will be used to create a display of photographs featuring the former Wheeling-Pittsburgh Steel Corp. plants at Steubenville and Mingo Junction.

The exhibit will travel to local universities and libraries.

The **USCGC LILAC**, launched in 1933 and now docked in New York City, is the last surviving steam-powered lighthouse tender in the country. The LILAC Preservation Project received a grant to assist with removal of the ship's current post-WWII heating system and installation of a new system that will mimic the ship's original steam-heating system. It will allow for the ship to be open for three seasons and facilitate restoration work on the ship during the winter.

The **Lake States Railway Historical Association** in Baraboo, Wis., will use its grant to purchase proper storage and archival supplies for approximately 600 glass-plate negatives of the Illinois Central RR Collection.

The 2013 IHPG Committee consisted of Jay McCauley, Nanci Batchelor, Christopher Marston, and Maryellen Russo, Chair. The committee wishes all of the grantees success in their projects, and thanks all those who submitted grant applications for their dedicated work in the realm of historic preservation, education, and research. To learn more about IHPG and the grant application process: www.sia-web.org/grants/about.html.

Maryellen Russo

After the Andersen tour, the group enjoyed lunch at the **Minnesota Transportation Museum** in the **Great Northern Ry.'s Jackson St. Roundhouse**, built in 1907 and the only surviving building on the site of the railway's shop complex. There was plenty of time to explore the maintenance bays and the many displays of locomotives, passenger cars, and maintenance-of-way equipment. The roundhouse has the features of a railway museum as well as those of a working railway shop, including a functioning turntable. Our group leader, John Wickre (SIA), showed off the Baldwin-built, 4-6-2 Pacific, Great Northern steam locomotive 2156 and explained its workings and described some of the substantial effort still needed to bring it back to operating order.

Our group's visit to the **Mill City Museum (Washburn A Mill)** included a view of the "Flour Tower" presentation, which uses a large freight elevator to transport the audience through displays depicting the life of workers in one of the world's largest flour mills. We also had a guided tour of the remains of the building as our enthusiastic guide effectively brought the old ruins to life.

Friday Tour 5: Milling, Malting, and Flour. This tour began with a visit to **PEM Millwork** in nearby New Hope. PEM makes custom doors for airport sound mitigation programs throughout the nation that are funded by airline fees. PEM's Glenn Hoover explained how its doors utilize a variety of core materials to meet specific performance requirements. They are also designed to be an exact match of the customer's existing doors. PEM designs and builds the door casings as an integral part of the system.

The tour's next stop was a brief visit to the **Peavey-Haglin Experimental Concrete Grain Elevator** in the town of St. Louis Park. The elevator, built in 1899-1900, is National Historic Landmark and Historic Civil Engineering Landmark as an early experimental use of reinforced concrete. The site is now home to Nordic Ware, a maker of kitchenware. The 22-ft.-diameter, 125-ft.-tall structure was the idea of Frank Peavey, a leading grain dealer who sought to find a quicker and less expensive way to construct elevators that would also be fire-resistant, unlike wood. Peavey hired local contractor Charles F. Haglin for the project that was at first built only to the 68-ft. level and filled with grain in order to test the performance of the new material. Satisfied, the structure was then completed to its full height, and filled with grain. As its name suggests, the single-bin silo was built solely for experimental purposes and has since been empty. It stands as a significant example of the pioneering use of reinforced concrete as a building material.

The group then travelled to the home office of the **T.E. Ibberson Co.**, located in Hopkins. Established by Thomas E. Ibberson in 1881, the company has designed and built thousands of grain elevators around the world, as well as bulk storage facilities for coal, salt, fertilizer, and liquids. Gerry Leukam provided a display of numerous historic construction photographs and drawings from the early 20th century when rural wooden elevators were Ibberson's main focus. Also on display in the conference room was Leukam's personal collection of antique tools, typical of those used during

(continued on page 18)

Manager Don Durfee. SIA currently has 1,400 members, 115 of them institutions and the remainder individuals, couples, students, contributing, and sustaining members. Membership is essentially stable. He encouraged everyone who had a good time at the conference to invite others to join. President Hay noted that some members are organized into local chapters, which he recognized through the traditional standing roll call.

He noted that at the previous day's Board meeting, Local Chapter Committee Chair Ingrid Wuebber mentioned a proposal for a new Minnesota chapter from Tim Tumberg. President Hay encouraged those interested in forming chapters, who have enough members with similar interests, to talk to Ingrid and look at information about chapter formation on the SIA website.

IA Journal. President Hay introduced IA journal editor Fred Quivik, who noted that since SIA last met, the equivalent of four issues have come out: Vol. 35 was a double issue on the West Point Foundry and there were two single issues for Vol. 36. Next will be Vol. 37, a double issue on IA in Montana, guest-edited by Brian Shovers. Manuscripts continue to come in for the two single issues that will follow, and Fred is also working with Carl Zimring on a double issue on the theme of industrial waste. At some point, perhaps two years from now, the journal will be caught up. Fred has heard some good presentations that could be submitted as manuscripts and would be glad to help presenters through the process.

eNews. SIA eNews editor Jay McCauley reported, "eNews goes forward. The great thing about social media is that you guys do all the work."

SIA Newsletter. President Hay recognized Patrick Harshbarger's efforts in editing *SIAN*, and reminded members to send him content and photos from the conference. President Hay noted that the *Publications of Interest* is a useful recruiting tool and that members shouldn't be bashful about sending links to Patrick.

Secretary Spivey read a report from *SIAN* Editor Patrick Harshbarger: "The *SIAN* is published quarterly and is one of the principal benefits of membership. The newsletter is

distributed electronically and in paper hard copy. At the present time, approximately 190 members, or 14 percent of the total membership, have opted for the digital-only version. Most members receive both an e-mail notice on how to retrieve the newsletter as a PDF and the hard copy by postal bulk mail.

Since last year's business meeting, the *SIAN* has been published four times. The newsletter represents annually several hundred hours of volunteered time that members donate by way of their writing and photography. *SIAN* is particularly indebted to two dozen or so core contributors who regularly assist with tour coverage and helping the editor with copy-editing and feature columns like *Publications of Interest*. We also receive significant support from Michigan Tech in the production and mailing of the newsletter." Thanks were given to everyone who has contributed to the *SIAN* during the past year.

Industrial Heritage Preservation Grants (IHPG). Committee chair Maryellen Russo reported that this year SIA received twelve applications. The Grants Committee, consisting of Jay McCauley, Nanci Batchelor, Christopher Marston, and Maryellen Russo selected four recipients to receive funding for their grant applications from SIA with matching funds from the J. M. Kaplan Fund. This year IHPG recipients are the Quincy Mine Hoist Assn., the Public Library of Steubenville and Jefferson County, Ohio, the LILAC Preservation Project, and the Lake States Ry. Historical Assn. (see article elsewhere in this issue). Many thanks to all those who submitted grant applications and congratulations to this year's recipients.

TICCIH. President Hay noted that SIA is affiliated with The International Committee for the Conservation of the Industrial Heritage (TICCIH). Patrick Martin is President of TICCIH, and Peter Stott is SIA's official representative. Peter gave a summary of the recent TICCIH Congress in Taipei during the afternoon paper sessions.

Tours and Conferences. Events Coordinator Ron Petrie announced that the 2014 Fall Tour will be held in Columbus, Ind., the headquarters for Cummins Diesel and justly

(continued on page 19)



2013 SIA Student Travel Scholarship Recipients (left to right): Nathan Holth, Kaitlin O'Shea, John Arnold, and Miles Shugar. Each year the SIA awards scholarships to help offset the costs of attending the Annual Conference. To help make future conferences affordable to students and introduce them to the programs and goals of the SIA, please consider making a donation to the Student Scholarship Fund by checking the box on your annual membership renewal.



SOCIETY FOR INDUSTRIAL ARCHEOLOGY

NEWSLETTER

PUBLICATIONS OF INTEREST

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COMPILED BY

Mary Habstritt, New York, NY., Justin Spivey, East Windsor, N.J., and Patrick Harshbarger, SIAN editor, Wilmington, Del.

