OVERVIEW

Wisconsin architecture has developed considerably since the first shelters were built by fur traders, missionaries, and early settlers. The varied immigrant and native stock that populated the state and the wealth of natural resources available lent a diversity to Wisconsin building stock nearly unsurpassed in the nation. In this section, Wisconsin architecture is summarized from four perspectives: architectural styles, vernacular architecture, construction materials and methods, and agricultural outbuildings. Each of the four categories is approached from the variety of types that occur in Wisconsin. In the cases of architectural styles and construction materials and methods, the Wisconsin perspective is tempered by a national perspective summarized from various secondary sources (see bibliographies). The sections concerning vernacular architecture and agricultural outbuildings are approached nearly exclusively from a Wisconsin perspective. Because information is not as readily available concerning these aspects of architectural history, the Historic Preservation Division staff formulated the terminology to assist field surveyors and data entry staff. The secondary sources and manuscripts listed in the bibliographies were essential to the development of the types presented.

The descriptions presented in all four sections should be useful in establishing historical and architectural contexts for evaluation purposes and for determining levels of significance, similar to the "Historical Background" sections throughout the rest of the report. However, the architecture summaries are not nearly as complete as the "Historical Background" sections. At present, analysis of Wisconsin's architecture is limited by a lack of scholarly research and field studies. The intensive survey reports that have been prepared for several communities have greatly increased available knowledge of Wisconsin architecture. Even so, they are primarily useful for evaluating resources in the study area. Usually, resources in communities that have not been surveyed at the intensive level will be very difficult to evaluate for architectural significance without some survey effort.

As development of this plan progressed, it became apparent that the architectural information in the report would be limited in comparison to the historical information. Thus, the architecture theme was considered as an "overlay" to the historical information: all resources should be examined from the historical perspective, with the assistance of the study units, but also from the architectural perspective. The information in this theme will serve to standardize the evaluation process for buildings and structures in Wisconsin by establishing a standard list of descriptors and terms. But, for each evaluation question, an architectural context will have to be developed through an examination of comparable resources in the appropriate geographical area.

Wisconsin's National Register listings for architectural significance are too numerous to include in this report. Instead, representative examples are mentioned throughout the text, with their locations and National Register list dates. For some types or styles, survey or research needs also are mentioned in the text. Each of the four sections is preceded by a brief overview and concludes with a bibliography.

PROTECTION

Wisconsin architecture of all sorts is threatened by pervasive factors that have been described in the "Protection" sections of other themes. Threats to historic architecture may result in loss of the resource or of its "integrity." All resources are not replaceable.

Sometimes the loss of a historic building closes the door to personal knowledge of that building type; all that may remain are photographs, sketches, and written descriptions. In some cases such a loss is a local matter, while in other cases the entire state or nation may suffer the loss. The demolition of the remaining Greek Revival building in one community may not affect anoher community that retains several; however, the loss of the only building in the state associated with a certain ethnic group, such as the Estonians, has an impact on the entire population's understanding and appreciation of that group. A similar argument can be made for the loss of integrity that historic buildings often suffer. The loss of the basic characteristics that lend distinction can so affect a building's significance that it is no longer important to us. It might as well have been demolished.

Although the quality of construction methods and materials may imply a longevity long beyond that guaranteed buildings constructed today, historic buildings are not excluded from the natural vulnerability of all buildings to decay and demolition. Buildings can be destroyed by fire, tornadoes, insect invasion, or water penetration. Materials lose their elasticity, cementing qualities, and load-bearing capacities. Added to these natural and sometimes unavoidable threats is the human capacity to demolish, alter, and abandon buildings. Little can be done to prevent some natural disasters, such as tornadoes. Likewise, unavoidable decay, such as metal fatigue in bridges, is sometimes difficult to counteract. However, for the most part, dangers to buildings can be minimized, ameliorated, or corrected. Information on the conservation of buildings can be obtained from the Historic Preservation Division of the State Historical Society of Wisconsin, from the National Trust for Historic Preservation, and from various architects and a growing number of publications. The challenge is to make sure the information gets into the right hands and that people are inspired to take action to save architecturally and historically significant buildings.

Historic preservationists have long recognized that educational efforts to teach people to recognize significance and to appropriately treat historic buildings are the best tools to counteract demolition and loss of integrity. It is not the purpose of this report to convey methods that can be used to educate people. However, the descriptions of building styles, forms, and types will at least alert people to their existence and potential significance.

ARCHITECTURAL STYLES

Architectural styles in Wisconsin generally tended to mirror the architectural developments of the nation as a whole. After about 1840, nearly every national or regional style appeared in Wisconsin. Styles that received their impetus from the eastern seaboard, however, generally made their appearance in Wisconsin a decade or so later. As a result, many stylistic mannerisms were in vogue in the state after their popularity had waned in the East. So it is that a Shingle Style house could be built in Madison in 1902, while the style really ceased in the East by 1890. Even in the twentieth century, with the rapid dissemination of up-to-date printed media, popular architectural styles often continued to make a late appearance in Wisconsin. In spite of this tardiness, however, Wisconsin can claim a rich architectural heritage, represented by many fine buildings, a few of which will be mentioned in this section.

The information regarding Wisconsin's architectural styles includes a revision of materials prepared by Jeff Dean and published in the Wisconsin Historic Preservation Plan, Vol. I. General information on the history of the styles was taken from several architectural history references, notably Marcus Whiffen's American Architecture Since 1780, Carole Rifkind's Field Guide to American Architecture, and Virginia and Lee McAlester's Field Guide to American Houses. Full citations for these and other references can be found in the bibliography at the end of this section.

FEDERAL (1830-1860)

Because about two decades passed between the end of the Federal Style in the East and Wisconsin's designation as a territory. Wisconsin does not have any true Federal style buildings. However, because architectural styles tended to be built in the western territories and states some years after their vogue had passed in the East, it is not surprising that Wisconsin does have a few buildings that have Federal references.

Characteristics that some early Wisconsin buildings evidence is the Federal double chimney at each gable end and parapet end walls. One such building is the Thomas Priestly House at Church and High streets in the Mineral Point Historic District (NRHP 1971). This brick house was built about 1850, fully thirty years after the end of the Federal Style in the East. Mineral Point has some other examples as well.

Typically, Wisconsin buildings that evidence the influence of the Federal Style were constructed of brick with simple stone lintels or sills and regular openings, sometimes in apparent bays. Federal buildings, while once common, are now rare in Wisconsin, but clusters tend to survive in the southwest mining region and randomly in small cities like Watertown and Oconomowoc in the south-central and southeastern parts of the state. The first parsonage of the First Methodist Episcopal Church (1846) at 504 Park Avenue in Racine is a good residential example of the Federal Style. Commercial examples include the three story brick building at 10 W. Main Street and the two story brick building at 90 E. Mineral Street, both in Platteville. An extant industrial building executed in the Federal Style is the Gipfel Brewery at 423 W. Juneau Avenue in Milwaukee.

FEDERAL
Thomas Priestly House
Mineral Point
c. 1850

GREEK REVIVAL (1830-1870)

The Greek Revival style is symmetrical, formal, and orderly. It is often characterized by porticos and pilasters reflecting the three Grecian orders: Doric, Ionic, and Corinthian. Eaves of Greek Revival buildings are typically detailed as classical cornices, and prominent gables are framed with heavy moldings. Roofs tend to be low-pitched and are generally heavy-looking and simple compared to later styles.

The Greek Revival was the first national style to have a wide-ranging impact on Wisconsin building. It originated in the East during the late eighteenth century and was brought to maturity in the architecture of Benjamin Latrobe and two of his contemporaries, Robert Mills and William Strickland. From the east coast the style was carried westward with the great population surge of the first half of the nineteenth century.

Architectural pattern books, such as those written by Asher Benjamin, Edward Shaw, and Minard Lafever, played a crucial role in the dissemination of the style. In Wisconsin, where architecture was not yet an organized profession, these books often served as the basis for houses constructed by local carpenters and builders. The foliated ornamentation of the Sewall Andrews House (1842) (NRHP 1971) in Mukwonago, for example, suggests this type of pattern book influence.

It should be emphasized that the Greek Revival style was not an archeologically correct style. It did not pretend to copy ancient Greek buildings, except in certain details. Instead, the style relied on Grecian forms as a source of inspiration to be studied and interpreted in the creation of a totally "American" architecture. It was a very versatile style, adaptable to local building variations. The special local variation in Wisconsin was the development of brick, field stone, and quarried-rock structures (Perrin 1967:63), in constrast to clapboard versions more common in other regions. One example of this can be seen in the Iowa County Courthouse (NRHP 1972) in Dodgeville, It was built in 1859 of locally quarried, buff limestone with a two-story Doric portico executed in wood. The plans for the courthouse were drawn in competition by Ernest Wilson of Mineral Point, a graduate of the University of Berlin, who may have relied on an early pattern book for inspiration.

An excellent example of Greek Revival domestic architecture is the 1853 William F. Kuehneman House (NRHP 1973), located on South Main Street in Racine. It has a two-story central block with Doric portico, flanked on each side by a one-and-one-half story wing. This type of configuration is sometimes referred to as "temple with wings" and was often employed in large scale domestic designs. A variation of this form can be seen in the Cotton House (NRHP 1970), built in 1849 and located on South Webster Avenue in Green Bay. Here again is the raised two story central block with portico flanked by two lower wings. In this case, however, the portico is treated in antis, i.e. the side walls of the central block project to provide a closed end for the front colonnade.

In addition to these rare examples of relatively pure Greek Revival buildings are the many vernacular structures that are basically astylistic, but which display limited Greek Revival details and possess fairly simple gabled forms. Typically, these vernacular Greek Revival buildings exhibit the rectangular massing, regular fenestration, and returned cornices characteristic of the style. Sometimes, a doorway with transom and sidelights is included. The style is attributed to vernacular buildings with the main facade (entry) either in the long wall or the gable wall.

EGYPTIAN REVIVAL (1850-1870; 1925-40)

The Egyptian Revival was a style limited in its popularity and generally restricted to special-use buildings and structures, such as Masonic temples and mausoleums. Historically, its American occurrence was preceded by a limited expression of the style in late eighteenth and early nineteenth century Europe, particularly in England and France. However, Egyptian references in funerary arts in Europe can be traced back through the Renaissance to Antiquity.

The Egyptian Revival Style distinguished itself among other severe and "archeological" early nineteenth century revival styles in its "appropriateness" and associative potential for some building types. For example, the ceremonial treatment of death and internment in ancient Egyptian culture made the style a logical choice for cemetery gatehouses, tombs, and mausoleums. The awesome effect of its forms and scale also made it well-suited for prison architecture. Full scale residential use of the style was rare in the United States, but Egyptian elements, such as battered window and door surrounds, appeared on Greek Revival and Italianate houses in Wisconsin and elsewhere during the mid-nineteenth century. The Greek Revival Benjamin Single House (NRHP 1980), built near Wausau in 1849, exhibits these battered surrounds. Pure examples of the Egyptian Revival Style are known to exist in the state, although the phenomenon has not yet been fully explored.

Of more consequences in Wisconsin are those few known full-scale structures born of the early twentieth century resurgence of the style. The opening of King Tutankhamen's tomb in 1922 proved timely in supplying a "new" form for modern design; the exoticism, sinuosity, and geometric simplicity of the Egyptian Revival were well-suited for adaptation within the Art Deco movement during the late 1920s.

As in the nineteenth century, the style was limited in its popularity, although in the breadth and liberalism of the early twentieth century Period Revivalism, Egyptian motifs were absorbed more readily into design nomenclature. Preeminent Wisconsin examples of the twentieth century Egyptian Revival Style include the Masonic Temple (1922) located in the Southside Historic District in Racine (NRHP 1977) and the mausoleum of Pine Grove Cemetery in Wausau. Both these examples are constructed of brick and possess the characteristic battered portals and door frames, gorge and roll cornices, vegetive columns (papyrus or lotus), and emblematic winged orbs over the doorways. Smaller scale representatives of the style can be found in grave markers or family mausoleums in cemeteries in the larger cities of the state and in some commercial buildings. The Jones Auto Supply at 143 N. Broadway in Green Bay is an interesting example of a small Egyptian Revival commercial building.

As elements of twentieth century building designs, Egyptian motifs occasionally occur as striking components of eclectic Period buildings. An ideosyncratic and highly significant manifestation of Egyptian design can be seen in the Hiram C. Stewart house in Wausau (NRHP 1983), designed by Prairie School architect George Maher.

GOTHIC REVIVAL (1850-1880)

The practically universal feature of Gothic Revival architecture is the pointed arch. Other characteristics include steeply pitched roofs, pinnacles, and battlements. In many instances there may be no more than one or two of these features to indicate the architect's/builder's medievalizing intentions (Whiffen 1969:53).

Gothic Revival churches were generally built with a basilican plan, with a steeple at the entrance end, although cruciform churches with a central steeple were also built. In Wisconsin, churches in the style were frequently built in stone, although a number were constructed of wood in a manner sometimes referred to a "Carpenters' Gothic." An excellent example of a wooden Gothic Revival church is St. John Chrysostom (NRHP 1972), built in Delafield between 1851 and 1853. It closely follows the plan for a small church contained in Richard Upjohn's book of standard drawings, Upjohn's Rural Architecture. The church is built with oak walls and roof trusses, and the surface material is 12-inch vertical wood planks and two-by-three inch wooden battens. A simpler board-and-batten example, unattributed, is St. John's Episcopal Church (NRHP 1983) built in 1863 in Sparta, with hallmark bell cot.

Many of Wisconsin's major communities have one or more stone Gothic Revival churches. Richard Upjohn was at one time believed to have designed the Chapel of St. Mary the Virgin at Nashotah, built of gray limestone from a nearby quarry in the 1860s, but the design was recently credited to James Douglas, a Wisconsin architect. Douglas also designed Grace Episcopal Church (NRHP 1976), an English Gothic Church of indigenous sandstone built from 1855 to 1858 in Madison. In Milwaukee, the well-known Wisconsin architect Edward Townsend Mix designed All Saints Episcopal Cathedral (NRHP 1974) in 1868. Mix also designed St. Luke's Episcopal Church in Racine, a Gothic Revival example executed in brick.

Buildings other than churches may be symmetrical or asymmetrical in plan or massing. Houses usually display steep pointed gables, often with decorative bargeboards. Larger houses sometimes have a tower or turret of square or octagonal plan. Nearly every detached house has a verandah or porch. Many of these houses are constructed or wood. Others are constructed of stone or brick; the brick is often stuccoed. Some examples of the style have been altered to a more vernacular appearance, but details such as decorated cross gables and label mouldings survive. Whatever the material, the general effect is monochrome; this helps distinguish them from buildings of the High Victorian Gothic Style (Whiffen 1969:53). Two excellent domestic examples of the style are the imposing William T. Leitch House (NRHP 1975), built in Madison between 1854 and 1857, and the A.G. Tuttle House (NRHP 1980), built in 1869 in Baraboo, with its whimsical matching privy. The style is also evident in the main house and outbuildings of Stonefield Farm (NRHP 1970), the estate of Thomas Dewey in Grant County. Both the smokehouse/outhouse and wine cellar/ice house display steeply pitched roofs and finials.

The popularity of the Gothic Revival was partially a reaction against the classical canons of the Greek Revival. As with the Greek Revival, pattern books played a major role in disseminating the picturesque styles. One of the most influential of these was Andrew Jackson Downing's The Architecture of Country Houses. First printed in 1850, it sold 16,000 copies before the end of the Civil War, raising the picturesque form to the romantic ideal and popularizing such styles as the Gothic Revival Cottage, the Italianate, and the Italian Villa.

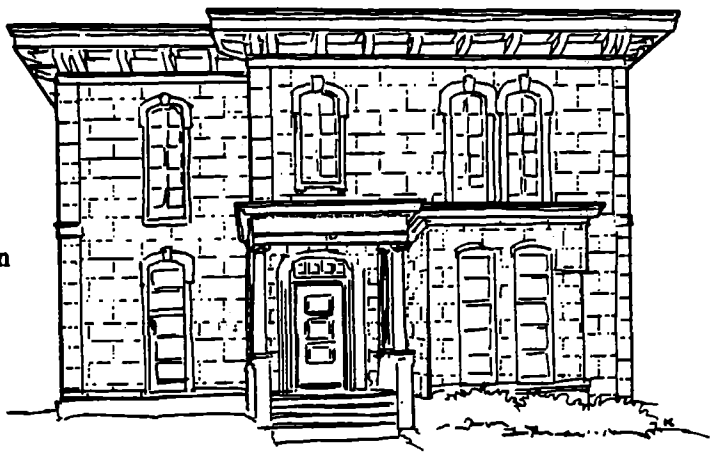
ITALIANATE (1850-1880)

Italianate houses abound in Wisconsin and have distinctive wide eaves with numerous brackets, gently-sloping hipped or gabled roofs, and, frequently, a polygonal or square cupola atop the roof. Typically square in plan with boxy proportions, sometimes these houses are "L"-shaped in plan and wrap around a square three-story tower. Frequently, windows have hoodmolds or even pediments, and sometimes they are round-headed. Bay windows are common, as are balustraded balconies. These houses nearly always have a veranda or loggia, although frequently these have been removed or altered. Italianate houses have clapboard, brick, or ashlar walls; some frame examples found in lumbering centers such as La Crosse and Oshkosh exhibit particularly elaborate detailing. In Wisconsin, these picturesque houses were built in the late 1850s through the 1870s.

