What are historic engineering and industrial resources? Historic engineering and industrial sites reflect our society’s rich technological heritage. Every generation of Americans has sought to transform the country’s landscape and utilize its resources by constructing a wide variety of engineering sites like irrigation ditches, canals, roads and bridges, mines, factories, power plants, and waste management treatment facilities. In addition to infrastructure, our technological heritage is comprised of innovations in machinery and equipment as well as in the development of modes of transportation. The nation’s historic engineering and industrial sites remind us of our path to the present and provide examples for the future. Most importantly, these sites encapsulate the contributions of every member of our society, evoking the intellect, ingenuity, hard work, and sacrifice of engineers and inventors, workers and businessmen and women, their families and communities. A permanent record of these sites and achievements ensures that they will remain available for future generations to appreciate and learn from, long after they have been lost or forgotten.

What is happening to our engineering legacy? Unfortunately, our nation’s engineering legacy is subject to loss from many forces, particularly obsolescence through technological advances and development pressures, vandalism, weather, and public utilities; maintenance and infrastructure; this floatbridge was once used to transfer freight cars to rail-equipped barges called carfloats. Changing regulations governing health, environment, and safety have also contributed to obsolescence, while overseas manufacturing and the adoption of new materials have impacted equipment and manufacturing plants. As a result, our engineering legacy is threatened from within, while the nation’s historic engineering and industrial legacy continues to be lost despite increasing interest in adaptive reuse of historic structures.

Why should we care about historic engineering sites? Historic engineering and industrial sites remind us of the sacrifices of engineers and inventors, workers and businessmen and women, their families and communities. A permanent record of these sites and achievements ensures that they will remain available for future generations to appreciate and learn from, long after they have been lost or forgotten. Every generation of Americans has sought to transform the country’s landscape and utilize its resources by constructing a wide variety of engineering sites like irrigation ditches, canals, roads and bridges, mines, factories, power plants, and waste management treatment facilities. In addition to infrastructure, our technological heritage is comprised of innovations in machinery and equipment as well as in the development of modes of transportation. The nation’s historic engineering and industrial sites remind us of our path to the present and provide examples for the future. Most importantly, these sites encapsulate the contributions of every member of our society, evoking the intellect, ingenuity, hard work, and sacrifice of engineers and inventors, workers and businessmen and women, their families and communities. A permanent record of these sites and achievements ensures that they will remain available for future generations to appreciate and learn from, long after they have been lost or forgotten.
HAER Documentation

Since its inception in 1969, HAER documentation has followed the basic format of Historic American Buildings Survey (HABS) documentation, the program after which it was modeled, with one important difference: HAER accepts documentation of processes, such as how machinery worked, bridge components fit together, or a plant functioned to produce a good or service. The formal documentation consists of measured and interpretive drawings, historical reports, and large-format photographs. All HAER documentation, as well as that from companion HABS and Historic American Landscapes Survey (HALS) programs, shares four characteristics: explains and/or illustrates the site’s significance; is accurate and verifiable; is stored on archival media for 500-year lifespan that is also reproducible; and is clear and concise. Guidelines for meeting these standards, formally the Secretary of the Interior’s Standards for Architectural and Engineering Documentation, are available online at the HAER website.

Drawings can include plans, elevations, sections, axonometrics, schematics, or interpretive illustrations that depict the evolution of the site. Depending on the time and complexity of the site or structure and the time allowed for fieldwork, measurements can be taken by hand, total station, or three-dimensional laser scanning. The drawings are then produced using Computer Aided Drafting (CAD). The written report uses field work and primary and secondary sources to develop a physical description of the structure and to trace changes over time. In addition, it includes contextual information to convey the significance of the site or structure and an explanation of the process in use. Finally, large-format, black-and-white photographs depict the current condition of the site or structure and the landscape on which it is located.

Not only does HAER documentation provide a comprehensive view of a resource for posterity, but it also serves as baseline documentation for rehabilitation and restoration projects. Documentation is also used as the basis for interpretive materials and to illustrate all types of publications. Not surprisingly, the HAERS/HALS collection is among the most heavily-used at the Library of Congress’ Division of Prints and Photographs.

HAER Documentation comes from a variety of sources. In addition to staff working with sponsors, HAER runs twelve-week summer projects that train students in understanding field work, preparing measured drawings, and researching and writing historical reports. HAER documentation is also produced under the provisions of the National Historic Preservation Act of 1966, as amended, which requires that historic sites or structures threatened with adverse action (demolition or alteration) from federally-funded initiatives and listed or eligible for listing in the National Register of Historic Places be documented to HAER/HALS standards. The mitigation program is administered by the NPS regional offices. Finally, HAER accepts donations of documentation that meets HAER/HALS standards. Every historic site that is of national, regional, or local significance has a place in the HAER/HALS collections at the Library of Congress.

For more information about the HAER program, or to access the HAER Guidelines for Drawings, History, or Photographs, visit our website at http://www.nps.gov/hdp/.