GENERAL INTEREST

- ◆ David Bracken. **Manufacturing Jobs Have Disappeared, But Survivors Find Ways to Make It in North Carolina.** *Charlotte News and Observer* (May 26, 2013). Lengthy article features two manufacturers that trace their roots to the 19th century: Council Tool (axes and other tools) and Glen Raven (textiles, particularly fade-resistant fabrics used in convertible tops and awnings).
- ◆ **Knoxville, Tenn., Local Industrial History of the 1930s.** The editors of the *Knoxville (Tenn.) News* (Apr. 29, 2012) must have been feeling nostalgic to run this string of articles on the same day: *George Roby Dempster: Inventor, Politician, Civic Leader* (remembrance of man who invented the Dempster Dumpster in 1935, revolutionizing trash disposal with standardized containers); *McGhee Tyson Airport Marks 75 Years of Service* (history of Knoxville's first commercial flight, 1937); *Decade on the Brink: Depression Brings Despair, Change* (local impacts of the financial crisis); *The Long Fight for Power* (impact of the TVA); *Norris Dam: Families Uprooted, Jobs Created* (TVA dam project).
- ◆ **TICCIH Bulletin No. 57** (3rd Qtr. 2012) includes John Baeten, *Archaeologists Document the Klondike Gold Rush* (U.S. Forest Service program); Mariano Toerres, *La Constanca Mexicana, the Sleeping Beauty of the Mexican Industrial Heritage* (restoration of textile mill, built in 1830-34); Stuart Tappin, *Can London's Battersea Power Station Be Preserved?* **No. 58** (4th Qtr., 2012) includes Robert H. Jimenez and Javier Romero, *Necaxa Hydroelectric Power Station* (Mexican hydroelectric station called the "cradle of the South American electrical industry"); Adam Hajduga, Aleksandra Iwan, and Jerszy Gorzelik, *Industrial Heritage in Danger, Uncertain Future of the Unique Energy Plant in Upper Silesia* (Szmobrierki electric plant in Bytom, Poland, opened in 1920, then Germany); Sanghamitra San, *Click, Clack, Ting! The Enchanted Story of Typewriters in India*; and Bode Morin (SIA), *Endgame for the Huber Anthracite Breaker?* **No. 59** (1st Qtr. 2013) includes Michael Pearson, *Industrial Heritage as Memory of the World* (document collections related to industry can be nominated to the UNESCO MOW list) and Marion Steiner, *What Social Networks Can Do for Industrial Heritage.* **No. 60** (2nd Qtr. 2013) includes Patrick Martin (SIA), *TICCIH Advocacy in Lowell National Historical Park: Pawtucket Dam* (effort to prevent alterations to the dam's flashboard system; (also see SIAN, Spring 2013) and Sarah McLeod, *Managing the Cromford Mill World Heritage Site* (the highly significant mill complex in Derbyshire, England, is developing a new master plan to address a financial crisis and outdated interpretation). In

addition, all bulletins include a round-up of news of industrial sites, museums, publications, and conferences from around the world. Info: www.ticcih.org.

- ◆ Julian Wayne. **Wonderful Things: Learning with Museum Objects.** MuseumsEtc, 2012. 194 pp. \$39.95. While not IA *per se*, this book offers some intriguing lessons about learning and engaging with objects found in history of technology museums and historic sites.

POWER GENERATION

- ◆ Ashley Halsey. **Aging Power Grid on Overload as U.S. Demands More Electricity.** *Washington Post* (Aug. 1, 2012). Following a windstorm that toppled three aging transmission towers in W.Va., this article reports on the state of a grid that has many components dating from the 1920s to the 1950s.
- ◆ Carol Lewis. **All Fired Up for Regeneration, Power Stations across the UK Are Being Converted into New Homes.** *The Times* (July 12, 2013). Features a half dozen or more power stations and other structures, including gasholders, that have been, or are being, repurposed as residential or commercial properties.
- ◆ Steven Mufson. **The New Boom: Shale Gas Fueling an American Industrial Revival.** *Washington Post* (Nov. 14, 2012), Business Section. Examples of U.S. manufacturing companies—petrochemical, glass, steel, and even toys—that are benefitting from forecasts that energy prices will remain low or moderate due to "fracking," the natural gas drilling technology that releases gas trapped in shale rock.
- ◆ Rahima Schwenkbeck. **Eden Electrified: Industrial Utopian Dreams and the Promise of Niagara Falls.** *Western New York Heritage* (Spring 2013), pp. 18-27. This is about utopian plans, not about the actual power plants, but it provides interesting insights into the enthusiasm for electric power in the early 20th century. For example, King Camp Gillette, of razor fame, proposed that Niagara Falls become the headquarters of the World Corporation, which would displace private companies and produce enough of everything for everyone.
- ◆ Jim Witkin. **From Power Plant to Civic Renewal Centerpiece.** *NY Times* (Apr. 25, 2013), p. F2. Looks at re-use of electrical generating stations with examples from across America. Quote from Fred Quivik [SIA].
- ◆ Jennifer Young. **NC Group Pushes to Save Historic Power Station.** *Winston-Salem (N.C.) Journal* (Jan. 7, 2013). The 1898 Idols Station on the Yadkin River was the first commercial hydroelectric station in N.C. to use long-distance transmission of alternating current. The station closed in 1998 following a fire,

but retains its granite dam, exterior walls, and wood flume and turbines. Preserve Historic Forsyth is looking into alternatives for saving the site and opening it to the public.

RAILROADS

- ◆ Len Barcoucky and Sean D. Hamill. **Locomotive Steams through Downtown Pittsburgh.** *Pittsburgh Post-Gazette* (Aug. 12, 2012). The restored Nickel Plate RR No. 765, a 1944 Berkshire class built by the Lima Locomotive Works, has been touring the East Coast and Midwest to help Norfolk Southern celebrate the 30th anniversary of the corporation's existence as a merged railroad.
- ◆ Alyssa Choiniere. **Pinkerton Tunnel Giving Way to History.** *Daily American* (Somerset, Pa.) (Sept. 20, 2012). Removal of the B&O's 1877 tunnel and several others as part of the National Gateway project that will allow double-stacked container cars to cross the Alleghenys.
- ◆ J. Parker Lamb. **Railroads of Meridian.** Indiana Univ. Pr., 2012. 176 pp. \$50. Generously illustrated narrative follows the evolution of a dozen separate railroads in Meridian, Miss.
- ◆ Todd Newcombe. **Restored Streetcars Now Desirable.** *Governing* (February 2012), www.governing.com. Vintage streetcars are being put back into service in New Orleans, Philadelphia, and Portland, Ore. Brookville (Pa.) Equipment Corp. specializes in restoration and its business is booming.
- ◆ Henry C. Peden and Jack L. Shagena. **The Ma & Pa Remembered: A History of the Maryland & Pennsylvania Railroad.** 502 pp., illus. \$75. Avail. www.maandparailroad.com. A comprehensive and heavily illustrated history of the circuitous 77-mile line between Baltimore and York, Pa.
- ◆ Sam Roberts. **100 Years of Grandeur: The Birth of Grand Central Terminal.** *NY Times* (Jan. 18, 2013). Celebrating the centennial of what has been described as "the greatest station in the United States."
- ◆ Robert Sharoff. **Home of Chicago Rail Cars Set to Undergo Renovation.** *NY Times* (Mar. 20, 2012). A series of projects and initiatives by various state agencies and nonprofit groups is breathing new life into Pullman, the National Historic Landmark company town where the Pullman Palace Car Co. built luxury parlor and passenger cars. Some projects focus on preservation, but the largest project, Pullman Park, includes a Walmart, which community groups listed as a top priority due to a lack of affordable shopping.