The well-known Tallman House (NRHP 1970) in Janesville is an Italianate house built in 1857. This three-story, brick house has been restored and is the property of the Rock County Historical Society. Villa Louis (NRHP 1966), in Prairie du Chien, is a fine Italianate house dating from 1872, although with subsequent alterations. It is two stories high and surrounded by a veranda. An example of an Italianate house wrapped around a square tower is the Robert Bashford House (NRHP 1973), built in Madison in 1857. It is two stories high with a three-story tower and was built of local sandstone. Also in Madison is the Italianate Old Executive Residence (NRHP 1973), built by 1856 of local sandstone.

More numerous than high-style Italianate residences are the ubiquitous one-to-two story frame cottages of the era, characteristic of Wisconsin's countryside and small communities. Occasionally, these vernacular houses carry abbreviations of Italianate detail (bracketing, bays, decorated porches), but more often they recall only the picturesque massing and proportions of the style.

A better indication of the extent of growth and settlement in the state during the period is the frequency of Italianate commercial design. Italianate references are typically found the bracketed cornice, which often rises above a flat or shed roof, and at the windows. Nearly every Wisconsin city and village has its examples, often surviving in near-original form in upper-story wood, stone, or iron hoodmolds, brackets, and cornices. Substantial portions of commercial areas in Stoughton, Ripon, Janesville, Brodhead, and a number of other cities are composed of Italianate stock. (See also HIGH VICTORIAN GOTHIC AND ITALIANATE)



ITALIANATE
Old Executive Mansion
Madison
1854-1856

OCTAGON (1845-1860)

The use of the octagonal plan in building was popularized through the writings and lectures of noted phrenologist Orson Squire Fowler during the mid-nineteenth century. Fowler, who had an abiding interest in architecture, advocated the octagon as the most beautiful and functional of building forms because it so closely mirrored the spherical shapes of nature. He theorized that an eight-sided house would be cheaper to build because its exterior walls would enclose more space than a rectangle, and it would be easier to heat in the winter and (with a cupola on top) easier to vent in the summer.

In 1848, Fowler set forth his architectural philosophy in a book entitled A Home for All. A few years later, during a western tour, he met Joseph Goodrich, a founding father of Milton, Wisconsin. The innovative Goodrich had built the hexagonal Milton House (NRHP 1972) in 1844, using a mixture of gravel, slaked lime, sand, and water which Goodrich called "grout." It was one of the earliest uses of concrete in the United States. Fowler was so impressed with its strength that upon his return home to Fishkill, New York, he leveled his partially built Octagon home and rebuilt it with grout. He then revised A Home for All under a new subtitle: The Gravel Wall and Octagon Mode of Building New, Cheap, Convenient, Superior, and Adapted to Rich and Poor (Boulton 1983:14-17).

It should be noted that Fowler was not the first nor the last proponent of the ocatagon form. The ancient Greeks and Romans had built octagonal structures over a thousand years before and Thomas Jefferson had utilized it in a design for his small retreat in Bedford County, Virginia. Later, during the 1870s, Alexander Jackson Davis chose the form for a number of public and private buildings, among them the insane asylum on New York City's Roosevelt Island.

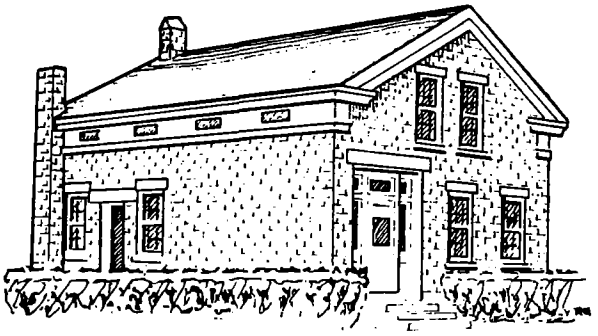
Other nineteenth century proponents of the octagon form include Samuel Sloan who included a number of octagonal designs in his Model Architect, published in 1852, and Henry Barnard, who authored School Architecture in 1849, with specifications for an octagonal schoolhouse. Nevertheless, it was primarily Fowler who promulgated interest in the octagonal plan.

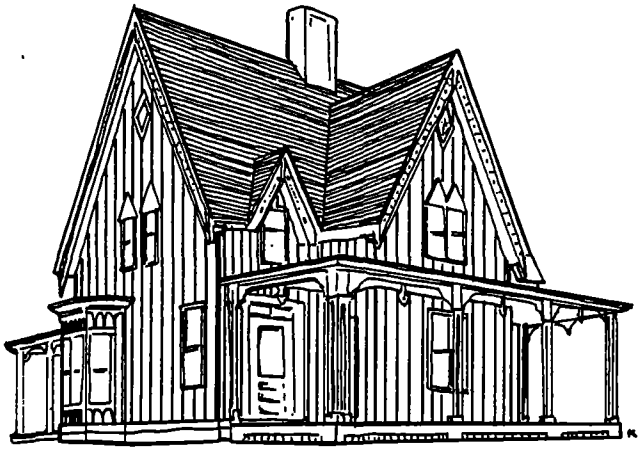
The greatest concentration of surviving Octagons may be found in New York, Massachusetts, and Wisconsin (Whiffen 1969:86). Of Wisconsin's approximately 20 extant octagons, nearly half are listed on the National Register of Historic Places. While none of these buildings are absolute copies of Fowler's published plans, several Wisconsin residences are considered among the best surviving examples of the style. The John Richard House, built in 1854 in Watertown (NRHP 1971), very closely resembles Fowler's "Superior Plan for a Good-Sized House," while the Edward Elderkin House, built in 1856 in Elkhorn (NRHP 1974), is a faithful adaptation of what Fowler termed "Howland's Octagonal Plan" (Perrin 1967:41).

In Wisconsin, the Octagonal mode was primarily applied to residences, although there is a surviving example of a schoolhouse near Cedarburg and an Octagon library is located in the Town of Empire, Fond du Lac County. These structures range from one to three stories in height and building materials include brick, clapboard, or grout. While Fowler determined that architectural detailing should be kept to a minimum, many of Wisconsin's octagons reveal a distinct Italianate orientation.

In A Home for All, Fowler also made specific suggestions about octagonal barns. But the octagonal barns of Wisconsin were not built until the late nineteenth and early twentieth centuries. While Fowler's suggestions may have been followed in the construction of some of these buildings, it is doubtful that his ideas for barn buildings were followed directly (Apps 1977:42-42). Instead, these turn-of-the-century barns were probably based on designs promulgated by agricultural colleges that began appearing in the late nineteenth century.

GREEK REVIVAL
Andrews House
Mukwanago
1842





GOTHIC REVIVAL
A.G. Tuttle House
Baraboo
1867-1869

OCTAGON
Richards House
Watertown
1854

ROMANESQUE REVIVAL (1855-1885)

The Romanesque Revival recalled the round-arched medieval style that had preceded the pointed-arch Gothic in Europe. Architects James Renwick and Richard Upjohn introduced the style in the eastern United States in the 1840s, although in Wisconsin and other German settled areas it may have been introduced by German immigrant architects. A monolithic style marked by the repetition of the rounded arch in windows, entrances, and corbel tables, it was most often executed in monochromatic brick or stone. Towers were often employed and may have been finished off with parapets or a pyramidal roof. Asymmetrical massing was achieved with towers of differing heights and roof shapes, but symmetrical compositions of the style were also common. Like the Gothic Revival, the Romanesque Revival was considered appropriate for ecclesiastical buildings; it was also a popular style for commercial structures of the period.

An excellent small-scale commercial example of the style was the C. S. Weston Block built in 1878 in Oshkosh (now demolished) which exhibited elaborate corbel tables. Milwaukee and other Wisconsin cities boast distinguished examples of Romanesque Revival churches of the period, although many more have been lost through attrition. Two good examples are the First Congregational Church in Platteville (1869) (NRHP 1985) and St. Francis of Assisi Roman Catholic Church in Milwaukee (1876) (NRHP 1984).

The Romanesque Revival was also translated by rural artisans building local churches, primarily by incorporating the round arch in windows and doors. A particularly sophisticated example is the St. John the Baptist Catholic Church built in 1857 in Johnsburg, Fond du Lac County, executed in coursed, rough-cut limestone (NRHP 1980).

Two excellent sandstone examples of the style are the Gates of Heaven Synagogue built in 1863 (NRHP 1970) and the very elaborate Carrie Pierce House built in 1857 (NRHP 1972), both in Madison and designed by the partnership of Samuel Donnel and August Kutzbock. The German-born Kutzbock was influenced by the "round arch style" (Rundbogenstil), a revival of Romanesque architecture popular in mid-nineteenth century Germany.

ROMANESQUE REVIVAL
Pierce House
Madison
1857-1859

HIGH VICTORIAN GOTHIC AND ITALIANATE (1865-1900)

During the High Victorian period, eclecticism was the order of the day. Features of Gothic Revival, Italianate, Romanesque, or Second Empire were often combined, resulting in picturesque facades. Two dominant strains of the period were High Victorian Gothic and High Victorian Italianate.

The High Victorian Gothic exhibits heavier detailing and more complex massing than the earlier Gothic Revival. The English critic John Ruskin was the philosopher of the movement, publishing his influential Seven Lamps of Architecture in 1848. High Victorian Gothic draws upon varied European medieval sources, all employing the pointed arch, although Ruskin promoted the Italian (Venetian) form as superior to the English tradition. Polychromatic effects, a hallmark of the style, are achieved by the use of materials of differing color and texture.

Examples of the style are relatively rare in Wisconsin. Like the Second Empire, the style was often employed for large public and institutional structures. The attrition rate for such buildings has been high, perhaps because such architectural statements appeared outmoded, and their facilities obsolete, even in the early twentieth century.

Wisconsin's preeminent example of the style is the National Soldier's Home (1868) in Wood, designed by Edward Townsend Mix (determined eligible NHRP 1980). Although the five-story structure exhibits a mansard roof in the Second Empire Style, the polychromatic treatment of the surface materials and the repetition of the pointed arch place the building closer to the High Victorian Gothic Mode. The Warner and Wharton Block (1873) in the College Avenue Historic District in Appleton (NRHP 1982), with its Gothic arch in the roof-line arcading and polychromatic treatment of the second-story window caps, is an excellent illustration of the style on a smaller scale. Immanuel Presbyterian Church (1874) (NRHP 1974) in Milwaukee well represents the appropriate ecclesiastical application.

Another dominant strain during this electic period was the High Victorian Italianate, a more elaborate expression of the earlier Italianate style. Classical detailing is heavier than that found in earlier Italianate structures, cornice brackets are overscaled, and window moldings are highly articulated. The style was particularly popular for commercial structures, examples of which abound in the older business districts of Wisconsin's cities and small towns. Outstanding High Victorian Italianate structures include the McClurg Building (NRHP 1977) in Racine and 15 S. Main Street (1876) in Fond du Lac.

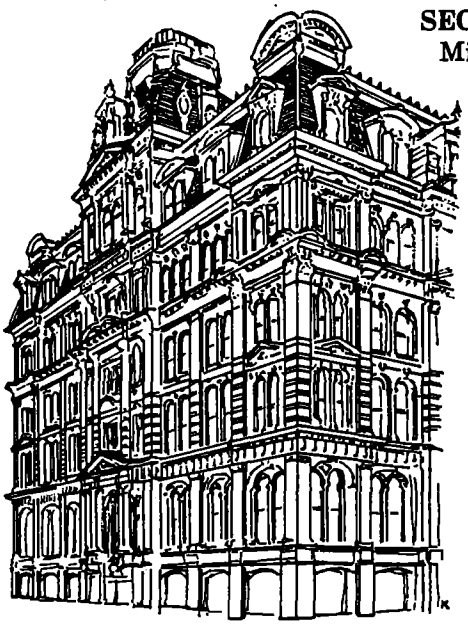
SECOND EMPIRE (1870-1880)

Second Empire buildings are quickly identified by their characteristic mansard roofs, with curbs around the tops of the visible slopes. Dormer windows are typical. Usually these buildings are tall and boldly modeled, and in their more elaborate versions very richly ornamented. Some Second Empire houses may have a visual similarity to early Italianate houses. Though the two movements were independent of each other, they overlapped in time and elements of Second Empire influence may be found in some Italianate houses. In its Wisconsin form the style often included Italianate details, although Second Empire effects were also achieved through the addition of mansard roofs to earlier, often Italianate houses. In its original state, the Alexander Mitchell House (NRHP 1986) at 900 West Wisconsin Avenue, Milwaukee, was an example of this type of house, as is Madison's Keenan House, at 28 East Gilman Street.

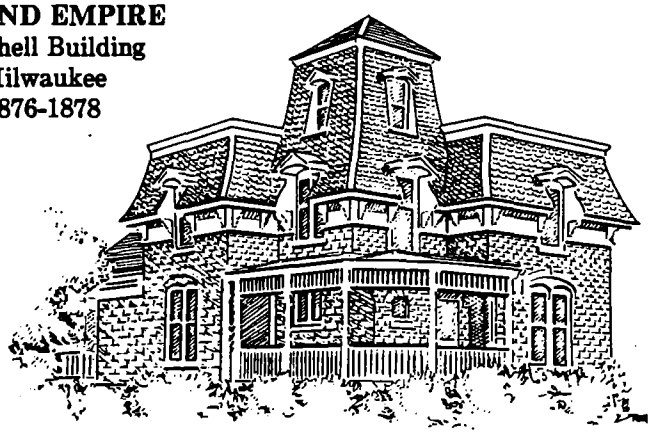
The style takes its name from the French Second Empire, the reign of Napoleon III (1852-1870). One of the first great public works of the Second Empire in Paris was the extension of the Louvre. Known as the New Louvre, it became the key building associated with the style (Whiffen 1981:103).

Several examples of the Second Empire Style can be found throughout the state. The well-known Mitchell Building (NRHP 1973), 207 East Michigan Street in Milwaukee, was built in 1876 and designed by Edward Townsend Mix in a fine Second Empire manner. The Jones House, 512 Wisconsin Avenue, Madison, was built in 1877 and is a restrained, brick example.

Historic photographs and lithographs suggest that Second Empire buildings were once more common in Wisconsin than the contemporary inventory might indicate. The style was popularly utilized for large public and institutional structures, but the attrition rate has been high as they were replaced by "modern" buildings beginning in the late nineteenth century.



SECOND EMPIRE
Mitchell Building
Milwaukee
1876-1878



SECOND EMPIRE
H.J. Wheeler House
DePere
1878

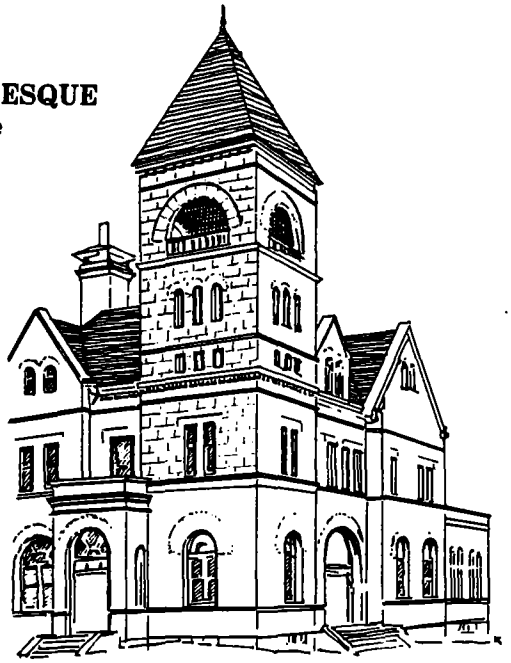
RICHARDSONIAN ROMANESQUE REVIVAL (1880-1900)

Henry Hobson Richardson (1838-1886) is generally considered one of the greatest native American architects, along with Louis Sullivan, and Frank Lloyd Wright. Richardson developed a style of robust architecture based on Romanesque forms but freely translated, and also worked in the Shingle Style. Wisconsin has no buildings designed by Richardson, but his influence was widely felt in the state in the 1880s and 1890s. The style is characterized by masonry construction, a general massiveness, simplicity of form, and impressive strength and durability. Like its Romanesque prototype, it is a round-arched style.

One of the best examples of the style in Wisconsin is the Milwaukee Federal Building and Courthouse (NRHP 1973), built from 1892 to 1899, and undoubtedly inspired by Richardson's Allegheny County Courthouse in Pittsburgh. Here is a massive, granite building with an arcaded north portico reflecting Richardsonian taste. Here, too, are the steeply-gabled wall dormers, round turrets and a prominent, pyramidally-roofed square tower.

The brownstone quarries of northern Wisconsin afforded a ready supply of building material suited to the style. During the late nineteenth century Lake Superior brownstone became a popular building material and was shipped to all parts of the country from Wisconsin. Particularly fine Richardsonian Romanesque structures, executed in brownstone, can be found in northern communities such as Ashland, Bayfield, and Superior, many of them designed by Ashland architect Henry Wildhagen. These include the 1892 Old Post Office (NRHP 1974) and the 1890 Knight Hotel (now demolished) in Ashland. St. Paul's Episcopal Church (1882-1890) (NRHP 1974) in Milwaukee, designed by Edward Townsend Mix, is another fine brownstone example. The Old Waukesha County Courthouse (1885) (NRHP 1975) in Waukesha displays walls of cream-colored limestone, a building material also popularly employed for this style.

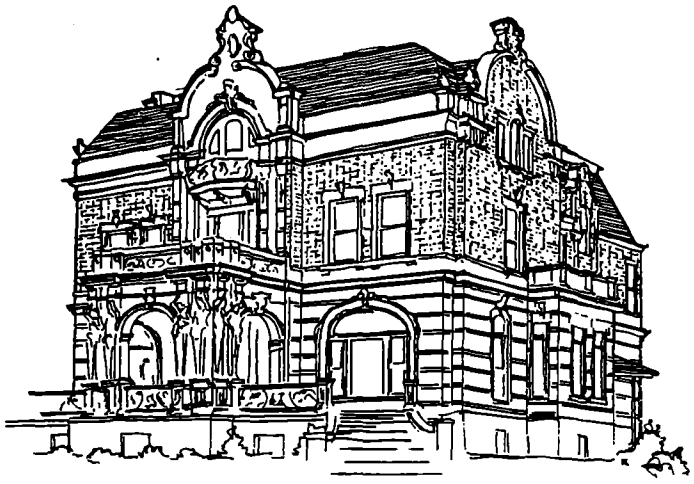
RICHARDSONIAN ROMANESQUE
Old Ashland Post Office
Ashland
1892-1893



GERMAN RENAISSANCE REVIVAL (1880-1910)

Although the spirit of historical revivalism in late nineteenth century America could admit forms of nearly any nation or culture, the magnitude of one source of Wisconsin's heritage resulted in a notable local architectural manifestation: the "German Renaissance Revival." The greatest local concentration of such buildings is in Milwaukee, where the number and industry of immigrant Germans created a German intelligentsia in the late nineteenth century. Especially when served by German-born and/or German-trained architects like H. C. Koch, Otto Strack, and Eugene Leibert, these German clients sponsored the creation of a revival style with stronger cultural association than the more standard national fads. It may well be that the use of Northern European forms, characteristic of sixteenth century Germany and Flanders, was also encouraged by the concurrent popularity of the English Queen Anne Revival, which also drew some of its inspiration from these northern sources. A secondary concentration of these highly decorative buildings can be found in Sheboygan County, where German settlement and industry was also especially strong. The German Renaissance strain was also significant in brewery design, readily recalling the cultural apex of brewing art.

Although Wisconsin German Renaissance Revival designs were hardly canonical or "correct," in general the style can be identified by its stepped "Flemish" gables with curved consoles, fractables, slim piers rising to finials, and sculptural ornament. The best examples of the form include the Joseph Kalvelage House (1896-98) (NRHP 1978) and Frederick Pabst House (1890-92) (NRHP 1975) in Milwaukee, and the Chief Oshkosh Brewery (1879, 1911) in Oshkosh. These imaginative buildings are among the best-designed and most substantial "monuments" of their respective communities, and they are certainly among the most visually distinctive.



GERMAN RENAISSANCE REVIVAL
Kalvelage House
Milwaukee
1896-1898

STICK STYLE (1870-1890)

Precursors of the Stick Style were found in designs published in Downing's pattern books, so it is not surprising that Stick Style buildings bear a generic resemblance to wooden Gothic cottages of the 1850s. But the Stick Style is not as "Gothic" in details and is less eclectic, stressing "truthfulness" in materials through the use of exposed stick work, whether structural or applied. The style also draws upon the wooden detailing of the Swiss Chalet and homes built in this mode were often called "Swiss Chalet" during the nineteenth century. (The term "stick style" was coined by the American architectural historian Vincent Scully.)

Stick Style houses have tall proportions with high and steep roofs. They are complex and irregular in massing and silhouettes, and are normally built with clapboards having an overlay of other horizontal and vertical boards and, sometimes, diagonals. Eaves have considerable projection and are supported by large brackets.

The popularity of the Stick Style was relatively short-lived, partially due to the interruption in building activity which followed the panic of 1873. Stick Style structures are very rare in Wisconsin. In most cases, Wisconsin structures which allude to the Stick Style are more Queen Anne-like in form, with stick-sheathed walls and restrained detail,such as that exhibited by the Helen O'Connell House (1897) at 1022 Mound Street in Madison. The ornamental use of framing boards displayed in the residence at 931 Bluff in Beloit also indicates the influence of the style. The term "Stick Style " can only truly be used in reference to a very few Wisconsin buildings.

STICK STYLE
931 Bluff
Beloit
1890

QUEEN ANNE (1880-1910)

The Queen Anne style, variously referred to as Neo-Jacobean or Free Classic in England, was initiated by British architects in the 1870s and reached Wisconsin by the 1880s. American Queen Anne houses are characterized by an irregularity of plan and massing and a variety of surface textures, roofs, and wall projections. Shingle or clapboard siding sometimes appears above a brick ground story. Roofs are steeply pitched, usually with a dominate front-facing gable; and cutaway bay windows are frequently employed, as are round or polygonal turrets. The asymmetrical facades often display wrap-around verandas as well. Architectural details are normally of a classical nature and tend to be small in scale, overwhelmed by the building itself.

The overall effect of complexity and irregularity distinguishes the Queen Anne from all preceding American styles. Its influence on American architecture survived well into the first decade of the twentieth century, although ornamentation became more classical and restrained and the style more rectilinear in shape.

In England, the Queen Anne style was developed by a group of architects who were reacting against the extreme didacticism of those who believed that the Gothic Revival was the only proper style. Architects such as Norman Shaw found the traditions of English domestic vernacular architecture to be equally admirable and more suitable to contemporary needs than the Gothic Revival. As such, the movement revived tile-hanging, weather-boarding, and half-timbering. It later expanded its vocabulary to include elements of seventeenth and eighteenth century brick structures, such as Flemish gables, and ultimately added classical detailing. The Queen Anne movement was mentioned for the first time in the British architectural press in 1872 (Girouard 1977:57). Although it was not without its vociferous critics, the style became exceedingly popular in England by mid-decade.

The American expression of the Queen Anne must be understood in the context of the intense interest in colonial forms that began sweeping the country during the 1870s. As the noted Boston architect R. S. Peabody stated in 1877 in reference to the Queen Anne, the "beautiful work of Colonial days" was perceived to be the American architects' "legitimate field for imitation" (Girouard 1977:209). While this interest ultimately gave rise to the Colonial Revival style, neo-colonial detailing distinguished the Queen Anne in the United States from that in Britain. Additionally, the American Queen Anne was most often clad in wood rather than brick.

An example of this picturesque style is the Frank Chenoweth House (NRHP 1976) at 10th Street and 20th Avenue in Monroe, built 1887 - 1888. Here an octagonal, pyramidal-roofed tower is the dominant feature, and a rambling veranda covers two sides of the ground floor. The main part of the house is brick, with bay windows, and the open gable ends of the third story are shingled. In Madison, the more subdued Daniel Campbell house, 125 East Gilman Street, was built in 1883 and has a clapboard lower portion with shingled gables above. Its round tower is the dominant element.

When they occur, Queen Anne commercial buildings tend to be multi-storied with bay windows and period ornament, or dominated by "Flemish" gables and similar decoration; they are generally more akin to the English Queen Anne. The Chauncey Hall Building (1883) (NRHP 1980) at 340 Main Street in Racine is one of the state's best examples.

SHINGLE STYLE (1880-1910)

The Shingle Style evolved from the Queen Anne style, but the overall effect of the Shingle Style is simpler and quieter, with more emphasis on volume and horizontality and less variety in color and material. The walls of the upper story, and often of the ground story, have a uniform covering of shingles. If the lowest story is not shingled, it is typically stone, or sometimes brick. Roofs may be hipped, gabled, or both, and may be gambrel. The pitch of the roof is more moderate than the Queen Anne, with broad gable ends. Like the Stick Style, Wisconsin expressions of the Shingle Style are typically closer to the Queen Anne; even diluted forms of the style are very rare in Wisconsin. The 1888 Jessie Jack Hooper House (NRHP 1978) in Oshkosh is one of the state's best examples of the Shingle Style. Shingled on all three stories, it exhibits the small paned windows, eyebrow dormer, broad gable ends, and strong horizontal elements characteristic of the style. The David Gould House (1899) in Oconomowoc is another excellent example of the Shingle Style as manifested in Wisconsin.

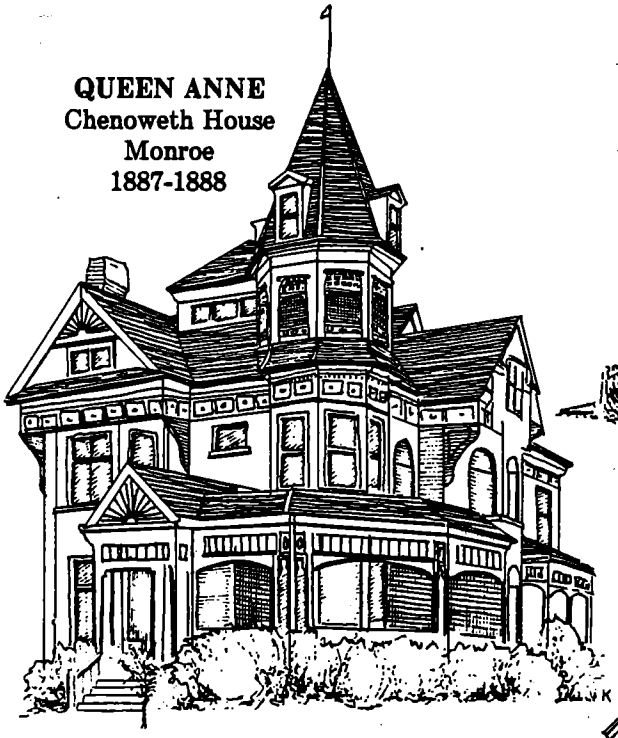
Perhaps the foremost practitioner in this style in the Midwest was Joseph Lyman Silsbee. The 1886 Unity Chapel (NRHP 1974), near Spring Green, and the J.S. Norton house and caretaker's cottage on Lake Geneva are Silsbee's Shingle Style designs known to exist in Wisconsin.

A preponderance of exterior shingles in the absence of other Shingle Style characteristics is not sufficient justification for attributing the "Shingle Style." For example, the Charles Buell House (1894) in Madison's University Heights Historic District (NRHP 1982) is more properly called Queen Anne, although it is sheathed in shingles. The massing and detailing of this house are clearly Queen Anne, not Shingle Style.

SHINGLE STYLE
Hooper House
Oshkosh
1888

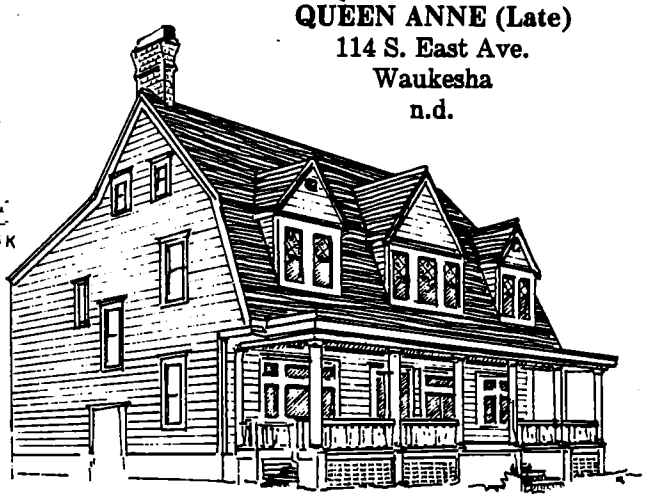
COLONIAL REVIVAL (1895-1920)

The Colonial Revival and Neoclassical styles developed concurrently at the turn of the century. American architects and builders, strongly influenced by the revived interest in American traditions generated by the Philadelphia Centennial in 1876, began to incorporate architectural elements from the Georgian and Federal styles (and to a lesser degree from Dutch colonial prototypes) into their building designs. Colonial motifs (broad classical porches, gables, decorative swags, festoons, and pediments) were often incorporated into Queen Anne style houses. More classically correct motifs, however, appeared on simpler, more symmetrical Colonial Revival structures. The John S. Gittens house (1895), at 823 North Broadway in De Pere's North Broadway Street Historic District (NRHP 1983), is a good example of this Colonial Revival style. The simplicity and regularity of the style lent itself well to standardization, and a colonial "temper" lay behind many of the builders' houses of the early decades of the twentieth century. Some forms of the Colonial Revival are more properly referred to as Georgian Revival, because of their reference to early American Georgian architecture. These Georgian Revival structures, like the Richard T. Ely house (NRHP 1974), built in Madison in 1896, tend to be larger in scale and more richly finished than Colonial Revival buildings. Testimony to the enduring popularity of both the Colonial Revival and Georgian Revival was their recurrence in the 1920s-1940s. (See "Period Revival Styles").



QUEEN ANNE
Chenoweth House
Monroe
1887-1888

QUEEN ANNE (Late)
114 S. East Ave.
Waukesha
n.d.



COLONIAL REVIVAL
Gittens Residence
DePere
1895

NEOCLASSICAL REVIVAL (1895-1935)

The World's Columbian Exposition of 1893 in Chicago effectively turned the Victorian tide back to classicism. "White City," as it came to be called, was a formal grouping of classical buildings created by some of the nation's most prominent architects and was viewed by millions of Americans. It reinstilled in the nation a belief in the classical ideal, which resulted in the unprecedented production of Neoclassical buildings using classical details. The style was particularly popular for public and institutional buildings, as well as commercial structures, especially banks.

One of the better-known architects of "White City" was George B. Post, of New York City, who was selected to design Wisconsin's state capitol in 1906. He had executed the Manufacturers' and Liberal Arts Building, prominently located on a central lagoon at "White City." When Wisconsin's second state capitol building caught fire and was partially destroyed in 1904, plans began for the construction of a new building. This was partially due to the fact that even before the fire, the old capitol was considered too small. Two competitions were held to select an architect, because the first resulted in an unsatisfactory solution. The second competition, held in 1906, led to the selection of Post as the architect, and his Neoclassical Capitol Building (NRHP 1970) in Madison was begun the next year. The capitol is a four-winged cross in plan, with a French Neoclassic dome directly inspired by Soufflot's Pantheon in Paris and crowned by the goldleafed "Miss Forward," a sculpture executed in the classical manner by Daniel Chester French.

Another equally Neoclassical structure is the State Historical Society building (NRHP 1972). Completed in 1900, it is located at 816 State Street in Madison. This building was inspired by the Place de la Concorde's Colonnades in Paris, and was designed by the Milwaukee firm of Ferry and Clas, which had been commissioned to design a number of Neoclassical buildings in Milwaukee.

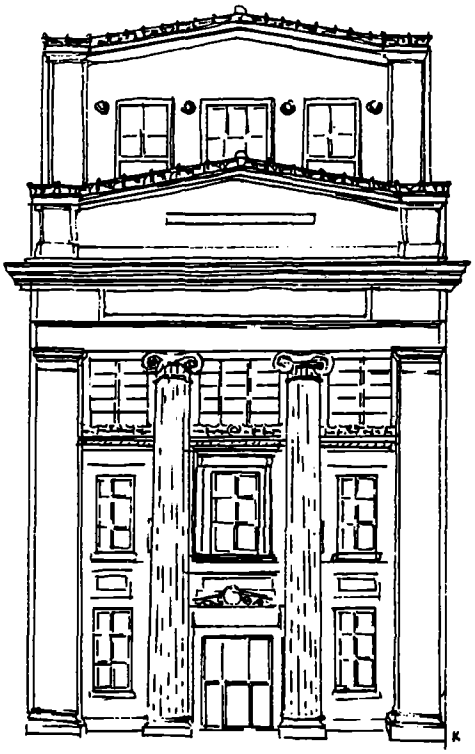
Fine smaller scale representations include Carnegie libraries in Sparta (1902) (NRHP 1981), Bayfield (1903) (NRHP 1980), and Washburn (1904) (NRHP 1984). Commercial examples of the style include the Daily Northwestern Building (NRHP 1982), built in 1927, and the Wisconsin National Life Insurance Building, built in 1930; both are located in Oshkosh and were designed by the firm of Auler, Jensen, and Brown. Masonic Temples erected during this period often employed Neoclassical styling. A good example is located on Wisconsin Avenue in Madison.

A very late Neoclassical building is the Milwaukee County Courthouse (NRHP 1982), designed in competition by New York architect Albert Randolph Ross. Frank Lloyd Wright scornfully called this building a "million dollar rock-pile." It is located at 901 North 9th Street and was completed in 1931.

COLONIAL REVIVAL
Anthony J. Kubec House
Kenosha
1902

BEAUX ARTS (1895-1920)

A specialized aspect of the Neoclassical Revival, the Beaux Arts style, is based on monumentally-conceived classical design as systematically taught in the eighteenth and nineteenth centuries at the Ecole des Beaux Arts in Paris. In truest forms, these buildings have ceremonial plans (described as "parlante" at the nineteenth century French Ecole des Beaux Arts) and details (sometimes termed Neo-Grec) expressive of purpose and use. Beaux Arts buildings share many of the formal characteristics of their Neoclassical Revival contemporaries, but often include paired monumental columns, blind parapets or balustrades, decorative urns, anthemia, orbs, and sculpture. Like Stick and Shingle style buildings, true examples are uncommon in Wisconsin. The Northwestern National Insurance Company building (1906) at 526 E. Wisconsin Avenue in Milwaukee, and the Racine Public Library (1903) (NRHP 1981) are good examples.



NEOCLASSICAL
Marshall and Illsley Bank
Milwaukee
1911 (demolished)

BEAUX ARTS
Racine Public Library
Racine
1903-1904

COMMERCIAL OR CHICAGO STYLE (1895-1930)

The Commercial Style refers to the commercial and office form that developed in the late nineteenth century, primarily in response to the new technologies that permitted greater physical height and larger expanses of open floor space. The style is sometimes termed the "Chicago Style" because experimentation with the form flourished in that city after the 1871 fire. Metal skeleton framing, first in cast and wrought iron, later in steel, was foremost among the new technological developments. Typically five or more stories in height, the Commercial Style's character derives from its fenestration. Whereas load-bearing masonry walls admitted relatively few windows, the new structural skeleton permitted maximum light and ventilation. The fenestration pattern is usually regular with large divided rectangular windows. A common window type is the "Chicago window," a three-part window with a large rectangular fixed central light flanked by two narrow, double-hung sashes.