WATER TRANSPORT

- ◆ Robert Blyth, Jan Ruger, and Andrew Lambert eds. **The Dreadnought and the Edwardian Age.** Ashgate, 2011. 258 pp., illus. \$124.95. Historians reassess the historical context of the *HMS Dreadnought* from political, cultural, national, and international perspectives.
- ◆ Russ Bynum. **Confederate Shipwreck Stalls Port Project.** *Navy Times* (May 5, 2012). The Army Corps of Engineers is planning a \$14 million underwater archeology project to raise the remains of the ironclad *CSS Georgia*, which was scuttled by Confederate troops in 1864. Now, the shipwreck stands in the way of a \$653 million plan to deepen the main river channel that serves the Port of Savannah (tour site—SIA Annual Conference, 1999).
- ◆ Dan Chapman. **Georgia's Rich Maritime History Largely Unknown.** *Atlanta Journal-Constitution* (June 29, 2013). Lengthy feature article discusses some of the better known of the estimated 1,200 shipwrecks off Georgia's shore. Includes a web link to a location map.
- ◆ Brian Gauvin. **Seattle Collection Offers One Man's History of Marine Propulsion.** *Professional Mariner* (June-July 2012). Mike Wollaston has a collection of "museum-grade" marine engines stored in a shed on the Lake Washington Ship Canal. He opened the Northwest Marine Propulsion Museum six years ago. All but one of the 25 assembled engines is operable.
- ◆ Jack Horan. **Man Pays \$20,000 for Abandoned Light Tower.** *Charlotte (N.C.) News & Observer* (Oct. 8, 2012). A Minnesota businessman purchased the Diamond Shoals Light Tower at auction from the federal government. The tower, erected in 1966, stands 13 miles off Cape Hatteras. The new owner intends to rehabilitate the tower for use as a research center for testing new technologies and materials in an oceanic environment. The government had estimated it would cost \$2.3 million to make the deteriorated tower safe and inhabitable.
- ◆ Jenny Jones. **Museum Constructed Around Hull of Henry VIII's Warship.** *CE* (June 2013), pp. 30-32. Sunk in 1545, rediscovered in 1971, and brought to England's Portsmouth Historic Dockyard in 1982, the wreck of the *Mary Rose* underwent a continuous polyethylene glycol spray treatment for the last 10 years to stabilize its timber members. A recently completed museum building was constructed over the 200-year-old dry dock and the 500-year-old ship without interrupting the conservation treatment.
- ◆ Ben Kesling. **Ship from Bygone Era Fights to Keep Sailing.** *WSJ* (Nov. 6, 2012). The S.S. *Badger*, the last coal-burning passenger steamer on the Great Lakes, powered by two Skinner unaflow marine engines, faces an uncertain future due to environmental regulations.
- ◆ Jay Landers. **U.S. EPA Proposes Plan for Cleaning Up Long-Polluted Canal In New York City.** *CE* (March 2013), pp. 24-26. The Environmental Protection Agency has released plans for remediation in Brooklyn's Gowanus Canal, a heavily industrialized tidal canal that was designated as a federal Superfund site in 1980. The remediation will include a combination of dredging, capping, and in-situ stabilization of existing sediment.
- ◆ John Leland. **No City for Old Tankers.** *NY Times* (Apr. 21, 2012). The financial struggles to keep the historic tanker *Mary A. Whalen* afloat as a cultural center. The 613-ton ship was launched 74 years ago.
- ◆ Martha Quillin. **NC Man Seeks Recognition for WWII Tug Boat, Barge Crews.** *Raleigh (N.C.) News & Observer* (Sept. 7, 2012). Don Horton of Camden went to work on a barge at the age of 10 in 1942, joining thousands of boys and families who manned tugs and barges carrying supplies between U.S. ports during the war. Conditions aboard were primitive and occasionally dangerous when German subs attacked. He now figures that fewer than 500 people are still living who crewed the barges and he's seeking official recognition for their service.
- ◆ National Oceanic and Atmospheric Administration, Office of National Marine Sanctuaries, Office of Response and Restoration. **Risk Assessment for Potentially Polluting Wrecks in U.S. Waters** (March 2013). Avail.: <http://1.usa.gov/12Q5XiO>. This government report finds that underwater shipwrecks have lower than expected risk for leaking tens of millions of gallons of oil into the environment. Of the 87 wrecks assessed, only six were identified as having sufficient oil aboard to cause a "local-scale" environmental disaster. Most of the others had either finished leaking long ago or ran on coal instead of oil. The majority of the studied wrecks date to WWII.
- ◆ John Schwartz. **In Midst of Drought, Keeping Traffic Moving**

on the Mississippi. *NY Times* (Aug. 19, 2012). The steady work of a dozen dredges keeps the river open to navigation.

AUTOMOBILES & HIGHWAYS

- ◆ Jeff L. Brown. **Rocky Road: The Story of Asphalt Pavement.** *CE* (May 2013), pp. 40-43. Asphalt pavement, discovered in Switzerland in the 1840s, gained quick acceptance in the U.S. after chemist Edmund J. DeSmedt added heat and sand to create hot-mix asphalt in the 1870s. The Maine Turnpike, the first superhighway to be paved with asphalt in 1947, is now a National Historic Civil Engineering Landmark.
- ◆ Brian McMahon. **A Short History of the Ford Plant: Industrial Archaeology and Economic Change in St. Paul.** Minnesota Historical Society Express Title (E-book), 2013. 20 pp. \$1.99. History of Ford's St. Paul assembly plant (tour site—2013 Annual Conference), established in 1923. An unusual characteristic of the 167-acre industrial complex was a glassworks that made windshields from sand mined from tunnels beneath the plant.
- ◆ David Montgomery. **Can This Demolition Derby Champion Make It Back to the Top of the Heap?** *Washington Post Magazine* (Nov. 21, 2012). Demolition derbies are in decline as the federal government's "clash of clunkers" program sent tens of thousands of future derby cars to the crusher, scrap prices have remained high, and automobile manufacturers are no longer making the full-frame cars that derby participants prefer. Derby promoters are organizing competitions for smaller, lighter cars, but these have been described derisively as "ping-pong" matches, without the bone-crushing muscle of the traditional event.
- ◆ Richard Snow. **I Invented the Modern Age: The Rise of Henry Ford.** Scribner, 2013. 384 pp. \$30. A detailed introduction to the rise of the U.S. automobile industry provides the preamble to a biography of Henry Ford and his pursuit of mass production from the beginnings on Bigley Ave. to the River Rouge Plant. Ford is portrayed as a mechanical genius whose success bred increasing personal isolation. Rev.: *WSJ* (May 10, 2013).
- ◆ Jaclyn Trop and Bill Vlasic. **Anxiety in Detroit over a Prized Car Trove.** *NY Times* (June 19, 2013). Curators at the Detroit Historical Society are concerned that the museum's collection

of 62 classic automobiles, most of which are stored under protective plastic bubbles in a warehouse, may be among the publicly owned cultural treasures put up for auction to satisfy the bankrupt city's creditors.

AEROSPACE & AERONAUTICS

- ◆ Jim Carlton. **Past and Future Clash at Pearl Harbor.** *WSJ* (Nov. 5, 2012). The U.S. Navy has announced a plan to cover the airfield on Ford Island with 60,000 solar panels, drawing rebuke from military historians and some Navy brass. The airstrip, formerly called Luke Field, was where the Japanese bombed American planes, crippling the Navy's ability to respond to the attack that launched America's entry into WWII.
- ◆ Kenneth R. Gosselin. **In Face of Demolition, Strong Legacy for East Hartford Turbine Testing Lab.** *Hartford (Conn.) Courant* (Mar. 26, 2012). Pratt & Whitney's Andrews Willgoos Turbine Laboratory complex was a center for the development of early jet engine technology in the 1950s and was P&W's primary test facility through the 1970s. Replaced by larger test facilities, it became obsolete and was demolished.
- ◆ Andy Pasztor and Tamara Audi. **Race to Save Space History.** *WSJ* (Sept. 20, 2012). Even as the retired space shuttles were being welcomed to museums, the wrecking ball was destroying the 160-acre industrial campus in Downey, Calif., where the NASA spacecraft were built.
- ◆ David Rising. **German 'Stuka' Junkers Ju 87 Bomber Wreck Recovered from Baltic Sea.** *Huffington Post* (June 11, 2012). German military divers have brought up the remains of one of the single-engine monoplanes feared during WWII for their distinctive sound as they dove vertically to release bombs. Only two known complete examples survive, both on display at the Royal Air Force Museum in London.
- ◆ Amy Wenk. **Delta Museum to Get \$6M Revamp.** *Atlanta Business Chronicle* (June 28, 2013). The Delta Air Transport Heritage Museum, located in a historic hangar at Delta's Atlanta headquarters, is being upgraded to make it more accessible to the public. Electronic version of the article includes a museum slideshow: www.bizjournals.com/Atlanta, search on "Delta Museum."

BRIDGES

- ◆ Jeff L. Brown. **A Tale of Two Cities: Chicago, Duluth, and the Birth of the Modern Vertical Lift Bridge.** *CE* (June 2013), pp. 42-45. Recapitulates the story of how J. A. L. Waddell's proposal to build a vertical-lift bridge over the Duluth Ship Canal was rejected in favor of Thomas McGilvray's aerial transfer or transporter design, so that Waddell ended up building his first vertical lift on Halstead St. in Chicago instead. Although Brown mentions Waddell's subsequent business partner John Lyle Harrington, he minimizes Harrington's mechanical engineering contributions to the eventual success of this important movable bridge type.
- ◆ Jeff L. Brown. **Transit Agency Repairs Historic Eads Bridge.** *CE* (March 2013), pp. 18-22. The Bi-State Development Agency, operator of the St. Louis Metro light rail system, is replacing the floor system on the lower deck of the historic Eads Bridge over the Mississippi. The floor system replacement is part of the overall rehabilitation of the bridge, which opened to traffic in 1874.
- ◆ Gillian Graham. **Historic Saco Bridge Closer to New Life.** *Maine Sunday Telegram* (Nov. 26, 2012). Local residents advocate to save the 1848 Stackpole Bridge, which is the oldest stone-arch highway bridge in Maine. City councilors

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With Thanks.

are favorable to a \$1.4 million rehabilitation plan to save the bridge. The plan is estimated to cost 7.5% more than replacement with a new bridge.

- ◆ Frank Griggs. **Newburyport Bridge.** *Structure* (June 2013), pp. 26-28. Timothy Palmer, a designer and builder who previously worked only on houses and mills, built the multi-span timber bridge over the Merrimack River between Newburyport and Essex, Mass., in 1793. The bridge was replaced in 1810 with an iron-chain suspension bridge based on Jacob Finley's patent, a 1909 (loose) replica of which stands on the site today. Also, **Othmar H. Ammann.** (April 2013), pp. 42-44. Swiss-born engineer Ammann (1879-1965), most famous for his role in designing many of New York City's major highway crossings, also was consulted by Joseph B. Strauss on the Golden Gate Bridge and chaired the commission to investigate the 1940 failure of Leon Moisseff's suspension bridge at Tacoma Narrows.
- ◆ Hugh Reynolds. **Wurts Street Bridge: A Span with No Future?** *Kingston (N.Y.) Times* (Feb. 14, 2013). The 1,145-ft.-long suspension bridge over Rondout Creek between Kingston and Port Ewen was built in 1921 by John A. Roebling's Sons Co. NYDOT says it has scheduled \$20 million to rehabilitate the bridge in 2016, but local officials are skeptical that the work will ever be completed.
- ◆ Jim Talbot. **Brooklyn's Other Bridge.** *MSC* (June 2013), pp. 32-35. Connecting the Lower East Side of Manhattan and Brooklyn's Williamsburg neighborhood, the Williamsburg Bridge will soon celebrate the 110th anniversary of its opening, in December 1903. Designed by Leffert L. Buck and once the world's longest suspension span at 1,600 ft., the bridge suffered from decades of deferred maintenance and was considered for replacement in the 1980s. A major rehabilitation completed in 2003 included the replacement of the original approaches.

BUILDINGS & STRUCTURES

- ◆ Craig M. Bennett, Jr. **Rebuilding the Walls of Fort Jefferson.** *Structure* (May 2013), pp. 30-33. Located 70 miles from Key West in the Dry Tortugas, Fort Jefferson was constructed between 1846 and 1865, at which point it became obsolete and was left unfinished. Describes an ongoing effort to restore the massive brick masonry walls, which required structural stability analyses due to the extensive loss of masonry around the corroding iron Totten shutters at the embrasure openings.
- ◆ Robert Hossli and Ronald Flucker. **William LeMessurier: Educator and Innovative Engineer.** *Structure* (June 2013), pp. 46-47. Better known for his role in designing the Citicorp Center in New York, William LeMessurier (1926-2007) also lectured at MIT, where he developed the staggered truss framing system used in dozens of buildings including many hotels. Research on this framing system at MIT's Applied Research Laboratory was sponsored by U.S. Steel.
- ◆ John Kelly. **The Washington Monument Is Tall, but Is It the Tallest?** *Washington Post* (June 19, 2013). Kelly admits that he and other writers have been incorrect in describing the 555.5-ft.-tall Washington Monument as "the world's tallest free-standing masonry structure," noting that "the beautiful homage to the Father of Our Country must cede its record to a big pollution stick," i.e., the 585-ft.-tall Anaconda Copper smokestack in Butte, Mont.
- ◆ Mark Reuter. **City Will Inject Funds to Help Restore Roland Water Tower.** *Baltimore Brew* (Mar. 26, 2013), www.baltimorebrew.com. The 8-sided, Italianate-style tower was

built in 1904-5 and designed by William J. Fizone as part of the city's network of water pumping stations. Closed in 1930, the tower's maintenance had been neglected for decades.

- ◆ Ryan Salmon and Meghan Elliott. **The Kahn System of Reinforced Concrete: Why It Almost Mattered.** *Structure* (Apr. 2013), pp. 9-11. Many of the factory buildings designed by Detroit-based architect Albert Kahn incorporated a patented concrete reinforcement system developed by his brother Julius. Julius Kahn's Trussed Concrete Steel Co. manufactured reinforcing bars with "wings" that were bent upward to form shear reinforcement. The system was used in numerous buildings and bridges nationwide.
- ◆ Richard Stradling. **Bodie Island Lighthouse Relit Thursday, Opens to Public Friday.** *Raleigh (N.C.) News & Observer* (Apr. 13, 2013). The 170-ft.-tall Outer Banks lighthouse, built in 1872, has undergone a 3-year, \$5 million restoration. It is now open for the first time on a regular basis for the public to climb to the top for spectacular views.
- ◆ Richard G. Weingardt. **Frank Osborn: Nation's Pioneer Stadium Designer.** *Structure* (Mar. 2013), pp. 61-63. Cleveland's Osborn Engineering Co., which is still in operation, was founded in 1892 by Frank C. Osborn (1857-1922). After working for several bridge companies, Osborn opened his own firm and designed numerous bridges, buildings, and baseball stadiums, from Pittsburgh's Forbes Field (1909) to the original Yankee Stadium in the Bronx (1922).

WATER SUPPLY & CONTROL

- ◆ Jeff L. Brown. **Water from a Distance: The First Owens River-Los Angeles Aqueduct.** *CE* (Apr. 2013), pp. 40-43. This brief but photo-rich overview covers William Mulholland's survey, design, and construction of a gravity-fed aqueduct for supplying water to the growing city of Los Angeles, from 1905 to 1913.
- ◆ Ashley Halsey III. **Billions Needed to Upgrade America's Leaky Water Infrastructure.** *Washington Post* (Jan. 2, 2012). Documents the problems of aging big city water-supply systems and a looming national crisis. Washington, D.C., which is addressing the problem more aggressively than many cities, has raised water and sewer bills by 50 percent in the past 4 years to pay for some of the needed work.

MINES & MINING

- ◆ Stephen Anderson. **Tech Archaeologists Hosting Free Tours of Cliff Mine Site.** *Daily Mining Gazette* (June 14, 2013). Interviews with Michigan Tech faculty and students as they conduct the 4th year of fieldwork at the Cliff Mine (tour site—1997 Annual Conference, Houghton).
- ◆ Bob Fowler. **Radar Finds Unmarked Graves from 110-Year-Old Mining Disaster.** *Knoxville (Tenn.) News* (May 19, 2012). Locating the graves of miners, most of them Welsh, who died in the Fraterville Mine disaster in 1902. The mine explosion killed 216 miners; 30 bodies were unclaimed by family and buried next to a railroad trestle on the spur line that led to the mine.
- ◆ Lynn French. **Pasties and Miners Bring Mexican Minister to Cornwall.** *BBC News* (May 4, 2013), www.bbc.co.uk/news/uk-england-cornwall-22397320. The historical connections among Mexican tortillas, enchiladas, silver mines, and the Cornish pasty.
- ◆ Marianne Sullivan. **Tainted Earth: Smelters, Public Health, and the Environment.** Rutgers Univ. Pr., 2013. 256 pp., illus. \$85. Traces the rise of public health concerns about nonferrous

HISTORIC BRIDGE NEWS

The **Second National Covered Bridge Conference** held in downtown Dayton, Ohio, June 5-8, 2013, included 125 attendees from 24 states, Canada, Germany, Russia, and 8 delegates from China. The conference, sponsored by FHWA, HAER and the USDA Forest Products Laboratory, celebrated the accomplishments of the National Historic Covered Bridge Preservation Program, a 13-year federal program that has funded the rehabilitation of over 250 historic covered bridges. The paper sessions were devoted to a variety of topics, including rehabilitation case studies; research on arson prevention, wind loading, lightweight decking, and hydrology; documentation and analysis; his-

toric truss types; and foreign covered bridges. Offsite events included a reception at the Engineer's Club of Dayton, a hog roast dinner at the Preble County Historical Society, a timber framing demonstration, tours of Dayton's aviation heritage, and visits to 20 nearby covered bridges. Several SIA members were involved in running the conference, including Christopher Marston, chair; David Simmons, paper chair; Doug Miller, host; and Bill Vermes, committee member. SIA alumni Dario Gasparini gave the welcoming presentation on the Wright Brothers use of the wooden Pratt truss in their early flyer designs, and Jim Barker gave the closing keynote on his reconstruction of the Moscow

Covered Bridge after a devastating tornado. The conference proceedings are available online: <http://www.woodcenter.org/2013-national-covered-bridge-conference/papers.cfm>.—Christopher Marston

The **Carroll Street Bridge** (tour site—2002 Annual Conference, Brooklyn) over the Gowanus Canal will receive more than \$1 million in federal disaster funds to repair damage caused by Hurricane Sandy. The movable bridge, a rare retractable design built in 1889, was submerged by the storm and rendered inoperable. The funds will be used to replace the electrical and hydraulic equipment.—*The Brooklyn Paper* (May 7, 2013)



Christopher Marston

Attendees of the Second National Covered Bridge Conference.

(continued on page 22)

smelting in the western U.S., focusing on three major facilities: Tacoma, Wash.; El Paso, Tex.; and Bunker Hill, Idaho.

- ◆ Joanne L. Yeck. **At a Place Called Buckingham ... Historical Sketches of Buckingham County, Virginia.** Greyden Pr., 2012. 175 pp. \$20. Essays and vignettes of local history include slate quarrying and kyanite mining in this central Virginia county located west of Richmond.

IRON & STEEL

- ◆ Hanah Cho. **Still in Business: The 175+ Year Club.** *Baltimore Sun* (May 8, 2012). Feature article on G. Krug & Son, a blacksmith shop on W. Saratoga St. in downtown Baltimore (near Lexington Market) that traces its lineage to a shop established in 1810 by Augustus Schwatka. Krug now specializes in iron window grates and grilles. Also mentioned as members of the club are Loane Brothers (sail makers since 1815), Gas Light of Baltimore (est. 1816, the country's first gas utility), and the B&O RR (est. 1827, now CSX).
- ◆ Anne Kelly Knowles. **Mastering Iron: The Struggle to Modernize an American Industry, 1800-1868.** Univ of Chicago Pr., 2012. 336 pp., illus. \$45. Examines the prolonged development of the industry prior to the Civil War, when it struggled to compete against low-cost British iron. Ironworks in Ala., Md., Pa., and Va. demonstrate how iron masters

struggled to replicate British practices and set the stage for the subsequent age of steel when the iron industry eventually emerged from the shadow of Great Britain.