Transitional structures of the late nineteenth century often employed exterior masonry bearing walls and iron columns and beams on the interior. The Loyalty Block (1886) in Milwaukee and the Old Superior City Hall (1890) (NRHP 1979) in Superior are examples of this type of transitional form; both structures allude stylistically to their Romanesque antecedents as do many others at this stage of evolution.

Steel-framed structures in Wisconsin exhibiting the glass "curtain wall" include the Railway Exchange Building (1899), the original section of the Gimbel Brothers Store (1901-1902) and the Caswell Building (1907), all in Milwaukee. Characteristically, exterior ornamentation is kept to a minimum.

PRAIRIE SCHOOL (1895-1925)

The Prairie School of architecture was born and nurtured in Chicago in the early twentieth century, and its influence soon spread to Wisconsin. Most examples occur in the upper Midwest, although isolated representatives were built elsewhere.

In 1918, the Prairie School was characterized by architectural historian Irving K. Pond as follows: "In imitation of a certain broad and horizontal disposition of lines individually employed, a school of design has sprung up, for which its authors claim the title, 'American.' The horizontal lines of the new expression appeal to the disciples of this school as echoing the prairies of the great Middle West, which to them embodies the essence of democracy" (Brooks 1972:3-5). Horizontality was the essence of Prairie School design, emphasized by a low, long hipped or gable roof, windows banded in horizontal ribbons, and the use of an emphatic belt course or shelf roof between stories.

Generally, wood, brick, and stucco were the materials used for Prairie School buildings. The richness of these natural materials was especially emphasized, thus becoming a building's ornament. Stylized, abstract and angular patterns were employed in the design of leaded-glass windows, interiors, and furnishings.

Stylistically, the Prairie School owes a philosophical debt to the British-inspired American Arts and Crafts movement. The American movement attempted to reconcile "art" and "the machine," in contrast to the British movement's reliance upon a medieval handcraft ethic. Although it advocated no specific vocabulary of form, the American Arts and Crafts philosophy "demanded simplicity, elimination, and respect for materials" as did proponents of the Prairie School (Brooks 1971:312).

The study of Prairie School architecture initially revolves around a group of architects who interacted, worked together, and exchanged architectural philosophies in Chicago. Two Chicago architectural firms, that of Adler and Sullivan and that of Joseph Lyman Silsbee, played important roles in the development of the radical new architecture in the last years of the nineteenth century. Interaction between three major personalities of the Prairie School was begun in Silsbee's office, where Frank Lloyd Wright, George Grant Elmslie, and George W. Maher were employed simultaneously in 1887. Silsbee, never a Prairie School designer, was then practicing in the contemporary Shingle Style. Wright continued to work in the manner of Silsbee for a number of years after his departure from Silsbee's office. Wright moved to the office of Adler and Sullivan in 1888.

Sullivan, of course, is most widely recognized for his role in the development of the tall, steel-framed building of the "Chicago School." His major impact upon Wisconsin came from his role as a teacher of Wright and Elmslie (although he did execute two buildings in the state relatively late in his career: The Harold C. Bradley House (1909) (NRHP 1972) in Madison and the Farmers and Merchants Union Bank (1919) (NRHP 1972) in Columbus).

Sullivan's architectural heritage was passed on to Frank Lloyd Wright's Oak Park Studio, established in 1895, and to the firm of Purcell, Feick, and Elmslie formed in 1909. Of the two, Wright's practice became far more famous, but Purcell and Elmslie's made a notable contribution to Wisconsin's architecture with the handful of buildings the firm designed for Wisconsin clients.

Wright's Oak Park Studio, in operation until 1909, became a "who's who" of Prairie School architects. Employed here were William Drummond, Barry Byrne, Walter Burley Griffin, Marion Mahony, Francis C. Sullivan, and John S. Van Bergen to name a few. The studio was closed in 1909, when Wright left Chicago permanently. This marked the

end of Wright's major contribution to what is generally considered the Prairie School, although he continued the appellation in his own work for years thereafter.

During his years at Oak Park, Wright designed a number of buildings in Wisconsin. The earliest structure was the Romeo and Juliet Windmill in 1896, at what is now Taliesin. He built the nearby Hillside Home School building in 1902 and the Andrew Porter House in 1907. A cluster of Wright-designed houses dating from 1900 to 1905 still exists on the south shore of Delavan Lake, Walworth County, though Wright did not personally supervise the construction of all of these buildings. In Madison, Wright's buildings include the 1904 Robert Lamp House (NRHP 1978), and the 1908 Eugene Gilmore "Airplane" House (NRHP 1973). In 1905, Wright built the Thomas Hardy House (NRHP 1974) in Racine, which, like the Gilmore House, is dramatically related to its site in what author Henry-Russell Hitchcock calls a "masterpiece" of steep-site design.

The second firm directly influenced by Louis Sullivan was Purcell, Feick, and Elmslie, formed in 1909 and shortened to Purcell and Elmslie in 1913 when Feick left. Purcell and Elmslie are often considered the direct successor of Sullivan because of Elmslie's artistic talen and 14 years of experiences with the master and Purcell's understanding of Sullivan's work. The First National Bank in Rhinelander (1911) (NRHP 1973) and the Harold C. Bradley House (1914-1915) in Shorewood Hills are among their distinguished Prairie School designs.

Many other Prairie School architects undertook commissions in Wisconsin, including Frank Francis Sullivan, Robert C. Spencer, George Maher, and Barry Byrne. Two native architects, Louis W. Claude and Edward F. Starck, set up practice in Madison in 1896 after working in Louis Sullivan's office. Not surprisingly, Claude and Starck worked in the Prairie School manner, though their practice included Period Revival designs as well. The firm was responsible for the designs of over 40 libraries; these are primarily located in the Midwest and many are in the Prairie School manner. The firm also designed several public schools in the Prairie School manner, including the 1915 Lincoln School (NRHP 1980) in Madison. Much of the firm's residential work is found in Madison.

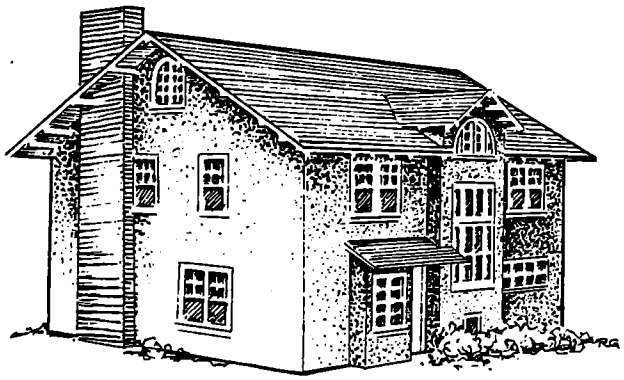
Alvan Small, another Wisconsin native practicing the Prairie School, worked in the Madison area. La Crosse native Percy Dwight Bentley was an exceptional Prairie School architect who never studied with any of the Chicago Prairie group. His Prairie School designs are concentrated in the La Crosse area.

A later Wisconsin architect who practiced in a manner similar to the Prairie School, but who had no Chicago experience, was Russell Barr Williamson. He worked for Wright from 1914 to 1918, and then set up an independent practice. Eventually he designed over 30 houses in Wisconsin and for many years had an office in Sheboygan. In 1922 and 1923, he designed two houses for Anthony and Frank Isermann on Seventh Avenue in Kenosha.

ARTS AND CRAFTS (1900-1920)

The English Arts and Crafts Exhibition Society was formed in 1888 by a group of artists and architects who had already worked together in limited association for several years. The group was dedicated to a revival of the tradition of craftsmanship and cooperation of the medieval guilds. John Ruskin, William Morris, and others within the movement sought to counter the evils and standardization of industrialized society with an ethic and aesthetic in the lineage of the early nineteenth century Gothic Revival. Even more than the subsequent American Craftsman and Prairie reforms, the Arts and Crafts idea involved comprehensive design in furniture and the decorative and fine arts, usually simple in form but with the rich embellishment and ecclesiastical look characteristic of the finest objects produced in the Middle Ages. Best representing the building art was C.F.A. Voysey, whose late nineteenth and early twentieth century stucco surfaced houses were in the form of traditional English cottages. Their simplified medieval elements, similar to elements used in Queen Anne style buildings, established a more casual "modern" mode of English country house.

Wisconsin buildings reflecting the English aspect of turn-of-the-century design reform (rather than the parallel American Craftsman and Prairie Schools) are simple in form, with expansive stucco surfaces and little decoration aside from well placed (usually irregular) multi-paned windows. Shingled roofs are typical and, in certain instances, are padded at the edges to recall thatch. As in Craftsman and Prairie interiors, wood is extensively employed to warm and enhance spaces. Even large houses in the Arts and Crafts style are humble in character, yet project an elegance and a historicity that Tudor and Elizabethan Revival houses lack. The number of Arts and Crafts houses in Wisconsin communities is quite small, suggesting that the understated romanticism and the informality of the form had less appeal than the more robust or traditional alternatives of the time. One of the best examples of the style is Elderwood (NRHP 1980) at 6789 North Elm Tree Road in Glendale, Milwaukee County.



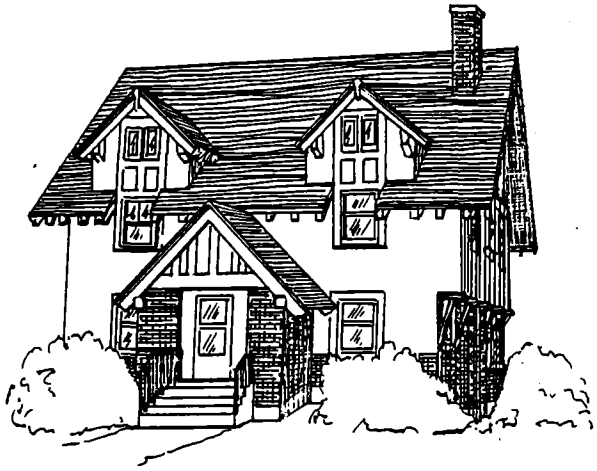
ARTS AND CRAFTS
1825 Summit Ave.
Madison
1913

AMERICAN CRAFTSMAN (1900-1920)

The American Craftsman style was a philosophical descendant of the English Arts and Crafts movement of the nineteenth century. It was directed primarily by Gustav Stickley in New York and a group of eastern educated architects, including Bernard Maybeck and the Greene brothers working in California. In their work both groups demonstrated much of the same "natural" aesthethic in distinctive, well-crafted, wood houses, although the California group did tend toward larger, more extravagant interpretations of the style.

Most Wisconsin Craftsman houses have the appearance of oversized bungalows, distinguished by quality construction and simple but handsome exterior and interior details. The effect is visually akin to the types of houses promoted by Stickley, but with a more standardized look. Nearly every city in the state has a few of these Craftsman houses. Normally two-and-one-half stories in height, they are constructed of brick, stucco, or stone, with contrasting wood bands or courses. Characteristically, they possess broad gable or hipped roofs, usually with one or two large front dormers, decorative brackets or rafters, prominent chimneys, and simplified Queen Anne sash. Sometimes, a glazed sunporch or open wood pergola appears on Craftsman houses, in addition to the hallmark open porch with heavy piers. Interiors are composed of airy rooms with simple surfaces of plaster and wood. Two excellent examples of the style are the Frank Hayes residence at 1820 Hammond Avenue in Superior and the Olsen-Apfelbach house at 630 East Holmes Street in the Courthouse Hill Historic District in Janesville.

Born in Osceola, Wisconsin, Stickley advocated the concept of "beauty through elimination" and promoted his philosophy and style at his workshops in Eastwood, New York, and in the publication, The Craftsman, from 1901 to 1916. Like the English Arts and Crafts movement, the craftsman aesthetic was the visible token of a moral commitment to the betterment of hearth, home, family, and society through art. The concurrence of Stickley's activities with the expansion of the building trade, the establishment of major mail order houses and building supply services, the proliferation of magazines devoted to the household arts, and the parallel development of the Midwstern Prairie Style, worked to secure this practical "democratic" and "American" mode of design and living.



AMERICAN CRAFTSMAN
A.G. Fee House
Superior
1909

AMERICAN FOURSQUARE (1900-1930)

Popularized during the first decades of the twentieth century by mail-order catalogues and speculative builders, the American Foursquare was part of a larger movement toward simplified rectilinear domestic architecture. Distinguished primarily by its box-like massing and broad proportions, and often devoid of overt stylistic references, the prototypical Foursquare is two stories in height, with a hipped roof, widely overhanging eaves, central dormers, and a one-story porch spanning the front facade. Window and doors are generally treated in a straightforward manner. Side windows often light the interior stairway. Several features served to alleviate the stark massing and straight lines of the Foursquare. The low pitch and overhanging eaves of the hipped roof (echoed in the dormer and porch roofs), minimize some of the structure's sheer bulk. The front porch, an essential component of the Foursquare plan, is often supported by Tuscan columns and features a filled-in or balustraded railing. Exterior materials contribute to the character of the house, and fabrics include brick, stone, stucco, and concrete block, as well as clapboard and shingles. Sometimes a Foursquare house combines a fieldstone or concrete block foundation with upper stories of clapboard, brick, or stucco. Other examples will alternate materials by floor.

Occasionally, the simplicity of the exterior is embellished by period details. Palladian windows add a Colonial flavor to some examples, while exposed rafters beneath the eaves of other Foursquares reflect the Craftsman tradition. The strong horizontal lines of the Prairie School style are sometimes applied to the otherwise cubic house. Tile roofs can suggest the Mediterranean revivals, while leaded casement windows add a Tudor flavor. But period details remain subordinate to the Foursquare plan and proportions.

The simple exterior is reflected in the straightforward interior plan of the Foursquare, which typically features four large rooms on each floor, and corner reception hall and stairway (reflected in the asymmetrical placement of the front door). Some examples, however, used a central hall-stairway arrangement, reminiscent of the strict symmetry of the contemporary Colonial Revival. Its ample size took full advantage of lot space, and additions were rarely needed (although some were added to the rear). Relatively simple and inexpensive to build, the Foursquare provided the spacious and "modern" home to Americans for the first several decades of the twentieth century.

AMERICAN FOURSQUARE
2302 W. Kinzie
Racine
n.d.

BUNGALOW (1910-1940)

Far more pervasive nationally than the Prairie School was its contemporary, the Bungalow, which swept across America on the pages of California bungalow magazines and other popular publications during the second and third decades of the twentieth century. The Bungalow vogue and its variations peaked after the Prairie School and had a much greater life span nationally, beginning as early as the late nineteenth century and lasting until around 1940.

The term "bungalow" is derived from the East Asian word "bangla" which, in Bengal, refers to a low house with porches surrounding it. In the mid-nineteenth century, the British were building temporary rest houses called "dak-bungalows" along main roads in India, and the first American Bungalows had a vague Hindu look to them. From their inception in America, Bungalows were thought of as small, modest dwellings with simple horizontal lines, wide projecting roofs, one or two large porches, and plain woodwork. They were usually built with ordinary wood siding, either horizontal or vertical, but sometimes had a stucco, or, more rarely, a stone, log, or brick veneer. The usual Bungalow had a massive chimney, and the living room carried across the front of the house. If a second story was provided, it was subdued visually to give the house a one-story look. Protruding brackets frequently were utilized as decorative features.

Thousands upon thousands of Bungalows were built across the country. A flood of literature on the style emanated from California after the turn of the century in the form of catalogues of plans and magazines from which one could order sets of working drawings.

Bungalows offered economical home ownership and, generally, they were well-constructed of quality materials. Speculative builders between 1920 and 1940 often platted entire neighborhoods for Bungalow development; in large cities such as Milwaukee Bungalow tract homes literally stretch for blocks.

Stylistically, Bungalow detailing may exhibit Japanese, Swiss, or Colonial Revival influences but the "Bungalow boom" is most often identified with Gustav Stickley and the Craftsman Movement. Philosophically linked with William Morris' Aesthetics (or Arts and Crafts) Movement in England, Craftsman tenets included the honest use of materials and expression of structure, inspiration from natural forms, and quality hand craftsmanship. An illusion of rusticity, conveyed by elements like log rafters, characterizes Craftsman detailing in Bungalows.

In Madison, five Craftsman-influenced Bungalows, built between 1908 and 1913 at the corner of Grant Street and Vilas Avenue, were designed by Cora Cadwallader Tuttle. Several of these were the result of collaboration with her nephew Eugene C. Smith who listed himself as a "Bungalow Designer" in city directories of the period. Tuttle, however, is generally credited with the designs. All of these houses have very rustic characteristics and protruding rafters and brackets. The architect-designed Bungalow is the exception, however. One of Wisconsin's most notable Bungalows is the Polson House, located in Spooner and designed by well-known Prairie School architects Purcell and Elmslie.

While a systematic study of this ubiquitous housing type has not been undertaken, intensive surveys have identified some architecturally significant Bungalows and Bungalow districts. Bungalows of the more typical sort may be better evaluated in the context of well-preserved districts, rather than individually. Bungalow developments illustrate the builders' application of popular design elements, the repetition of materials and details, as well as "variations on the theme." The Emery Street Bungalow District (NRHP 1983), identified in the intensive survey of Eau Claire, is a distinct neighborhood of varying Bungalow designs.