ABBREVIATIONS:

B&L	= <i>Buildings & Landscapes: Journal of the Vernacular Architecture Forum</i>
CE	= <i>Civil Engineering</i>
MSC	= <i>Modern Steel Construction</i> , published by the American Institute of Steel Construction
TICCIH	= <i>The International Committee for the Conservation of the Industrial Heritage</i> , www.mnactec.com/ticcih
WSJ	= <i>Wall Street Journal</i>

Publications of Interest is compiled from books and articles brought to our attention by you, the reader. SIA members are encouraged to send citations of new and recent books and articles, 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 SIA Newsletter, 305 Rodman Road, Wilmington, DE 19809; phsianews@aol.com.

The AIA Spring Tour 2013—The Ruhr

In an effort to strengthen correspondence between the SIA and the Association for Industrial Archaeology (AIA), our sister organization in the U.K., the SIAN from time to time will report on AIA tours and activities. IA News will also report on SIA activities to its membership. We thank Chris Barney, IA News editor, and Bill Barksfield (AIA/SIA) for their help initiating this effort.

Over 40 members and friends of the Association for Industrial Archaeology (AIA) from the U.K. came together in May to explore the Ruhrgebiet, an area that was the subject of an SIA Study Tour in 2001 (SIAN, Spring 2001). This area was historically the industrial heartland of Germany, an area full of coal mines, coking plants, steelworks, and associated railways and canals. It was previously considered to be dirty, noisy, unpleasant, and definitely to be avoided—but not now.

Like much of the heavy industry in western Europe, actually very little remains in operation today, and many on the tour commented on how green the whole district looked, very far from how it must have been in the days of full production.

Our first visit was to Henrichshütte in Hattingen. Henrichs steel works was founded in 1854, and the site included blast furnaces, rolling mills, and a coking plant. At the height of production about 10,000 people were employed at the works. Only one blast furnace now remains, and for those born too late to experience these sites in operation it was good to stand next to a Bessemer converter or at the base of the furnace trying to imagine the fantastic noise, heat, and smell as tons of molten metal poured out.

For those keen on railways, a visit to the 14-bay roundhouse at the Railway Museum in Bochum-Dalhausen gave us a chance to admire a fine collection of Germany's locomotives, some small, some curious, and some vast beasts. One of the largest locos on display was built locally in 1942 by Krupps—perhaps the best-known name in German heavy engineering and well-known arms manufacturer since the 17th century.



Railway Museum in Bochum-Dalhausen

More impressive buildings were to be seen at Zeche Zollverein, a UNESCO World Heritage Site. To extract some of the coal from the vast Ruhr coalfield, Shaft 1 was sunk in 1847. More shafts followed, culminating in 1932 with Shaft 12, distinctive for its winding tower and surrounding buildings in the Bauhaus style by architects Fritz Schupp and Martin Kremmer. We learned that coal production ceased in 1986, leaving enough coal underground to provide Germany's energy needs for 400 years.

At Henrichenburg there is a 14-meter drop from the old Dortmund Ems canal to the Rhein Herne Canal, and the solution to navigating this in 1899 was a ship lift, which sadly has been inoperable for many years. At first sight you might think that the caisson, capable of accommodating 350-ton vessels, was raised and lowered by the tall vertical screws to be seen at each corner. But in fact we learned that it floats upwards by means of cylindrical floats immersed in deep, water-filled wells. Two later attempts at negotiating the height difference: a more modern looking boatlift, using



Atop the head frame at Zeche Zollern.



Head frame and museum at Shaft 12, the Zeche Zollverein colliery.

the same principles, and a lock with five large side ponds have now been abandoned in favor of a modern ship lock capable of handling craft of 190 x 12 meters.

Our next visit was to the Kokerei Hansa, which was one of the largest coking plants in Europe. Production first started in 1927, and by 1938 the 300 coke ovens had a production capacity of 1.7 million tons per year. Some level of fitness was required to ascend the coal conveyor where once all the coal to feed the ovens was carried aloft, but the view from the top gave an impression of the huge scale of operations. On top of those ovens men toiled, in conditions that few of us would tolerate today, knowing that just to touch the metal would result in serious burns.

Further fitness was required to get the best view from the top of the headframe at Zeche Zollern, a “model” colliery at Bövinghausen, near Dortmund. Building of this well-preserved site began in 1898. Most of the buildings are of solid brick and designed by Paul Knobbe. The central engine house has an iron framework and contained the most up-to-date generators and machinery at the time. An Art Nouveau styled main entrance, by Bruno Möhring, has lead glazing of blue and green glass.

The next day saw us looking at the earliest industrial his-



Bessemer converters at Henrichs steel works.

tory in the region. The Archbishop of Cologne granted permission in 1741 for Freiherr von Wenge to excavate iron ore at Osterfeld, but it was 11 years before he began building his foundry at St. Antony-Hutte and a further six years before the first iron flowed. A modern, curving steel structure has been erected to cover this archaeological site and little now remains, but it is very well interpreted and, for those of us struggling to make out what might have gone on, there were some excellent animated video reconstructions.

The Hagen Open Air Museum for Craft and Technology was founded in 1960 on the principle that visitors should be able to see the buildings where urban and rural trades were carried on and be able to get up close to those processes in action. Crafts and trades demonstrated include ropemaking, tanning, printing, and many more. We spent a lot of time watching nailmaking. It is a pleasure to watch such a craftsman at work, transferring hot metal from the fire to the anvil and with carefully aimed and timed strokes turning out yet another perfect example. Apparently, though, this is far from a dying craft as hand-made nails are now in vogue and manufacturers are unable to meet the demand.

At Solingen, sometimes called the “city of blades,” we saw the Hendrichs Forge, a drop forge specializing in the making

(continued on page 19)



Boatlift at Henrichenburg.



The Schwebebahn.

TWIN CITIES (continued from page 9)

that period. Lunch was also provided at Ibberson, accompanied by a slide presentation on the company's history and current work, such as the huge new Grain Export Terminal in Longview, Wash. The presentation also included an amazing time-lapsed view of the concrete slip-forming process used to quickly construct huge engineered structures.

The last stop was **Rahr Malting** in nearby Shakopee, which produces malted barley for the brewing industry. It is the largest single-site malting facility in the world, producing over 24 million bushels of malt per year. The plant's first malthouse was constructed in 1937 with new houses added in 1954, 1977, 1980, and 1994. The site also contains a series of large grain elevators, with total capacity of 8 million bushels, constructed in various stages since 1937. The newest bins were designed and built by T.E. Ibberson. The tour split into two smaller groups for a visit to Malthouse No. 4 (1980). Tim Sparks explained how malting is an eight-day process and we saw all of the steps from the delivery through steeping, germination, drying, and shipping. Moving through the malthouse requires passing through airlocks, which maintain different air temperatures within the

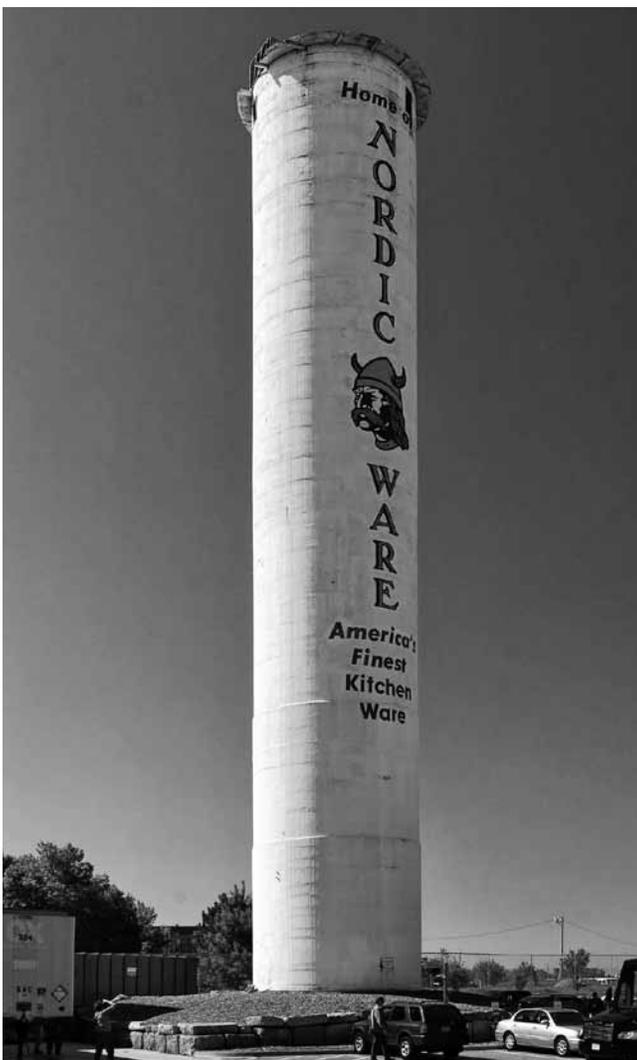
facility. The malting process at Rahr is continuous—as soon as one tank is emptied, it is immediately filled again for the next batch. Rahr only produces light-colored “base malts” which are then stored for shipment via rail. (Specialty dark and amber malts require further roasting at other facilities.) Afterward, the group was able to walk around the outside of the huge plant, past the adjacent Koda Energy bio-waste electric plant that suffered a major explosion on Apr. 25, 2013. It is out of commission until repairs can be made. Rahr is currently getting its electricity from elsewhere.

Sunday Tour 1: Mississippi Riverfront and Mill City Museum. This tour featured a 1.5-hr. walking tour of the Minneapolis Riverfront District and St. Anthony Falls, followed by a visit to the Minnesota Historical Society's Mill City Museum, repeating sites that had been visited on Friday for those who had not had a chance to see them.

Sunday Tour 2: St. Paul Union Depot. Upon arrival at the **St. Paul Depot**, this tour, led by John Wickre, visited the headhouse, main concourse, and massive waiting room. The depot, which was constructed from 1917 to 1923, is in beautiful condition after having been fully restored during the past two years. It will soon become a significant intermodal passenger transportation facility when Amtrak shifts its operations there and upon the opening of the Central Corridor (Green Line) light-rail segment of the METRO system in the near future.

The SIA offers its thanks to the many volunteers who

(continued on page 19)



Marc Belanger

Peavy-Haglin Experimental Grain Elevator.



Duncan Hay

Atop the “Flour Tower” at the former Washburn A Mill.

MINUTES (continued from page 10)

famous for its architecture, with buildings designed by top architects of the 20th and 21st centuries.

He noted that the 2014 Annual Conference is scheduled for Portland, Maine, a beautiful city on the Atlantic coast. Due to its popularity as a tourist attraction, with a significant increase in hotel rates after Memorial Day, the conference will be in mid-May, several weeks earlier than normal.

Ron Petrie then passed the microphone to Tom Ferrell, who is organizing the 2013 Fall Tour in Rockford, Ill., with his wife Uma. Tom reported that because the city was in decline when he grew up there, it has taken some time for him to appreciate it, but he has learned a lot about his hometown in the process of planning the tour, which is scheduled for Sept. 26-29. Tom then gave a presentation on the city, founded in 1834 as "Midway" (i.e., between Chicago and Galena), and its role as a manufacturing center for farm machinery, furniture, and machine tools through the mid-20th century. Rockford now gives prominence to the high-tech aerospace industry. Day 1 of the tour is planned for Rockford's history museum, Midway Village, followed by three tours each on Days 2 and 3. Confirmed tour sites include the Illinois Ry. Museum; the Rockford *Register Star* newspaper, which has been printing since 1855; the Rockford Sanitary District; a Lowe's regional distribution center; and metal fabrication equipment manufacturer MegaFab. Other tentative stops are being explored. There will be a break from SIA Fall Tour tradition with a Sunday brunch at the Coronado Theater, an atmospheric movie palace from 1927.

Nominations Committee. President Hay recognized current SIA Board members and staff, and thanked departing

Board members Maryellen Russo and David Rotenstein for their service.

Nominations Committee Chair Kevin Pegram reported receiving 290 ballots. He announced the results of the election, with Justin M. Spivey re-elected as Secretary, Nancy K. Batchelor re-elected as Treasurer, Lynn Rakos elected to the Nominations Committee, and new directors Richard K. Anderson, Jr., and Ann Dichter. Kevin emphasized the need for nominees who have not served before to lend fresh perspective. Tim Mancl, the incoming Nominations Committee chair, said, "Nominations start now."

Vogel Prize. Bob Casey read the Vogel Prize citation on behalf of committee chair Robert Gordon (see article elsewhere in this issue). Patrick Martin accepted the prize on behalf of Paul White, indicating that Paul is on a well-deserved vacation in New Zealand. Paul was pleased and honored by the award. Patrick indicated that Paul was grateful to his reviewers, grateful to Fred Quivik for sharpening up his language, and looking forward to contributing more articles to IA in the future.

General Tools Award. Carol Poh read the General Tools Award citation (see article elsewhere in this issue). In accepting the award, Bob Frame said that it was a profound honor and that SIA has been his professional community, his family, and his home. He thanked committee members Carol Poh, Richard K. Anderson, Jr., and Helena Wright, as well as the "devious people" who nominated him.

Bob said that he joined the organization in 1976, when everything he knew about SIA came through the mail. He received a call for nominations, indicating that one could

(continued on page 23)

TWIN CITIES (continued from page 18)

made the 42nd Annual Conference possible. The local planning committee led the way, planning tours, preparing the conference guidebook, and arranging events. Thanks go to the members of the committee: Ann Barnard-Toftness, Greg Brick, Patricia Emerson, Bob Frame, Amanda Gronhovd, Kitty Henderson, David Mather, Fred Quivik, Tim Tumberg, Jennifer Tworzanski, Miranda VanVleet, and John Wickre, and Kelly Wolf. Thanks also go out to Eric Satre, Lorrie Larson, Gina Aulwes, Kristen Zschomler, John Anfinson, Denis Gardner, Dennis Gimmestad, Greg Mathis, Hohkan Miller, Brian McMahon, and Steven Olson who handled various aspects of registration and tours. The Saturday paper session was organized by the committee of Erin Timms, Justin Spivey, Maryellen Russo, and Kitty Henderson. And a final thank you to Don Durfee at SIA headquarters, and to Ron Petrie and Corrine Petrie, SIA Events Coordinators, who provided vital organizational support.

Contributions from Marc Belanger, David Farrier, Laura Golberg, Nathan Holth, Jack McKinnon, Carol Poh, Lisa Schrenk and Joe Seely

THE RUHR (continued from page 17)

of scissors. It began in 1886 and employed 90 workers at its height in about 1914. It continued until 1986 and remains now as a museum. Each stage of making a pair of scissors was demonstrated including the benches where the forging dies themselves were made.

Finally then to Wuppertal and the unique Schwebbahn—"the oldest electric elevated railway with hanging cars in the world." We boarded the specially reserved Kaiserwagen (the seat where the Kaiser sat was pointed out) and, scheduled amongst regular commuter traffic, we swung out of the station suspended over the street, passing bedroom windows with the traffic below us. Then curving out over the river Wupper, this ride on a most unusual railway left a smile on everyone's face!

Thanks are due particularly to Sue Constable for a great deal of hard work in putting the program together. The tour was organized for the AIA by Heritage of Industry (www.heritageofindustry.co.uk), a specialist in tours for groups from all over the world who are interested in industrial history.

Bill Barksfield

IA ON THE WEB

Brewed in Philly (<http://libwww.freelibrary.org/exhibitions/slideshow.cfm?exhibit=22>). This online exhibit tells the history of Philadelphia brewing with excerpts from books, videos, and recipes from the collection of the Free Library. It was developed to accompany temporary displays at the Central Library that featured the history of Brewerytown (tour site—2007 Annual Conference).

Bureau of Reclamation Historic Dams and Water Projects (<http://www.nps.gov/history/nr/travel/ReclamationDamsAndWaterProjects/Index.html>). This in-depth site offers an itinerary for exploring the history of water in the American West and visiting historic dams and water projects. The bureau is the nation's largest supplier of water and second-largest producer of hydroelectric power. Includes historical overview essays, sites listed by state with a summary history of each site, and maps.

Confederate States Armory at Macon, Ga. (www.csarmory.org). Extensive website covers the history, images, products, employees, and official reports and letters regarding the armory that would have had more than 177,000 sq. ft. of manufacturing space if it had been brought into production before the war ended. Construction began in Feb. 1863 and the large brick factory and support buildings were nearing completion when captured by Union forces in April 1865.

Durant-Dort Carriage Factory (<http://blog.hemmings.com/index.php/2013/05/16/why-did-gm-buy-another-auto-companys-historic-factory/>). Blog provides historical background and some good images of the factory that GM recently bought on the waterfront in Flint, Mich., probably saving it from the wrecking ball. The purchase has some in the automotive world puzzled, coming on the heels of three recent GM plant closings in the Flint area. GM claims the purchase is for historical reasons; the Durant-Dort offices, currently housing

the county historical society, were where founder William C. Durant signed GM's incorporation papers in 1908. GM has been vague on what it plans to do with the property, although the possibility of displaying historic cars from the company's collection has been mentioned.

The Future of Pullman Yard (<http://clatl.com>, search on Pullman Yard). Panoramic views, photographs, and history of Atlanta's Pullman Yard, the 26-acre site purchased by the Chicago-based Pullman Co. in 1922 to serve as one of six hubs nationally to maintain and restore passenger cars. Also commentary on proposals for redevelopment.