BUNGALOW
1602 Emery St.
Eau Claire
n.d.

BUNGALOW
1611 Emery St.
Eau Claire
n.d.

BUNGALOW
1435 Emery St.
Eau Claire
n.d.

PERIOD REVIVAL STYLES (1900-1940)

The term "Period Revival" is often used to describe a wide range of past motifs and styles that architects borrowed during the first four decade of the twentieth century, but particularly during the 1920s. Many architects commonly advertised their expertise in a broad stylistic range during this period. The wide availability of photographs, and the popularization of revival styles through architectural journals, in concert with Beaux Arts exposure, might have allowed for greater historical accuracy. However, many of the best designs of the period are not historically "correct" copies of a mannerism but are the architect's creative interpretation of the style. Whenever possible, the use of the term "Period Revival" should be supplemented with a description of the more specific revival style(s) employed by the architect.

Period Georgian Revival borrowed from the classical forms of Georgian and Federal architecture. The public's intense interest in the American past had been fostered by the 1876 Centennial Exposition and was first manifested in domestic architecture with the application of Georgian and Federal ornamentation to Queen Anne style houses. The pervasive influence of academically-trained architects resulted in more historically "correct" interpretations of the revival styles. Formal, symmetrical facades, rectangular plans, and hipped roofs are characteristic of the Period Georgian Revival style. Architects were able to choose from a wide range of classical details for tasteful embellishment, including denticulated cornices, elliptical fanlights, sidelights flanking doorways, Palladian windows, broken pediments, and classical columns. Two fine interpretations of the style are the Augustus Hugo Vogel House (1911) at 2135 North Lake Drive and the Tallmadge Hamilton House (1904) at 2245 North Lake Drive, both in Milwaukee's North Point South Historic District (NRHP 1979).

Period Georgian Revival also became a popular church style among some Protestant sects during this period. A favorite model of church builders in the eighteenth century was James Gibb's St. Martin-in-the-Fields built in London, 1722-1726. The Period Georgian Revival church form returned to this tradition. The First Baptist Church (1912) in Eau Claire's Randall Park Historic District (NRHP 1983) is a good example of the Period Georgian Revival church style, exhibiting characteristic symmetry, classical detailing, and prominent steeple.

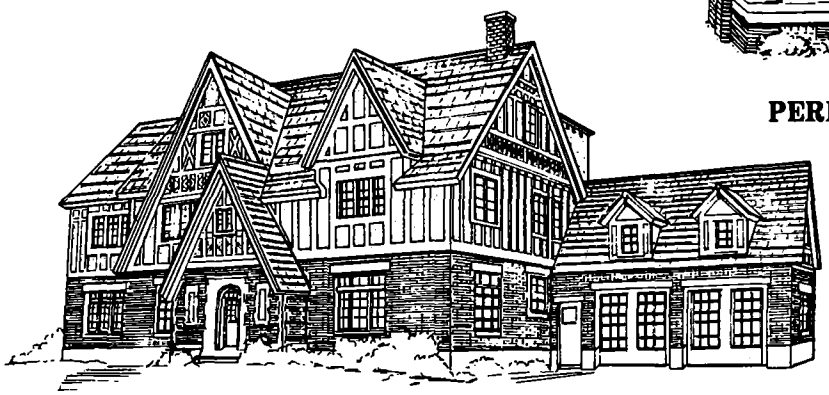
PERIOD GEORGIAN REVIVAL
R. Ely House
Madison
1896

Period Colonial Revival buildings usually include many of the same elements or stylistic references as the Georgian, but are less formal or specific to the Georgian and Federal models. The most numerous of these revival buildings are residences, usually two-stories in height and faced with clapboards. They rely most heavily on a simple, classically derived entrance to communicate their architectural heritage. Symmetry of design is also common, as are gable roofs with dormers. Other eighteenth century architectural references include columns, pilasters, denticulated cornices, and shutters. At times, the form may assume an L-shape to accommodate a breezeway and garage. With clapboard and wood shingle facing and no overt classical references, it may assume a "Cape Cod" aspect.

New life was breathed into the Colonial Revival style with the restoration and recreation of Williamsburg, Virginia, during the 1920s and 1930s, thus reestablishing an American architectural identity in contrast to the contemporary European-conceived International Style. In contrast to their nineteenth century antecedents, the Colonial Revival structures of the 1920s-1940s are much simpler in form and ornamentation and much smaller in scale. A representative example of the style is 2225-27 East Woodstock Place, Milwaukee. Built in 1936, it is included in the North Point South Historic District (NRHP 1979).

Dutch Colonial Revival is essentially an off-shoot of the more formal Georgian Revival style readily identifiable by its gambrel roof, sometimes terminating in flared eaves. Commonly, its symmetry is offset by the inclusion of a small wing at one end. A picturesque quality is often achieved through the use of a combination of building materials including clapboards, shingles, brick, and stone. The style was particularly applied to small-scale suburban residences of the early twentieth century. A good example of the Dutch Colonial Revival style is the Robert E. Locher House (1925) at 2547 North Summit Avenue, in Milwaukee, included in the North Point South Historic District (NRHP 1979).

PERIOD COLONIAL REVIVAL
K.K. Scheutz House
Wausau
1922

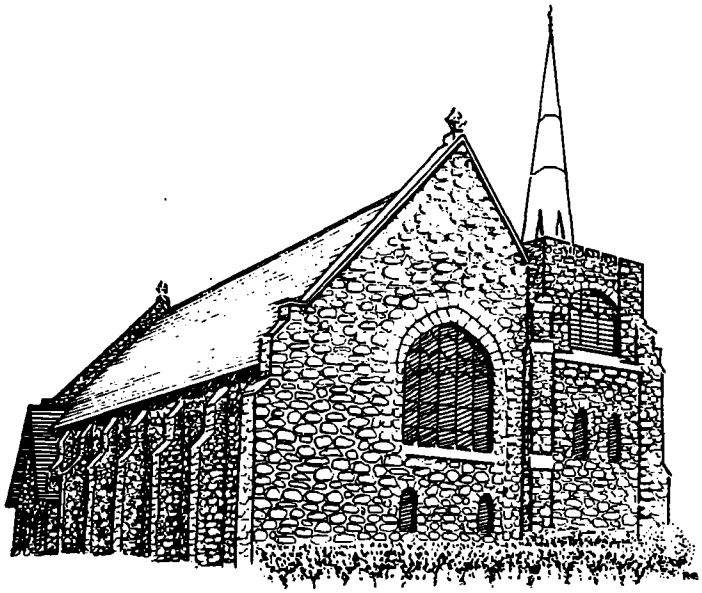


TUDOR REVIVAL
Hale House
Eau Claire
1928-1929

Tudor and Elizabethan Revival styles draw primarily upon English antecedents of the sixteenth century. Ornamental half-timbering applied over a conventional balloon frame structure and in-filled with stucco or brick is a hallmark of the Tudor Revival. Elizabethan Revival buildings, much rarer in Wisconsin, are more commonly of brick with stone detailing. They also tend to be larger in scale and more formal. Both styles are characterized by elaborate decorative chimneys, multi-gabled rooflines, and large window expanses subdivided by a multitude of mullions. Tudor and Elizabethan Revival structures are irregular in plan. Baronial in scale, the Riverbend Farm of Walter J. Kohler (1921) (NRHP 1980) in Kohler is an elaborate statement of the Tudor Revival style, formal in its composition. The Milwaukee firm of Eschweiler and Eschweiler produced numerous Tudor Revival residences of high quality design for their clients in the state, most significantly concentrated in Milwaukee's North Point South Historic District (NRHP 1979) and North Point North Historic District (City of Milwaukee historic district 1983). The C. F. Dunbar house (1926) (NRHP 1980) in Wausau and the Jesse Hoyt Smith House (1913) (NRHP 1979) in Milwaukee are two notable examples of the work of the firm.

Small-scale residential versions of the type, sometimes termed "Cotswold Cottages," often with a "thatched roof" simulated with shingles, are quaint houses of stone, shingles or brick. A grouping of such "cottages" may be found in the Washington Highlands area of Wauwatosa, and a good individual example is located at 213 Warren Street in Hartland.

Neo-Gothic Revival is a subdued form of Gothic Revival in comparison with the polychromy and heavy detailing of the High Victorian Gothic. The English Perpendicular and French Gothic forms predominate in the Neo-Gothic Revival and color contrasts are subdued or non-existent. Its major characteristics include steeply pitched roofs, irregular massing, and random ashlar construction. As a style considered particularly appropriate for certain types of ecclesiastical, educational, and commercial structures, the Neo-Gothic Revival style withstood the resurgent popularity of classicism during the early decades of the twentieth century. The architectural firm of Cram, Wentworth, and Goodhue (later Cram, Goodhue, and Ferguson) is credited with promoting acceptance of the style, partially through the design of All Saints Church (1892-1913), located in the Boston suburb of Dorchester.



NEO-GOTHIC
First Universalist Church
Wausau
1914

The inherent verticality of the Gothic style was considered appropriate for the tall office building. With its stone-faced "modern" medieval portal and twelfth-story buttresses, the Zwelke Building (1932, 1951) (NRHP 1982) in Appleton is a conspicuous example. In Wisconsin, ornamentation of Gothic-like derivation (with more Jacobean or English "Baroque" flavor) was sometimes applied to the small brick commercial or office building. Gothic tracery and "grotesqueries" were often executed in terra cotta; bronze canopies, lamps and screens were also common elements of the style.

The Neo-Gothic Revival style remained popular among many religious congregations during this period. The St. Thomas Aquinas Church (1914) at 2101-05 N. Prospect Avenue in Milwaukee, is a prime example of Neo-Gothic, with its oversize Gothic window above the entrance alluding to the medieval Gothic tympanum.

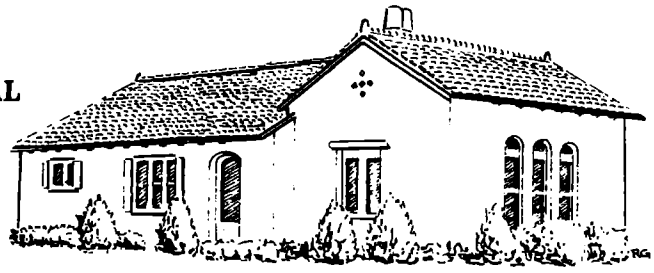
Collegiate Gothic can be considered a sub-category of the Neo-Gothic Revival style. In its recollection of buildings of the great English medieval universities, the style had popular application in college campus buildings, high schools, and even elementary schools throughout the early twentieth century. Elementary and secondary schools generally employed a "loose" interpretation of the Gothic style, sometimes exhibiting a central "keep-like" entrance, battlements, finials, and other appropriate period ornament. The Washington Park High School (1927) in Racine is a fine example of this mode, as is Dempsey Hall (1916), part of the Oshkosh Normal School Historic District (NRHP 1984), in Oshkosh. A particularly fine Collegiate Gothic example is the Milwaukee-Downer Quad buildings (NRHP 1974), designed by Eschweiler and Eschweiler between 1897 and 1905. Based on English university precedents, the buildings exhibit Gothic and Tudor arches, crenellated parapets, numerous steep, pinnacled gables, and heavily mullioned windows.

COLLEGIATE GOTHIC
Horlick High School
Racine
1927-1928

Spanish Colonial and Mediterranean Revival. These two revival styles are discussed together because in Wisconsin both are relatively rare and sometimes confused. The Spanish Colonial Revival is further confused with the Mission style because of the rarity of both the Spanish Colonial and Mission styles in Wisconsin. Mission characteristics, such as wooden vigas, shaped gables, and a rustic demeanor, are often attributed to the Spanish Colonial Revival in Wisconsin. These elements should not be attributed to a Mediterranean Revival building.

Both Spanish Colonial and Mediterranean Revival buildings are characterized by flat wall surfaces, often plastered, broken by arcading and terra cotta, plaster, or tile ornamentation, sometimes drawing on classical motifs. Brick walls sometimes remain unplastered and red tile roofs with heavy brackets are preferred in both styles. The Mediterranean Revival is more often planned around a courtyard and generally lacks Spanish stylistic references such as wrought iron grill work. One of Wisconsin's best examples is the Lloyd R. Smith House (NRHP 1974) in Milwaukee, designed by Chicago architect David Adler and built in 1923. It exhibits a gracious arcaded central courtyard. The Norman columns, heavy round arches, and tile roof of the two-story Bertelson Building (1927) at 2101 N. Prospect Avenue in Milwaukee is an excellent example of a commercial application of the style. It was designed by Martin Tullgren and Sons. The Dwight T. Parker Public Library (1924) in Fennimore and the Dwight Foster Public Library (1916) at 102 E. Milwaukee Avenue in Fort Atkinson illustrate the application of the Mediterranean Revival in small-scale public building design. Both were designed by Claude and Starck and the Fennimore library was listed in the National Register in 1983.

Spanish Colonial Revival buildings in Wisconsin may appear less restrained than Mediterranean Revival examples, with gaily shaped gables often replacing the neat tile roofs. The Studio Apartments (1925) at 1111 N. Astor Street in Milwaukee is a good example of the style, with a shaped gable and rope arches lending ornamentation to the two-story building. In Wisconsin the Spanish Colonial Revival is poorly understood at this time. As surveys are undertaken, a better understanding of the style, at least on a city-by-city basis, should be achieved.



SPANISH COLONIAL REVIVAL
1604 State St.
Eau Claire
n.d.

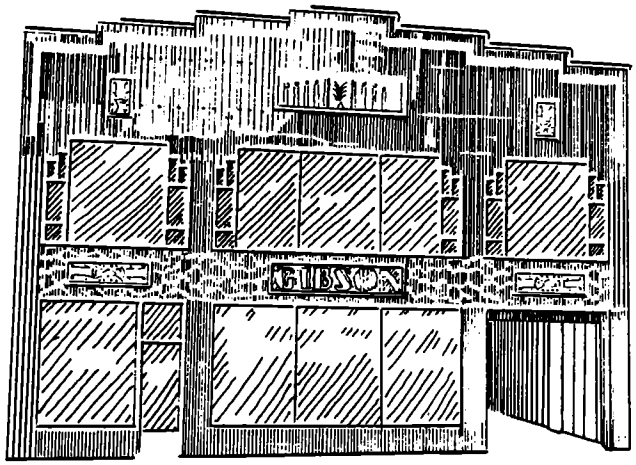
MEDITERRANEAN REVIVAL
Bertelson Building
Milwaukee
1927

Commercial Manifestations of Period Revival Styles. The trappings of revivalism are also evident in Wisconsin's small-scale commercial structures of the period. Restrained bits of period ornament such as balconies, urns, finials, and ogee arches may grace otherwise non-descript small commercial buildings. Theater architecture of the period allowed for exotic interpretation and freest expression, often drawing upon Oriental, Mediterranean or European Renaissance and Gothic motifs. The Oriental Theater (1927) at 2230 N. Farwell Avenue in Milwaukee is probably the best example in Wisconsin. Even the relatively new form of the gas station was subject to fanciful statement, such as Eschweiler's pagoda-style stations for the Wadham Oil Company, and the "English Cottage" service stations designed by C. A. Petersen for the Pure Oil Company. A good example of the former is located in the Washington Avenue Historic District in Cedarburg (NRHP 1985), while the Freitag Pure Oil Service Station in Monroe (NRHP 1980) illustrates the latter.

ART DECO (1925-1945)

Art Deco, like the revival styles of the early twentieth century, was essentially a romantic style. Unlike the revival styles, it incorporated futuristic or highly stylized historical details. The descriptive term "Art Deco" was derived from the Exposition des Arts Decoratifs held in Paris in 1925. Art Deco designs, whether expressed architecturally or in the decorative arts, are characterized by an angular hard edge suggesting machine precision. The style is a celebration of the possibilities of advancing technology and industrialization; it also bears some relationship to the cubism art movement of the early twentieth century. Low-relief geometrical ornamentation is characteristic, using details such as shallow fluted columns, chevrons, stylized sunbursts, and muted polychromy. Verticality is stressed, enhanced in large buildings by the stepped setbacks that were required under zoning regulations in most cities by the 1920s. Granite or terra cotta was popular for facing Art Deco buildings, and ornamental metal, particularly bronze, was often used on both the exterior and interior. The Wisconsin Gas Company Office Building (1930) in Milwaukee, designed by Eschweiler and Eschweiler, is Wisconsin's most prominent example of the Art Deco style. The Wisconsin State Office Building (NRHP 1982) at 1 West Wilson in Madison is another fine statement of the style.

The style was also popular for small-scale commercial buildings of the period. The two-story Gibson's Auto Exchange (1931) in Appleton's College Avenue Historic District (NRHP 1982) is an outstanding example of such an application. The symmetrical two-story design features a black crazed carrara glass facade and chrome-trimmed windows. Another fine example is the four-story Strong Building (1930) (NRHP 1983) at 400-408 E. Grand Avenue in Beloit. Designed by the Chicago firm Oman and Lillienthal, the building is distinguished by its light green glazed terra cotta facade, reeded piers, recessed spandrels, and geometric and floriated ornament.



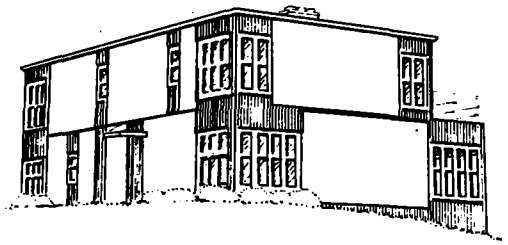
ART DECO
Gibson's Auto
Appleton
1930

ART MODERNE (1930-1950)

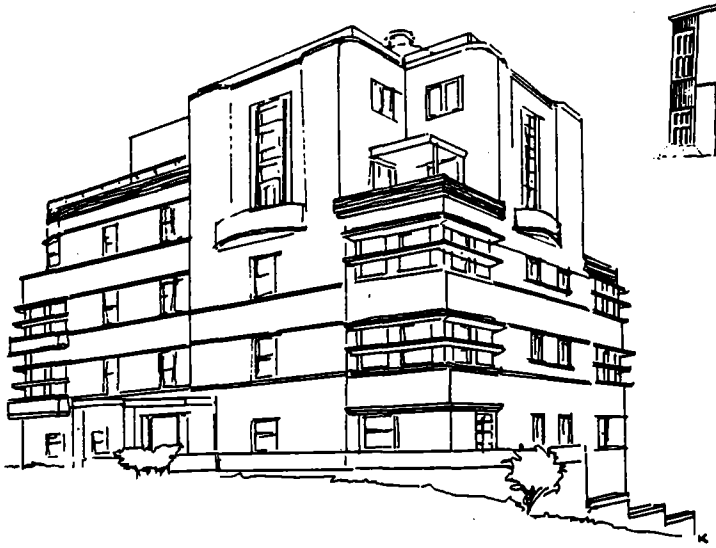
Art Moderne is related to Art Deco in its celebration of industrialism and technology but is more volumetric, streamlined, and totally devoid of any historical references. Glass block and concrete were materials frequently used to achieve smooth, rounded corners, and aluminum and stainless steel were often used for door and window trim. While Art Deco stressed verticality, the streamlined effect of Art Moderne was achieved through horizontality emphasized by flat roofs and narrow bands of windows.

Superb examples of 1930s Art Moderne were designed by Chicago and Kenosha architect Lawrence Monberg. In Madison, he designed a series of buildings in the 1930s and 1940s for the Quisling medical family. The Quisling Towers (NRHP 1984), built at 1 East Gilman Street in 1937, is a multi-story apartment building whose rounded volumes are defined by narrow bands of terra cotta and chrome. Two nearby buildings constructed in the 1940s bear the hallmark Moderne curves and "port holes." The Quisling Clinic is one block to the southwest at 2 West Gorham; the Edgewater Hotel is one block to the northwest at 666 Wisconsin Avenue. The 1260 N. Prospect Avenue Building (1937) in the First Ward Triangle Historic District (determined eligible NRHP 1977) in Milwaukee, designed by Milwaukee architect Herbert W. Tullgren, is an excellent example of a large scale apartment complex in the Art Moderne style.

An adaptation of Art Moderne to a smaller scale structure is exhibited by Tony's Cabaret in Superior. It is a "pop" expression of the style, with a "port hole" and other circular elements highlighted in neon and shiny burgundy and blue square panels. In Milwaukee, the Geiser Potato Chip factory (1930) at 3113 W. Burleigh Street is an excellent example of the style's application on an industrial building.



INTERNATIONAL STYLE
Edward Morehouse House
Madison
1937



ART MODERNE
Quisling Towers
Madison
1937

INTERNATIONAL STYLE (1930-1945)

The distinguishing characteristics of the International Style were first articulated by Henry-Russell Hitchcock and Philip Johnson in their 1932 publication, The International Style: Architecture Since 1922, and in connection with the accompanying International Exposition of Modern Architecture at the New York Museum of Modern Art. Three principles of the style were noted: an emphasis on volume, or space enclosed by thin planes or surfaces instead of a suggestion of mass and solidity; regularity and an underlying orderliness which is seen clearly before the outside surfaces are applied; and lastly, the avoidance of applied, surface decoration, and the dependence on the intrinsic qualities of the materials, technical perfection, and excellent proportions. Thus, International Style buildings do not imitate or recall past styles. To the casual observer, International Style structures may appear boxy, simplistic, and completely abstract with flat roofs, smooth wall surfaces, windows with minimal exterior reveals so that they appear to be a continuation of the surface, and windows which "turn the corner" of a building. Windows also tend to be used in groups or in vertical or horizontal ribbons.

Of immediate impact regionally was the 1933 Century of Progress Exhibition in Chicago where modern stylistical and technical innovations were displayed for adoption and adaptation by the more innovative architects of the region.
Excellent examples of International Style structures can be found in much of the work of Watertown native George Fred Keck, who established his practice in Chicago in 1926 and went on to design dozens of houses in Wisconsin. Perhaps because of his long-time interest in abstractionist painting and his degree in architectural engineering, rather than design, he was not committed to the Neoclassical influences that dominated architecture in the early 1920s. Keck was joined in practice in 1931 by his brother William Keck.

A house designed by the Kecks in Madison in 1937 illustrates their regional approach to the International Style. The Edward Morehouse House at 101 Ely Place in the University Heights Historic District (NRHP 1982) has a basic, white cube-like form which is broken to the rear by a one-story wing, a concession to the steep site. The flat roof, the sense of volumetric space enclosed by thin planes, and a complete absence of surface decoration place this fine house squarely in the style. The main elevation of the house, with its abstract patterns formed by pure white rectangles defined by vertical ribbons and groups of windows, is strongly reminiscent of paintings by the Dutch DeStijl painter active after 1917, Mondrain. Mondrain painted two-dimensional planes of pure color and abstract composition, abandoning every connection with illusionism.

An earlier example of the International Style is a residence at 3840 N. 55th Street in Milwaukee, designed by Henry Phillip Plunkett. Built in 1933, the structure is a metal-clad cube, broken by a stream-lined stair tower leading to a roof top terrace surrounded by metal railings. Also in Milwaukee is the A.O. Smith Research Building (1930), a seven-story office structure in which the glass facade is arranged into vertical panels of convex triangular bays and rests on a base of black stone.

Small scale residential expressions of the style include small, cube-like structures, typically of frame construction covered with glazed tile, stucco, brick, concrete block, or composition panels. Detailing, if present, is often of an Art Moderne influence. A good example is located at 2718 Milwaukee Street in Madison.

CONTEMPORARY (1950-present)

Contemporary architecture cannot be defined or described in the manner of other preceding stylistic movements. "Contemporary" can be used to designate any mid-twentieth century building of distinction and potential historic interest, whose identity or features cannot be ascribed to styles and forms discussed in this report. Although architectural historians and architects have invented names for some contemporary schools of architecture (i.e., Brutalism, The New Formalism, Neo-Expressionism, Late Modernism, Post-Modernism, etc.), buildings of these genres are not of sufficient age, and generally do not have widely-recognized and understood scholarly value, to be evaluated for significance according to the National Register criterion. Other widely accepted terms for mid-twentieth century residential architecture, such as "ranch house," "tract home," and "split-level," refer to buildings generally not surveyed in the Wisconsin program. As with contemporary schools of architecture, a terminology will likely be adopted as scholarship develops and as these buildings reach 50 years of age.

Although not well understood at this time, some contemporary architecture should be documented by Wisconsin surveyors. Buildings that are universally distinctive, or even eccentric, as well as those designed by notable architects, should be documented. However, it must be left to the discretion of individual surveyors to determine which buildings seem to represent notable achievements in twentieth-century design, recognizing that all post-World War II architecture will require more detached and intensive scholarly attention.

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VERNACULAR FORMS

Vernacular architecture did not become a serious concern of the Historic Preservation Division until the early 1980s. By then, the Division could no longer ignore the buildings that had previously been considered a backdrop to the buildings that had "style." Common buildings whose distinguishing characteristic was their simplicity began to be viewed as keystones in the architectural history of Wisconsin, and preliminary attempts were made to classify and evaluate the ubiquitous vernacular buildings. Computerization of the Wisconsin Inventory of Historic Places presented an opportunity to systematically describe all buildings by a standard vocabulary. At the same time, the Division was inspired to develop a typology for vernacular buildings that would assist surveyors identify and evaluate vernacular architecture in the field.

A group of terms based mainly on exterior massing, roof shape, and number of stories was adopted by the division and field tested in all surveys beginning in 1984. Data entry staff also began using the terminology in entering information on properties in the Wisconsin Inventory of Historic Places data base. From its inception, the group of terms was considered experimental and an answer to an immediate need. Surveyors enthusiastically embraced the terms for buildings that for years had remained unlabelled or were erroneously attributed to one of the common styles. The experiment proved quite successful, with problems developing in predictable areas: distinguishing between the American Foursquare and the two-story cube, including terms as broad as the front gable and side gable categories which span several decades and fit a wide spectrum of buildings, and accurately applying the cross gable term. As surveys continue and the division refines the typology, new forms may be identified and subcategories may be developed. On the other hand, with studies in vernacular architecture increasing across the country, a typology with nationwide applicability may be developed in the near future and the division may want to adopt that instead. Descriptions of vernacular forms are offered with full knowledge that this is a little understood aspect of the built environment and that much more study is needed.

FRONT GABLE (c. 1840-1925)

The front gable form, ubiquitous in urban and rural settings, may be linked to the Greek Revival style and to various urban "row" buildings. Houses, commercial buildings, halls, churches, schools, and other types of buildings can be associated with the front gable form. Characterized by a rectangular plan and gabled roof, the term derives from the placement of the major facade in the gable end of the building. Although the one-and-a-half story version predominates in Wisconsin, one, two, and two-and-a-half story examples occur. Sometimes half-story versions have dormers on one or both planes of the roof, either to light a storage space or to provide additional living space. Typically symmetrical, a central or offset entrance may be sheltered by a small entry porch or may have an uncovered stoop. Many examples have a full porch with a shed or hipped roof.

Lack of key architectural details or decorative embellishment disassociate the form from recognized styles that swept Wisconsin during the mid-nineteenth century through the early twentieth century, the period the form predominates. Although plain, minor embellishments are apparent in the form of simply detailed sills and lintels, turned porch posts, decorative shingles, and oversized parlor windows, sometimes with overlights of etched or stained glass. The form should not be confused with mundane versions of the major styles. For example, early versions of the form should be classified as Greek Revival if they exhibit returned eaves, a wide freize, a low sloping roof, and other characteristics of the style. Later examples exhibiting classical details are probably associated with the Colonial Revival style, while other examples are clearly related to the Bungalow.

Proportions of the form vary over time, but usually earlier versions are narrow in width and proportions and later versions are broader, regardless of the number of stories. Similarly, roofs on early versions tend to be steeper and later versions are more gently sloped and broader to accommodate the expanded width. Additions take a variety of forms, but generally because of lot limitations and the interior plan additions were made on the back of the building. Additions on either side may warrant classification as a gabled ell form.

Windows and doors, if original, can be good indicators of the age of a front gable building. Although almost always plain, the windows may reflect styles that were popular when the building was constructed. Distinctive windows include those that are tall and narrow, paired windows, or a parlor window with an overlight that constitutes the major embellishment.

In Wisconsin, the form is usually a balloon frame structure, sheathed in clapboards (which may be covered with modern siding). Wood front gable houses that were built prior to about 1870 in rural areas may be timber framed. Brick examples occur, but early brick examples can sometimes be associated with the Italianate style and later examples with the Colonial Revival. Rarer stucco versions may be plain expressions of the Arts and Crafts movement. A well known variety is the red brick front gable house built by Belgian immigrants in Door, Kewaunee and Brown counties, and other counties. The form is distinguished by decorative brickwork at openings, bulls-eye windows in gables, and, sometimes, alternating bands or a checkered pattern of white or cream brick. These characteristics are also found in side gable houses built by the Belgians and in buildings constructed by other ethnic groups in Wisconsin, although not in the concentration of the Belgian cluster. Front gable buildings associated with other ethnic groups may become known as vernacular architecture studies in Wisconsin progress.

SIDE GABLE (c. 1840-1940)

The side gable form is probably one of the earliest, most pervasive, and universal house forms found. Spanning centuries and continents, in Wisconsin it has been built in all periods of white settlement, of a variety of materials, and by various ethnic groups. The form also was applied to commercial and public buildings, but side gable buildings were built predominantly as houses. Hallmark features are a rectangular plan and a gable roof, usually gently pitched. The major facade is in the long wall, with gables oriented perpendicular to the street. From one to three stories, the form is particularly adaptable to half story versions, and the one-and-a-half story version may well be the most common. Half-story versions with dormers are not unusual.

Although the side gable form was most often covered with a clapboard veneer, fieldstone, cut stone, and brick examples are also common. Early examples may actually be log structures sheathed in clapboards. Other early examples may be timber-framed buildings, or, feasibly, half-timbered, instead of the nearly universal balloon frame beginning in the last quarter of the nineteenth century. As with some other vernacular forms, earlier examples tend to be narrower in proportion, often only a room wide. Examples that are only one room wide, a full two-stories high, and at least two rooms long were classified as "I houses" by Fred Kniffen. "I houses" also must be at least two rooms in length. (Annals of the Association of American Geographers, vol. 55, no. 4, pp. 553-555). Later examples are sometimes nearly square in plan and have a higher foundation. Wings are very common on the side gable form, often a one story shed spanning the rear wall, either original or a later addition, that lends a saltbox-like configuration. Wings also take the form of perpendicular extensions, forming "T" or "L" plans to the rear. If the wing intrudes on the major facade, the building should probably be evaluated as a "gabled ell" form.

The side gable form is as plain as the other vernacular forms in Wisconsin. The ubiquitous front porch, entirely or partially spanning the front facade, may have the only touch of embellishment, with small brackets or turned posts. Generally, the porch roof is not an extension of the main roof, but is a separate shed, flat, or slightly hipped roof. The form is generally low to the ground, particularly in early examples, with only a few steps leading to the porch. Sometimes a foundation is barely perceptible. Window openings are usually regularly spaced, although sometimes a stair light is offset on a side wall. Doorways are almost always centrally placed, reflecting a symmetrical floor plan.

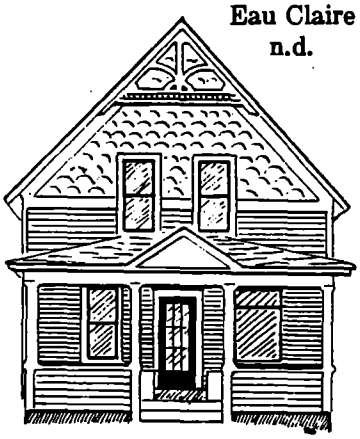
Like the front gable form, an identifiable ethnic rendition of the side gable form is found in Belgium-settled areas of the state. Contrasting brick at openings and wall edges render the Belgium examples almost too elaborate to be identified with the simpler vernacular expressions. As studies progress other ethnic expressions of the side gable may be identified.

For many years in Wisconsin, an early version of the form with the proportions, symmetry, and minimal details of the Greek Revival has been associated with that style. "Eyebrow" windows have been used as primary evidence for identifying a side gable building as Greek Revival. As buildings devoid of primary stylistic features are more commonly identified as vernacular forms, the broad Wisconsin definition of Greek Revival may be revised.

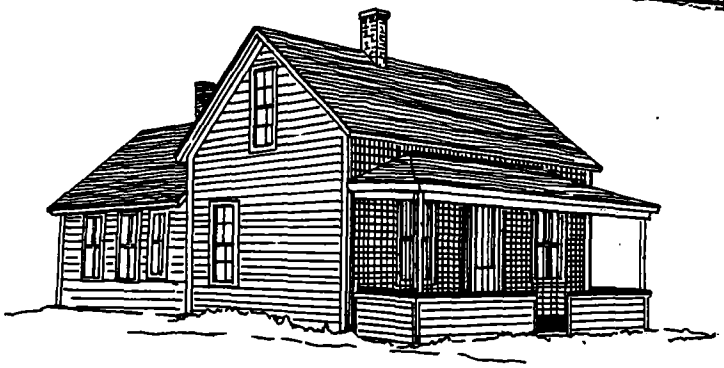
Two other classical styles that are sometimes confused with the side gable form are the Federal and Colonial Revival styles. In a zealousness to categorize buildings by style, these styles are sometimes attributed to very plain buildings that may simply assume the same side gable form but evidence minimal period construction details, such as window embellishment.

FRONT GABLE
908 Prentice Ave.
Ashland
n.d.

FRONT GABLE
1509 Madison St.
Eau Claire
n.d.



SIDE GABLE
2205 Main St.
Hazel Green
n.d.



SIDE GABLE
2136 Dewey
Whitehall
n.d.

GABLED ELL (c. 1860-1910)

The gabled ell form is one of the most ubiquitous of the mid- to late-nineteenth century vernacular house types. Built for comfort and practicality, the form offers outdoor living space and a sheltered entrance at the porch "ell," and nearby service space if a back "ell" is present. Unlike some other vernacular forms, the gabled ell was nearly always a residential form. Although it is uncertain with what frequency the gabled ell appeared as a complete unit at original construction, it is certain that the form sometimes evolved from front or side gable buildings. The form appears in both rural and urban settings, although it seems to be more commonly a rural or small community house form, primarily because of urban lot limitations.

In simplicity, construction materials, and proportions, the gabled ell resembles early front and side gable buildings. It is distinguished, however, by the virtual absence of a twentieth century version with broad proportions and vague references to the Craftsman or Arts and Crafts movements. This could be in part because the later, broader front or side gable buildings provided enough space to alleviate the necessity of nearly doubling space by the addition of an ell. Also, in many areas lots platted later tended to be narrower and could not accommodate gabled ell forms.

The gabled ell includes buildings that are cruciform, or "L" or "T" in plan. However, from the main elevation, all but the cruciform version appear as two gabled wings perpendicular to each other. The cruciform appears as a front gable central wing flanked by perpendicular wings. Cruciform plan houses should not be confused with cross gabled houses, which typically have a square plan and a cross gable roof.