Giant Concrete Arrows (www.cntraveler.com, search on "giant concrete arrows"). This feature from *Condé Nast Traveler* summarizes the history of the Transcontinental Air Mail Route started in 1924 and its ground-based navigation system of beacons and concrete arrows, painted a bright yellow, pointing to the next beacon on a route that extended from New York to San Francisco. Some of the giant arrows can still be found today. Further info available at www.atchistory.org/history/nightnav.htm.

Industrial Landscapes of Catalonia and Beyond (<http://www.catpaisatge.net/dossiers/pindustrials/eng/index.php>). This site promotes the industrial heritage of Catalonia (2004 SIA Study Tour). Includes a nice introduction, info on specific sites, and bibliography. Also good for links to other industrial heritage websites, news stories, and publications with a primarily European focus. Available in English, French, Spanish, and Catalanian. Part of the Observatori del Paisatge (Landscape Observer) website, which covers all facets of Catalonia's cultural landscape.

Living Landscape Observer (<http://livinglandscapeobserver.net>). This website, edited by Brenda Barrett (SIA), offers "commentary and information on the emerging field of large landscape conservation." It uses the concept of landscape to bring together the interests of land conservancies, heritage areas, watershed organizations, long distance trails, community-based tourism initiatives, and other organizations and individuals with a focus on preserving a "sense of place." IA, especially as it relates to the large industrial processes and technological systems that have shaped regional landscapes, fits well within this rubric. There is a special page dedicated to the topic of industrial landscapes.

Sibley Mill (www.youtube.com/watch?v=JCTIY17N9c). Historic views of the Confederate Powder Works and the Sibley textile mill are featured in this 3-min. video by *Augusta (Ga.) Chronicle* journalist Rob Pavey. ■

NOTES & QUERIES

EXPORAIL, the Canadian railway museum in Montreal (tour site—2003 Annual Conference), is in the process of preparing a cookbook featuring recipes from the three largest Canadian railway companies. The 200-page cookbook will offer 90 recipes grouped by "deliciously evocative" historical themes and accompanied by archival photos. The museum is using social media to raise funds to publish the book and all profits will support the conservation activities and enhancement of the museum's outstanding collection of more than 160 vehicles, 10,000 artifacts, 700 scale models, and 400,000 archival documents. If you'd like to be a cookbook sponsor and receive an archival photo as a thank you gift, visit www.igg.me/at/exporailcookbook. ■

"IA on the Web" is compiled from sites brought to the editor's attention by members, who are encouraged to submit their IA Web finds: phsianews@aol.com.

Hudson Mohawk Industrial Gateway launches major fundraising initiative

July 1 saw the launch of a major fundraising initiative by the Hudson Mohawk Industrial Gateway in Troy, N.Y. The Gateway is the organization that interprets the region's industrial heritage, advocates for the preservation of significant industrial sites, and operates the Burden Iron Works Museum in the former headquarters of the Burden Iron Co.

The goal of the initiative is to raise at least \$2 million, of which \$1 million would be dedicated to completing the restoration of the museum and the rest reserved for the Gateway's endowment. P. Thomas Carroll, Ph.D., Gateway executive director for the past 16 years, has stepped down as executive director to serve as task force chair so that he can dedicate more time to fundraising. Carroll was also named the Gateway's Senior Scholar as part of this transition. Michael Barrett, who has served as deputy director for 13 years, has become executive director.

Troy played a significant role in American industrial history; indeed, the area has been called the "Silicon Valley of the 19th century." Troy's gasholder house is one of the few surviving such structures in the U.S., and serves as the SIA logo. SIA held its 2nd Annual Conference in Troy in 1973 and its 16th Annual Conference there in 1987. The Hudson Mohawk region was also the site of the first survey performed by the Historic American Engineering Record in 1969.

The Burden Iron Works Museum features displays and artifacts covering the development of the region's principal industries. A major part of the museum is dedicated to Henry Burden, his horseshoe making machine, and the world's most powerful vertical waterwheel, which powered his mill. Other exhibits cover bell casting, precision instruments (including an Edward R. Arms circular dividing engine), the detachable collar and cuff industry (Troy's nickname is "Collar City"), and Troy-Bilt rototillers.

Steve Muller



Burden Iron Works.

Steve Muller

SITES & STRUCTURES

The Massapoag Mill in Lincolnton, N.C. was destroyed in a two-alarm blaze the night of June 17. Built in 1907, the textile mill made national news in the Sept. 12, 1960, edition of *Time* magazine when it was reportedly the first textile mill in the U.S. to be outfitted with Japanese-made machinery. The mill closed about 40 years ago and had been abandoned in recent years.—*Charlotte Observer* (June 18, 2013) ■

The ribbon-cutting ceremony for the stabilized Petty's Run Archeological Site in Trenton, N.J. (SIAN Winter 2012) was held on May 14, 2013. The site, located adjacent to the State

House, features the ruins of the Trenton Steel Works, ca. 1745-84, as well as traces of a short-lived cotton mill, ca. 1814-1820, and the Front Street paper mill, ca. 1827-1876. It is believed to be the only colonial North American cementation furnace to have been archeologically investigated. Several hundred people attended the ceremony, which featured a fife-and-drum corps from the nearby Old Barracks Museum (French & Indian War army barracks) and speeches from state officials and archeologists from Hunter Research who conducted the site investigation.



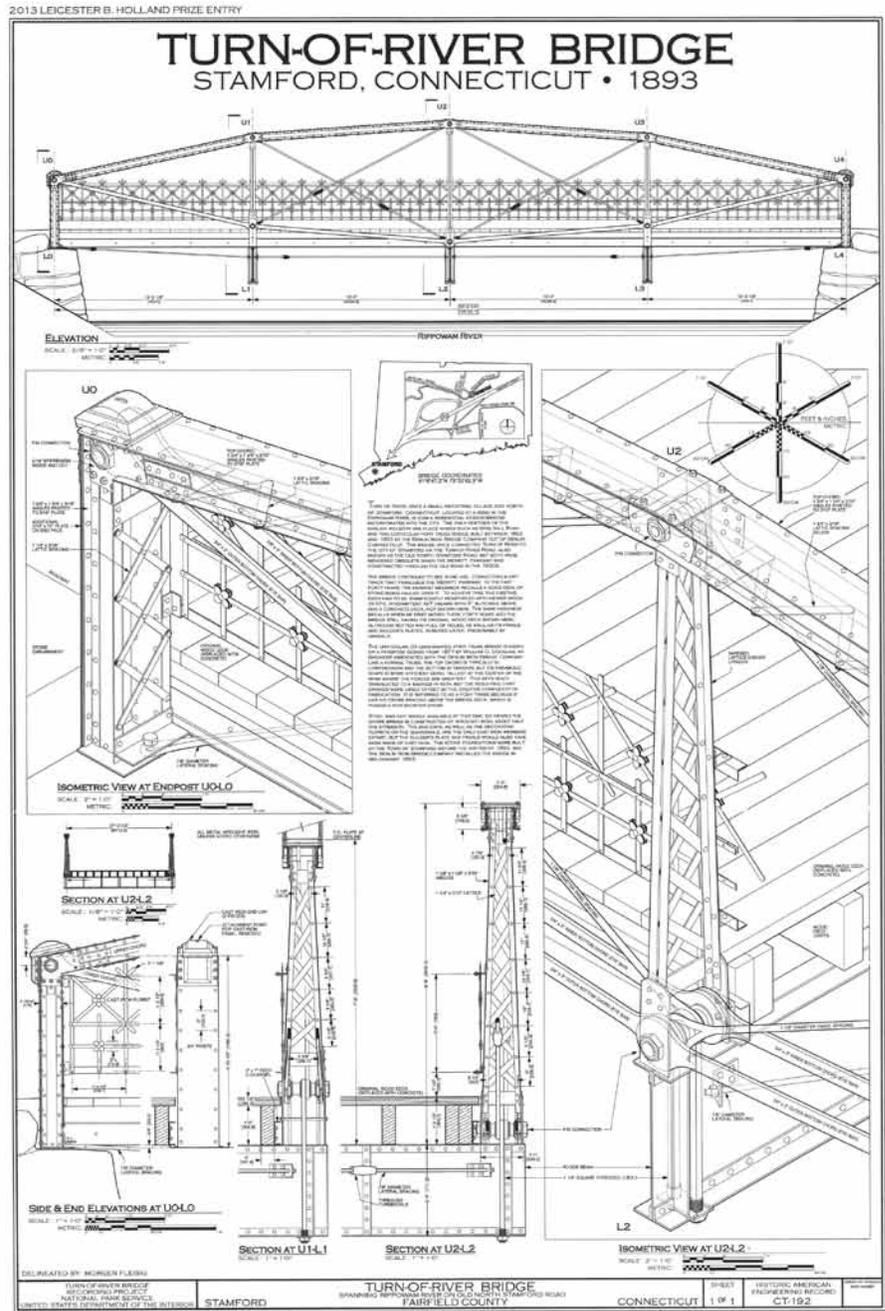
Patrick Harshbarger

2013 Holland Prize Winner Selected

Each year the Leicester B. Holland Prize recognizes the best single-sheet measured drawing of a historic building, site, or structure meeting the National Park Service's HABS/HAER/HALS standards and guidelines. The 2013 winner is Morgen Fleisig for a measured drawing of the Turn-of-River Bridge in Stamford, Conn. The Turn-of-River Bridge is a 53-ft.-long lenticular truss, fabricated by the Berlin Iron Bridge Co. in 1893. The company was a prolific builder of this distinctive style of iron truss, sometimes called "pumpkin-seed" bridges in the vernacular of New England.