Entry to the gabled ell form is always via the porch at the ell, although door placement varies. Doors were placed on either wall of the porch, and sometimes on both. Window openings are usually regular, with placement depending on construction method (balloon, timber frame, or log) and interior plan. If the front gable wing perpendicular to the street contains the main entry, the form is sometimes classified as an "upright and wing," a term applied by many students of vernacular architecture to buildings of this description. The "upright" is the front gable section perpendicular to the street.

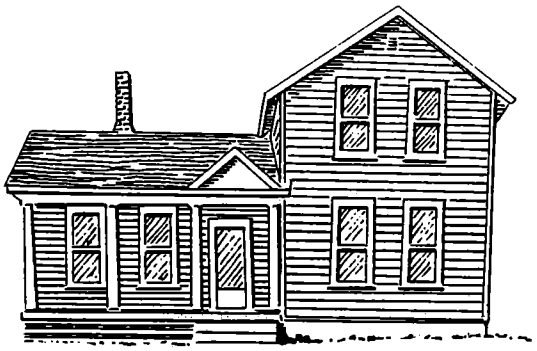
Gabled ell examples exhibit a variety of combinations of stories, although the most common seems to be a one story longitudinal wing connected to a one-and-a-half story wing or "upright." Examples with both sections the same number of stories, from one to two-and-a-half, are common. If heights vary, the longitudinal section parallel to the street is nearly always the lower.

Either shed or hipped porch roofs were built at the ell created by the junction of the two wings, sometimes broken by a gablet at the doorway. Often, they have been enclosed. As with the front and side gable forms, the porch on the gabled ell may exhibit the only decorative touches on the building. Brackets, turned posts, and a balustrade often render the porch the most visually interesting and dynamic element on the otherwise undecorated structure. Reflecting the generally low foundation on the gabled ell form, porch stairways are usually quite short.

The clapboard variety of the gabled ell form is by far the most common, although brick and stone versions appear. Early examples may exhibit modest references to Greek Revival and Italianate styles, but later in the century the form seems to lose stylistic references. As with the other gable forms, ethnic renditions seem to occur, most obviously the Belgium, although other ethnic associations may be discovered.

Besides the enclosure of ells front and back, additions to the gabled ell form are commonly

sheds and extensions to the wing least obstructed by a lot line or out building. Although plain, the gabled ell conveys a sense of comfort and hominess, with the sheltering porch, the contrast of planes, and the rural associations it seems to embrace. As such, it was nearly always built as a residential form, although early inns may also exhibit the form.



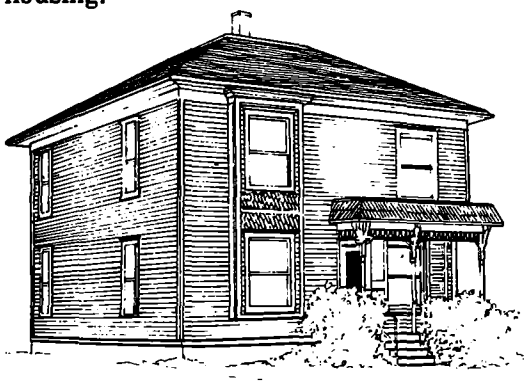
GABLED ELL
944 Main St.
Eau Claire
n.d.

TWO-STORY CUBE (c. 1850-1880)

First built in Wisconsin in the mid-nineteenth century, the two-story cube is characterized by square proportions, a hipped roof, and a nearly complete absence of surface ornament. Original exterior fabrics include brick, clapboard, and less frequently stucco, but surface materials are rarely juxtaposed as in later American Foursquare examples. ~~Foursquare examples.~~ The cube's most distinguishing feature, boxy massing, remained unchanged over time, and the form omits any of the stylistic references that distinguish other houses of the period. As such, the cube appears of indeterminate age, often confused with its closest stylistic relatives. For example, early versions share the cubic form and symmetrical fenestration of the Italianate style, but lack the classical features of the Italianate. In the twentieth century the form was largely subsumed by the standardized American Foursquare.

Windows of the two-story cube are disposed symmetrically across the facade, articulated by simple frames or in brick examples by flat lintels and sills. On nineteenth century cubes, the principal doorway is usually placed in the center of the front facade but is not trabeated or otherwise handled in a classical manner. Early twentieth century examples, reflective of the interior plan associated with the American Foursquare house of the era, sometimes have front doors set off-center. With almost all examples, a porch with hip roof spans the front facade or at least shelters the entry. Porch posts on nineteenth century cubes are sometimes turned and the porch roof is ornamented with brackets. Porches on later examples commonly feature balustraded railings and simple Tuscan columns. The eaves of the two-story cube do not widely overhang, as with the American Foursquare and, unlike the Italianate style, are usually unornamented. However, some late nineteenth century examples feature brackets, spaced singly rather than paired. A notable variation on the standard roof form is the presence of gablets projecting from the hip roof (usually above the front entry), a device which creates extra storage or living space in the attic. But unlike the typical American Foursquare, dormers are rare. Additions to the cube are usually appended to the rear of the structure, sometimes in the form of a one-story shed, sometimes a full two-story addition which elongates the original square form. Because of the width of the front facade, full side additions are rare, but a simple bay window may project from a side elevation.

In the early twentieth century, the two-story cube reflected elements of the popular American Foursquare, including an offset doorway, Tuscan porch columns, and enclosed porch railings. Although the American Foursquare alleviated its mass through the use of overhanging eaves, contrasting materials, and a horizontal emphasis, the two-story cube remained more square in proportion, thus appearing more narrow. During this period, many two-story cubes adopted enough of the American Foursquare traits to be classified as such. Even so, this simple and substantial vernacular form continued to be built well into the twentieth century. While normally a single family house, the two-story cube was sometimes adopted to multi-unit housing.



TWO STORY CUBE
Ezra Rice House
Janesville
1900

ONE-STORY CUBE (c. 1870-1930)

Boxy, diminutive proportions characterize the one-story cubes that dot the Wisconsin landscape. Although many examples actually have a square plan, even those with rectangular plans convey a sense of cubic dimensions because the distance from ground to roof top is approximately the same as the width of the front facade. Typically, the form has a low-hipped roof, with or without ridge or deck, but sometimes the form has a steeply pitched, almost pyramidal roof. The cube almost always has a full front porch, often recessed under the front roof, and frequently enclosed to add more interior space. If the porch extends in front of the house, it may have decorative brackets or turned posts on earlier versions.

The one-story cube usually has a clapboard veneer, although modern siding has frequently been added. Brick and stucco examples exist in some communities. Plain, regularly or irregularly spaced windows are the norm, although more elaborate parlor windows, or even bay windows, appear on some versions. Small dormers with either shed or hipped roofs often light and ventilate attic spaces in the one-story cube, but rarely provide additional living space. Sometimes an oversized or normal sized dormer is deceptive as it may do no more than light the attic. The main entry is nearly always centrally placed. Frequently one or more back additions have been added in telescope fashion, and although the square plan has been obliterated, the form is still identifiable. It is unusual to see additions placed on either side of the building.

Decoration on the one-story cube is even less common than on other vernacular forms. Minimal wall space and strictly functional fenestration render the form one of the most utilitarian, an apt reflection of its low cost and frequent occurrence among workers' housing. The form seems to have appeared in the 1870s or earlier in a remotely Italianate brick version that occurs in working class neighborhoods in Racine and La Crosse. Later versions of the form, nearly always clapboarded, seem to relate to Bungalow and Prairie School architecture and may exhibit minimal Craftsman details. As with other vernacular forms, if a building exhibits a predominance of stylistic characteristics it should be evaluated as a mundane example of the style it reflects.

The one-story cube does not occur as non-residential buildings as frequently as some other vernacular forms, although it has been used for halls and churches by denominations that built in simple, inexpensive forms.

ONE STORY CUBE
727 Summer St.
Eau Claire
n.d.

CROSS GABLE (c. 1890-1930)

The cross gable form is usually two stories, roughly square in plan, with a cross gable or cross gambrel roof. The "cross" refers to two intersecting, identical roofs whose ridges form a cruciform. In lesser examples the cross gable may actually be greatly oversized roof or wall dormers. Buildings with a cruciform or "T" configuration should not be considered an aspect of the cross gable tradition, but should be considered related to the gabled ell form.

Unlike other vernacular types, the cross gable form did not appear until late in the nineteenth century. The broad proportions and sometimes squatty form of later examples embrace elements of early twentieth century building styles like the American Foursquare and Bungalow. Earlier examples are more delicate and are reminders of the Queen Anne tradition. Gambrel roof versions are usually not strongly related to Dutch Colonial Revival style buildings that may have been contemporary. In fact, cross gabled buildings are as unadorned as other vernacular forms and are not strongly associated with any style because of their simplicity. Instead, they simply relate to the late-nineteenth and early-twentieth-century period of building because of the stock materials used.

Full porches with low roofs typically span the front of cross gable buildings. Roof lines are often broken by gablets or the porch roof itself may be gabled. Porches on earlier versions are sometimes treated in a more Picturesque tradition. Because of their high foundations, porches are frequently enclosed with balustrades and are reached by a short flight of steps. The wooden porches are usually in harmony with the clapboarded walls, although masonry examples with either masonry or wooden porches also exist (as are wooden examples with masonry porches).

Windows and doors reflect stock building supplies of the period and usually have quite simple frames, although a more elaborate parlor window may overlook the front porch. Windows are often paired, or even tripled, and varying sizes and spacing reflect the lighting of baths, kitchens, and staircases. They are randomly spaced on all but the front facade, which may appear quite symmetrical, despite the typically offset front door.

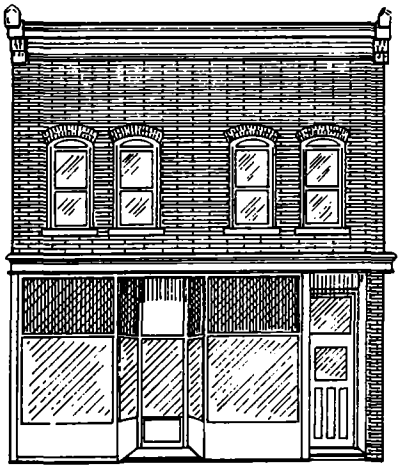
The cross gable form is not well understood in Wisconsin and little is known about its occurrence or relationship to other styles and forms of the period. As study of the form continues, it may be considered a sub-category of another vernacular form or a distant relationship to another style.

CROSS GABLED
Arnold E. Shumway House
Janesville
1905

VERNACULAR COMMERCIAL (c. 1850-1920)

The label "vernacular commercial" is less specific to a visual type than other significant Wisconsin building forms, and can be applied generally to simply-designed commercial buildings of the late nineteenth and early twentieth centuries. All varieties, if not radically altered, include large retail show windows on the ground story. Upper stories, whether meant to serve business or residential uses, are characterized by simple window openings. Doors to serve ground-story shops and upper-stories are simple and, when original, are generally of paneled wood with a single window above. An emphatic cornice with some decorative treatment (compound brick corbeling, wood moldings, or metal friezes, with finials or thick corbels at the ends) and a cornice or I-beam above the storefront are usually the only decorative touches. Simplified period motifs are implied, but without any overt stylistic character. Frequently, vernacular commercial buildings, as other commercial buildings, were partially illuminated on the ground floor by a transom across the facade. The transoms are often covered with modern signage. Although there are free-standing vernacular commercial buildings, many are joined by party walls into continuous commercial streetscapes.

Like other building forms, the most significant vernacular commercial examples will be those with the highest integrity, retaining original or later period storefronts, and interior elements like pressed metal ceilings, simple wood wainscoting, simple wood door frames and molding blocks, and details like shop fixtures, second-story fireplaces, interior door transoms, and corner spools.



COMMERCIAL VERNACULAR
107 W. Gale Avenue
Galesville
c.a. 1890

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CONSTRUCTION MATERIALS AND METHODS

Since the early settlement of Wisconsin, a variety of materials and methods have been used to build houses, commercial buildings, agricultural outbuildings, and the myriad other buildings that dot the Wisconsin countryside and cityscape. Some materials are intrinsic to particular styles, others cross stylistic references and are ubiquitous from the mid-nineteenth century to the present. The variety of construction techniques applied in Wisconsin is one of the richest aspects of its built heritage. A rich supply of natural resources and a diverse ethnic history combined to yield an unusually varied building tradition. Certain construction methods were brought to Wisconsin by Yankee settlers and reflect their tradition of ingenuity and craftsmanship. Thus, several building techniques that are rare or lacking in other states can be found in Wisconsin. Grout, stovewood, cobblestone, and half-timbering are notable examples. Even the ubiquitous clapboard and balloon frame assumes a meaningful position in a state that developed on the lumber industry. Fine wood craftsmanship is common in Queen Anne houses to Bungalows.

Caution should be exercised in applying an ethnic label to cultural resources on the basis of a construction technique. Intercultural influences, available natural resources, economic circumstances, and settlement patterns are among the many variables that must be considered in attributing ethnicity. As studies in this area progress, such attributions will undoubtedly be made with greater certainty. Until Wisconsin studies are collaborated with European architecture, and other states' ethnic architecture, attributions should be tempered with other variables existing in the region.

WOOD

LOG

Before the massive European influx of the mid-nineteenth century and about the time Wisconsin Territory was seperated from Michigan Territory in 1836, settlers began moving into southeastern and southwestern Wisconsin in limited numbers. Generally, farmers from the East settled in the southeastern part of the state, while settlers in the Galena lead district were from the upper south.

Both groups took advantage of Wisconsin's native forests to construct small log cabins, which were of the western frontier where timber was plentiful. Several typical examples of these log cabins still stand in Wisconsin. The John Petty cabin at Aztalan, Jefferson County, and the Goodrich cabin at Milton, Rock County, are small, one-room cabins, the former built with round logs, the latter with square-cut logs. Devoid of stylistic mannerisms, both have simple gable roofs. Both cabins have few doors and other exterior openings, and each has a massive, split-rock chimney in one end-wall.

The earliest American log cabin designs were believed to have been brought to the Delaware Valley by Swedish immigrants, and from there taken west with the frontier. Recent scholarship, however, indicates that the Swedish influence died out with the Swedish settlement and that log cabin construction was reintroduced in the United States by German settlers (Kniffen and Glassie 1966:56). Whatever the case, log construction was well known in settled parts of the United States by the time Wisconsin settlement began.

Many of the ethnic groups that immigrated to Wisconsin brought with them strong traditions of timber construction. During the mid-nineteenth century, many immigrants from Germany came to Wisconsin, tending to cluster near Lake Michigan in the southeastern section of the state. Traditionally builders in wood, the Germans primarily employed two types of timber construction: log and half-timbered. In German log construction, typically squared logs were laid horizontally upon each other, notched and joined at the ends to form a solid wall. One of the best remaining German hewn log houses, and an early example from the 1840s, is the Christian Turck House (NRHP 1973), originally built in Washington County near Kirchhayn but now relocated to Old World Wisconsin near Eagle in Waukesha County. It is a one-and-one-half-story structure built of squared cedar logs, with a salt-box roof and cantilevered shed porch roof across the front. The log walls are heavily chinked with clay, rye straw, and lime plaster. The Germans built log buildings with generous interstices to allow for occasional rechinking as the logs moved and shrunk over time.

The Finns were far less numerous than the Germans in Wisconsin, and tended to settle in northern Wisconsin near Lake Superior beginning in the late 1880s. Their log construction seems more precise than that employed by the Germans, requiring careful fitting of whole logs so that no chinking was necessary. The Finns built entire farmsteads of log buildings, including houses, root cellars, stables, barns, and saunas. The Finns continued to use log construction into the twentieth century. Many such structures still exist in Douglas and Bayfield counties, particularly in the towns of Maple and Brule in Douglas County, and Oulu in Bayfield County. Examples of such structures are also found in the Finnish display at Old World Wisconsin.

The palisaded wall is another method of log construction found in Wisconsin, although rarely. The basic technique involved setting closely spaced vertical posts into a trench which was then back-filled; interstices were generally filled with mud and straw and pargeted with lime mortar. Termed "poteaux en terre," this method was used extensively

by French settlers in Canada, around the Great Lakes, and throughout the Mississippi Valley (Perrin 198l:16). A similar pioneer French construction method, poteaux sur sole, consisted of placing the vertical timbers onto a horizontal timber sill. Recent archeological excavations at the site of the Northwest and XY Company wintering post on the Yellow River in Burnett County indicate a variation of these techniques was employed in constructing the cabins there (Oerichbauer 198l:32-36). Such early examples, however, are extremely rare in Wisconsin and may be covered by later siding.

Palisaded walls were also a Nordic building tradition, brought to Wisconsin by Scandinavian settlers. Characteristically, the Scandinavian palisaded structures exhibit timbers which are carefully fitted when positioned upright. The Penttila Barn in the Town of Maple, Douglas County, is an excellent example of such construction. The palisading technique was also utilized by other immigrant groups, including the Germans and Slavs (Perrin 198l:16). No surveys are known to have been undertaken to establish the extent of this historic construction method.

The rustic retreat in Wisconsin's northwoods is another type of log building found in the state. In the late nineteenth century, wealthy lumber and industrial barons began purchasing tracts of land in the forest and lake regions of Wisconsin. The 23-bedroom cedar log home of lumber baron Frank Stout, built in 1912 on Red Cedar Lake in Barron County, is one such example. While the rustic retreat follows in the tradition of the early Yankee cabins, the lodges and mansions are typically on a grand scale and attempt to evoke a romanticism about nature and the American frontier despite their scale and pretentions. The many rustic retreats built along the Brule River in Douglas County (an excellent example is the Weyerheuser Estate) would be a major emphasis in the study of this aspect of Wisconsin log construction and recreation.