This is the first time the Holland Prize has been awarded to a HAER drawing. Established in 2011, the prize honors Leicester B. Holland (1882-1952), who in the 1930s was chairman of the American Institute of Architect's (AIA) Committee on Historic Buildings, head of the Fine Arts Division of the Library of Congress and first curator of the HABS collection, a co-founder of the HABS program, and the first chair of the HABS Advisory Board. The award is administered by the Heritage Documentation Programs and the Center for Architecture, Design & Engineering in the Library of Congress, and is supported by the Paul Rudolph Trust, and AIA. The winning drawing is published in , and the winner receives a \$1,000 cash prize and a certificate of recognition. Merit awards may also be given.

The prize is intended to increase awareness, knowledge, and appreciation of historic sites, structures, and landscapes throughout the U.S., while adding to the permanent HABS/HAER/HALS collection at the Library of Congress, and encouraging the submission of drawings among professionals and students. By requiring only a single sheet, the competition challenges the delineator to capture the essence of the site through the presentation of key features that reflect its significance.



Turn-of-River Bridge, Holland Prize-winning drawing by Morgen Fleisig, 2013.

HISTORIC BRIDGE NEWS *(continued from page 15)*

White's Bridge, built in the late 1860s and the oldest surviving covered bridge in Michigan, was destroyed by arson on the morning of July 7, 2013. Jared N. Breese and J. N. Walker, two significant timber bridge builders based in western Michigan, constructed White's Bridge using the Brown truss design, patented by Josiah Brown of Buffalo, N.Y., in 1857. Brown trusses are rare and represent one of the unusual variations that characterized the inventiveness of 19th-century

bridge builders. The Brown truss is usually described as a lighter variation of the popular Howe truss, except without the wrought-iron verticals; however Brown's patent specifically covered the method of joining the diagonal members to the chords. White's Bridge crossed the Flat River in Keene Township, Ionia County, about 15 miles east of Grand Rapids. Police are investigating the fire, but no suspects have been identified. ■

CHAPTER NEWS

Oliver Evans (Greater Philadelphia) held its annual meeting and picnic at the Fairmount Water Works on June 24. Dan Lieb gave a presentation on the underwater archeology of two Planet class, 2-2-2 locomotives (rare, pre-Civil War) discovered off the coast of Long Branch, N.J. The locomotives are believed to have slipped off of a ship during a storm.

Roebling (Greater N.Y.-N.J.) has been keeping busy on spring and summer weekends with tours throughout the metropolitan region and beyond. On May 19, Joe Macasek led a tour of the Morris Canal right-of-way from Little Falls to Woodland Park, N.J. The four-mile walking tour was on the newly completed section of the Morris Canal Greenway trail. On May 25, chapter members undertook a full-day, drive-it-yourself trip to the Anthracite Museum, Lackawanna Coal Mine, and Eckley's Miner Village near Scranton, Pa. Joe Macasek and Bierce Riley teamed to lead a walking tour of the Mt. Hope iron mines and mineral railroad, culminating with a behind-the-scenes tour of the restoration work taking place at the Ford Faesch iron master's house.

Tom Flagg led an exploration of the former 60th St. Yard of the New York Central RR on June 9, including the yard's float bridges. On June 15, chapter members traveled up the Hudson River to Wappingers Falls, N.Y., where Matt Kierstead organized a tour of the industrial village and Windsor Machinery Co.'s hydroelectric plant, located within the former Dutchess Bleachery mill complex. June 22 found chapter members once again exploring a section of the Morris Canal with Joe Macasek, this time the inclined plane at Ledgewood where restoration work has recently been completed on the underground turbine chamber. On July 6, Bob Kaplan led a tour of Floyd Bennett Field, New York City's first municipal airport, which began service in 1931. The field became a naval air station during WWII and is now part of Gateway National Park. ■

Support Your Local Chapter. For info on a chapter near you or to start one, contact Ingrid Wuebber, SIA Director, Local Chapter Chair (Ingrid_Wuebber@urs.corp.com) or check out the local chapters section of the SIA website (www.sia-web.org).

GENERAL TOOLS AWARD *(continued from page 5)*

It was particularly appropriate, as the Society once again gathered in the Twin Cities, that this year's General Tools Award was presented to Bob Frame, in his adopted hometown.

Carol Poh

The General Tools Award was established in 1992 through the generosity of Gerald Weinstein [SIA], chairman of the board of General Tools & Instruments Co. LLC 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, which consists of three members appointed by the President of the SIA. They serve three-year overlapping terms.

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. 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. (4) The award may be made only to living individuals. ■

MINUTES *(continued from page 19)*

nominate oneself for the Board. Thinking that many members must do that, he responded, received congratulations on his nomination, and then a ballot indicating that he was running unopposed.

Prior to Bob's attending his first SIA conference at the Hagley Museum and Library in 1977, the only SIA member that he had met in person was Vance Packard, who had been in Minnesota to speak about the SIA at the Minnesota Historical Society. At the Annual Business Meeting, Bob was promptly elected to the Board. He thought it was great organization that puts a first-time conference attendee on the Board.

Bob thanked Gerry Weinstein, without whom the award would not exist, and Robert M. Vogel, whose service in Room 5020 at the Smithsonian Museum of American History has helped keep him a member for almost forty years.

New Business. President Hay called for new business; none was forthcoming. He asked new officers to informally meet with current Board members immediately after the last presentation session.

Adjournment. President Hay called for a motion to adjourn. Vance Packard so moved, Bob Casey seconded the motion, and the Annual Business Meeting was adjourned by acclaim at 1:30 p.m.

*Respectfully submitted,
Justin M. Spivey*

SOCIETY FOR INDUSTRIAL ARCHEOLOGY

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CALENDAR

2013

Sept. 26-29: SIA FALL TOUR, ROCKFORD, ILL. Info: www.sia-web.org.

Oct. 6-9: Society for the History of Technology (SHOT) Annual Meeting, Portland, Maine. Info: www.historyoftechnology.org.

Oct. 9-12: Pioneer America Society: Assn. for the Preservation of Artifacts & Landscapes, Annual Conference, Mohawk Valley, N.Y. Info: www.pioneera-merica.org.

Oct. 11-15: Assn. for Preservation Technology International Annual Conference, New York, N.Y. Info: www.apti.org.

Oct. 21-27: VII Latin American Symposium on Conservation of the Industrial Heritage, San Luis Potosí, Mexico. Info: www.mnactec.cat/ticcih/.

Oct. 29-Nov. 2: National Trust for Historic Preservation Conference, Indianapolis, Ind. Info: www.preservationnation.org.

Nov. 8: Business and Politics in 20th-Century America, Wilmington, Del. Sponsored by the Hagley Museum & Library. Info: clockman@hagley.org.

2014

Jan. 8-12: Society for Historical Archaeology Annual Conference, Quebec City, Que. Info: www.sha.org.

Mar. 3-4: Iron & Steel Preservation Conference, Lansing, Mich. Paper sessions and hands-on workshops. Info: mesler@lcc.edu.

Mar. 19-22: National Council on Public History Annual Conference, Monterey, Calif. Info: www.ncph.org.

Apr. 11-12: Construction History Society First National Conference, Cambridge, U.K. Info: www.constructionhistory.co.uk.

May 15-18: SIA ANNUAL CONFERENCE, PORTLAND, ME. Please note the new date, occurring a week earlier than previously announced. Info: www.sia-web.org.

May 28-31: Early American Industries Assn. Annual Meeting, Pittsburgh, Pa. Info: www.earlyamericanindustries.org.

Apr. 9-12: Society for Commercial Archeology Annual Conference, St. Petersburg, Fla. Info: www.sca-roadside.org.

Apr. 9-13: Society of Architectural Historians Annual Conference, Austin, Tex. Info: www.sah.org.

May 7-11: Vernacular Architecture Forum Annual Conference, Galloway, N.J. Tours of South Jersey landscapes from Cape May to Salem. Info: www.vernaculararchitectureforum.org.

June 11-15: Mining History Assn. Annual Conference, Trinidad, Colo. Tours of the Raton Basin with a focus on Western coal mining. Info: www.mininghistoryassociation.org.

June 19-22: First International Conference on Early Main Line Railways, Caernarfon, North Wales, U.K. Info: www.earlymainlinerailways.org.uk. ■