HALF-TIMBER

Half-timbered construction reflects a medieval building method that was practiced primarily in Britain, France, and Germany and introduced into the colonies by immigrants from these countries (Kniffen and Glassie 1966:42-43). Half-timbering was not carried westward to the same extent as the log cabin. However, the practice continued in rural provinces of eastern Germany well into the nineteenth century; as such, the technique was utilized by many German settlers in Ohio, Missouri, Texas, and Wisconsin. Most Wisconsin examples are located in the southeastern portion of the state, particularly Dodge, Washington, and Ozaukee counties, and are almost exclusively of German provenance.

The German term for half-timber work is Fachwerkbau. Houses, barns, churches, and commercial structures were built of heavy timbers, which were mortised, tenoned, and pegged together. End panels were braced diagonally. The panels between the timbers were filled with various materials, including bricks laid in mud mortar, rubble masonry coated with plaster, or wood staves covered with a mixture of straw and mud, pargetted with plaster. Clapboarding was sometimes applied over the half-timber work, either at the time of contruction or later. Thus, some half-timbered structures may remain extant in southeastern Wisconsin, hidden by siding.

An outstanding surviving example of a German half-timber house is the Koepsel House (NRHP 1973), originally located near Kirchhayn, but now located at Old World Wisconsin. The two-story house was built of white oak around 1860 and has handmade, sand-molded, buff-colored brick nogging. The house is symmetrical, with a central chimney and entrance.

STOVEWOOD

An unusual variation in log construction is "stovewood," in which short logs are laid

perpendicular to the wall plane (like an ordinary wood pile) and mortared in place. The majority of the pre-1945 stovewood structures thus far identified in the United States are found in Wisconsin (Tishler 1982:131). While isolated examples have been found in parts of Minnesota, Iowa, and the Upper Peninsula of Michigan, only the province of Quebec in Canada exhibits a similar preponderance of such structures. Stovewood building is a relatively late type of log construction, most popular in Wisconsin between about 1895 and 1915 (Perrin 1981:29). The greatest number of remaining stovewood structures is concentrated in the northern portion of the state, particularly in Door and Bayfield counties. The antecedents for the type are undocumented, although recent research suggests a Scandinavian origin (Tishler 1982:132-133).

Over seventy such structures have been identified in Wisconsin, many through the Heritage Areas Project of the Department of Landscape Architecture at the University of Wisconsin-Madison. Most of the identified structures were built of white cedar, although in a few cases other types of wood were also used. This unique construction technique was used to fashion outbuildings such as barns, sheds, and chicken coops, or, less frequently, for residential dwellings. Stovewood wings were sometimes added to an existing log or stone house.

Perrin notes that Wisconsin's stovewood structures are of two distinct types. The first is the timber frame structure in which stovewood has been used as nogging between the timbers, resulting in a form of half-timber construction. The logs are cut into short lengths, generally less than eight inches. These structures may be difficult to identify as the exterior walls were often shingled, clapboarded, or clad with vertical boards and the interior walls were typically plastered. Stovewood structures located in Door County are primarily of the half-timber type.

The other predominant form is the solid, self-supporting stovewood wall, ranging in thickness from twelve to twenty inches and often two-stories in height. The Mecikalski Saloon in Lennox, Oneida County (NRHP 1984) is an outstanding example of this type of massive construction, built in 1899 with cedar logs of up to sixteen inches in diameter. The solid stovewood wall was less often sheathed with another material on the exterior and is typically found west of the Door County Peninsula (Perrin 1974:6).

Recent research has identified a third category of stovewood construction in which short sections of stovewood were stacked between the studding in a balloon-frame wall, the sections of stovewood being cut to match the size of the two-by-four-inch or two-by-six-inch studs (Tishler 1982:131). In this type of construction, the stovewood was utilized primarily for its insulating effect rather than structural value.

TIMBER AND BALLOON FRAME

Early wooden buildings in Wisconsin that were not entirely of log were likely of timber frame construction. This method was brought to America by European settlers, and was used well into the nineteenth century. The timber frame relies on a system of heavy vertical posts supporting the upper weight and cross timbers supporting the floors. Diagonal corner braces stabilize the frame, and wooden pegs fasten the timbers together. Timber frame buildings were typically sheathed in wood siding.

In the 1830s balloon frame construction was introduced in Chicago and rapidly spread throughout the region. The new construction method eliminated the massive timbers and pegged joints, substituting lighter boards that were nailed together. Vertical studs extend the full height of the wall of a balloon frame building, and floor joists are fastened to the studs with nails.

The introduction and ensuing popularity of balloon frame construction coincided with the intensification of Wisconsin settlement and the opening of Wisconsin forests to the lumber

industry. By 1850 the lumber industry was making a significant contribution to Wisconsin's economy, and by 1892 the state was producing over four billion board feet of lumber, mainly white pine. The vast amount of milled lumber available made balloon frame, board construction an inexpensive and expedient choice for Wisconsin builders. Thus, wood frame buildings of all descriptions became ubiquitous on the landscape. The disastrous fires that ravaged many commercial centers were fueled by the wood buildings, whose replacements tended to be masonry. Nevertheless, clapboard buildings were executed in most of the styles popular in the nineteenth century and were the most common choice of rural, small town, and urban speculative builders.

Although the lumber industry in Wisconsin declined dramatically in the twentieth century, wood construction remained popular. The popularity of styles like the American Foursquare and, eventually, the common ranch house assured a place for wood construction. The relatively low cost and ease of building in wood remained appealing. Because of its "common" nature, balloon frame buildings are rarely considered significant for their construction method. Instead, they tend to be evaluated as significant examples of styles or vernacular buildings or as historically significant.

STONE

FIELDSTONE

Buildings of all sizes constructed of stone are found throughout Wisconsin. Stone architecture in the state illustrates standard stylistic mannerisms, as well as vernacular and ethnic variations. Its popularity was due to its common occurrence, combined with the building traditions of Wisconsin settlers. Deep limestone deposits extend in a broad belt through the eastern, southern, and western parts of the state. Wisconsin limestone varies in color, from buff, to cream and pink tones, to various shades of gray. Sandstone, a softer and less durable stone, is common in many parts of the state. It ranges from white to brown in color.

During glacial times, retreating sheets of ice left boulder deposits in Wisconsin that were employed by early settlers, particularly the German and the Irish, in structures built from 1840 to the turn of the century. Fieldstones were used to build fences, roads, houses, barns, silos, churches, and commercial structures. Earliest structures were built with fieldstones just as they were found, with voids between the large stones filled with smaller ones. Liberal amounts of mortar were applied. Eventually, boulders were split and mortared with thinner joints. Quoins, or special corner blocks, were often quarried rock or brick. An outstanding example of fieldstone construction is St. John Evangelical Lutheran Church (NRHP 1986) at New Fane, Fond du Lac County, built in 1871 of coursed fieldstones that decrease in size toward the top of the wall. Buff bricks were used to frame door and window openings.

The period of greatest popularity for the general use of fieldstone in Wisconsin was between 1850 and 1880. In the twentieth century, fieldstone construction generally became limited to agricultural outbuildings, mainly foundations. An important exception is the all-fieldstone Annala Round Barn (1917) (NRHP 1979) near Hurley in Iron County. Although fieldstone buildings are found throughout the state, southeastern Wisconsin is the area of greatest concentration of such structures.

QUARRIED STONE

The earliest part of Wisconsin permanently settled by large numbers of whites was the southwestern lead mining district. In this area, stone was quarried and cut for construction of miners' cottages. Today, Mineral Point has Wisconsin's richest concentration of Cornish miners' stone houses and exhibits some of the state's finest stonework. "Pendarvis" (NRHP 1971), and the Trelawny House, Mineral Point Historic District (NRHP 1971), both on Shake Rag Street and built in the 1830s, have cut-limestone front walls and random ashlar side and back walls. Similar early cut-stone houses are elsewhere in the region, particularly in Platteville, Shullsburg, and Prairie du Chien.

Other quarried stone buildings are found throughout Wisconsin. Some of the state's oldest churches were constructed in this manner, including the Jenkinsville Primitive Methodist Church, built by Cornish miners in 1854 in the Town of Benton in Lafayette County. David's Star Evangelical Lutheran Church near Kirchhayn, Washington County, built by German immigrants in 1856, is but one of the great number of nineteenth-century stone buildings constructed in the heavily German settled eastern region of the state.

Pockets of high-quality dressed stone construction that exhibit similar construction and decorative characteristics indicate the activity of skilled local masons. The Cedarburg area is a good example. Stone was taken from local quarries, cut in fairly large and regular blocks, and laid in a buff-colored, sand and lime mortar. When the stone weathered to a

blue-gray tone, a particularly distinct visual effect resulted. The Cedarburg Mill (1855) (NRHP 1974) and the Concordia Mill (1853) (NRHP 1974) are two examples of this workmanship.

Rural areas of northwestern Dane and southern Sauk counties also display distinctive stonework. In addition to the typical coursed block technique, many buildings were constructed of regularly coursed stone, usually with finely-tooled raised mortar joints. There are many fine examples of this type of construction in the vicinity of Sauk City. The city of Madison retains a fair number of fine "high-style" sandstone structures, including the American Exchange Bank (1871) (NRHP 1980) and the Gates of Heaven Synagogue (1863) (NRHP 1970). The concentration of limestone deposits in Waukesha County fostered the construction of many fine stone buildings there, several located in the city of Waukesha's Downtown Historic District (NRHP 1983).

Later in the nineteenth century and in the early twentieth century, northern quarries began to yield the region's distinctive brownstone which became commonly used in such cities as Ashland, Bayfield, and Superior. Cut and coursed in large rough-faced blocks, the material was especially well-suited to achieving the robust effects of Romanesque, Queen Anne, and classical designs, and found a ready market both locally and at more distant points in the nation. Two excellent examples are the Old Bayfield County Courthouse built in 1883 in Bayfield (NRHP 1974) and the Bayfield County Courthouse, built in 1894 in Washburn (NRHP 1975).

COBBLESTONE

The technique of veneering rubble walls with rows of cobblestones imbedded in mortar was brought to the Midwest by Yankee immigrants during the mid-nineteenth century. The greatest concentration of cobblestone structures in the United States is in the vicinity of Rochester, New York; many of these structures were constructed by masons who had previously worked on the Erie Canal (Schmidt 1966:3). The number of examples found outside of New York state is relatively limited and, as such, cobblestone buildings in Wisconsin that maintain their integrity represent a significant manifestation of this unique method of construction.

Cobblestone buildings were constructed in Wisconsin for approximately thirty years, beginning in the 1840s. In New York, cobblestone walls were originally load-bearing. By the 1840s, changing tastes had dictated the use of smaller and smaller stones, and a cobblestone veneer was applied to a load-bearing wall. Typically, cobblestones were laid in horizontal bands with each stone supported by a V-shaped mortar joint. Some cobblestone facades exhibit stones painstakingly matched in size, shape, and tonality of color. A banded or striped effect was achieved by laying alternate rows of stone of contrasting color. At the corner of the buildings, stone or brick was used for quoins.

Most examples of cobblestone construction in Wisconsin are found in the southeastern region of the state, reflecting Yankee settlement patterns. The majority are located in Racine, Rock, Walworth, and Waukesha counties. About 15 cobblestone structures in Wisconsin have been listed in the National Register; however, others have been identified by various researches.

The majority of Wisconsin's cobblestone buildings were constructed as single-family residences with definite traces of the Greek Revival style. The Bradley H. Marcy House (1866) (NRHP 1974) in Eau Claire is a late example that alludes to the Gothic Revival style with its steep proportions and pointed arches. Wisconsin also has two excellent examples of commercial cobblestone construction: the three-story Buena Vista House (NRHP 1978) built in 1843 in East Troy, Walworth County, as a hotel and tavern and the smaller Enterprise Building (1845) (NRHP 1975) in Palmyra, Jefferson County.

GROUT AND CONCRETE

Concrete is the "oldest synthetic material used in the building process," dating to at least 121 B.C. when the material was used in the foundation of the Temple of Concord at Rome (Condit 1968:155). Roman builders discovered that when quicklime (calcium oxide) was combined with volcanic earth (later known as pozzolana) and mixed with water, sand, and an aggregate of brick and stone, the substance, when hardened, was as strong and durable as stone. But despite this ancient application, concrete technology was "lost" during the Middle Ages. Not until the eighteenth century did experiments with concrete resume, although concrete construction was unusual until the nineteenth century (Condit 1968:156-157).

Experiments with concrete in the United States date to colonial times, but the first notable application came in 1810 when the builders of the Erie Canal applied a hydraulic cement (made from local limestone) to a facework of the canal. Over the next three decades, at least a dozen natural hydraulic cements were discovered along the Eastern seaboard and also in Illinois and Kentucky (Condit 1968:157). Despite these advances, the use of concrete in America remained limited. Hydraulic lime was unavailable in many areas and the uncertain strength of lime deposits made concrete impractical for most building. Monolithic concrete construction was rare and remained so until an artificial cement (Portland cement) was patented in 1872, making concrete construction more practical (Condit 1968:158).

Within this context of uneven development, the early use of grout in Wisconsin was a noteworthy innovation. In 1844, Joseph Goodrich developed a lime-sand-gravel-water mixture that was hardened in wooden forms. The so-called "grout" method enjoyed limited popularity in the Rock County area, particularly in Milton where Goodrich lived. The Goodrich method used local materials in the proportion of one bushel of lime for every seven or eight of gravel. According to Goodrich, the method was durable and relatively inexpensive. Orson Fowler, who lauded the use of grout in his 1854 book A Home for All, or the Gravel Wall and Octagon Mode of Building, visited Goodrich in 1850 and praised the practicality of the method. He noted that "it was copied extensively" in the region, and believed that the "superiority of the plan must certainly revolutionize building and especially enable poor men to build their own homes" (Fowler 1854:19).

Although the grout method was never widespread, grout buildings were built outside the confines of Milton. The diffusion of the technique was no doubt due, in part, to Goodrich himself. As the proprietor of the grout Milton House, a popular "temperance inn" and stage stop, Goodrich was able to use his place of business as an advertisement for his favorite method of construction. Known locally as the "gravel man," Goodrich discussed his ideas in the local newspapers as early as 1846 and through private correspondence. By the time Fowler gave national attention to the method in 1854, grout buildings had been constructed in several Wisconsin communities.

Besides the fairly localized use of grout in Rock County, precast concrete blocks were the most common use of concrete prior to the advent of Portland Cement. The blocks were made with hydraulic lime and cast in wooden frames. They were solid like bricks and laid up in mortar. United States Patents specifically mentioning "cement block" were first issued in the mid-1830s. Interest in Wisconsin in this type of building material is evidenced by United States Patent #12,264 issued January 16, 1855 to John A. Messinger of Milwaukee and A. Foster of Portland (Dodge County). This patent was for an "improved building block composed of twelve parts sand to one part lime and pressed in moulds" (Report of the Commissioner of Patents, 1855, Vol. 2, 88). It is not known how actively they pursued the development of their patent. The first commercial manufacture of concrete blocks began in 1868 by the Frear Stone Manufacturing Company of Chicago.

These and other commercially manufactured block were turned out by metal presses with hollow cores. This later innovation produced a light, insulated, moisture resistant block that was cheaper than stone and stronger than brick. By the turn of the century concrete blocks presses were being commercially manufactured, engendering a wide application of concrete blocks until the end of their popularity in the 1930s.

BRICK

Pioneer brickmaking was largely done by small-scale, locally-based operations with bricks handicrafted. Consequently, there were literally scores of brickyards scattered throughout the state in the nineteenth century, each providing slightly different hues of brick. Chemical characteristics of clay deposits are the dominant factor in determining the color of the bricks. Perrin offers the following description of brick varieties in Wisconsin:

> The lacustrine or lake clays along Lake Michigan resulted in predominantly light cream and buff colored brick when properly made, while clays found elsewhere in the state produced various shades of red and brown brick. Outstanding among the early brick was that of Hustisford in Dodge County and Mineral Point in Iowa County because of good quality and exceptionally pleasant color in a blend of vermilion and burnt orange. A similar brick, but of somewhat more uniform red color was produced in the Duck Creek area near Green Bay, in Forestville, Door County and Menomonie in Dunn County. All along the Mississippi River and its tributaries on the west end of the state, various types of red, brown and russet colored bricks were made (Perrin 1981:64).

The community of Cooksville in Rock County exhibits a concentration of buildings that were built during the 1840s and 1850s of locally-made vermilion-colored brick. Many of the Cooksville brick structures allude to the Greek Revival or Gothic Revival styles popular during that period. Several are listed in the National Register. In some of the earliest settled parts of the state, brick buildings exhibit a Federal style influence. The Thomas Priestley House, located in the Mineral Point Historic District (NRHP 1971) is a good example. It was built about 1850.

The cream-colored brick produced primarily in the Milwaukee vicinity had the most distinctive visual effect on the state. The Lacustrine deposits located almost exclusively in narrow strips along Lake Michigan are unusually deep, reaching over one hundred feet in depth at certain points (Zimmerman 1970:4). The buff or cream tone of brick made from this clay is a result of its relatively high proportion of calcium and magnesium. Brick manufactured in Milwaukee became so popular during the nineteenth century that the city was nicknamed "Cream City." Milwaukee's first cream brick structure was erected in 1836; by 1853, six million bricks were being produced in Milwaukee kilns annually and one-third of these were shipped out of state (Zimmerman 1970:6-7). The brickyard of George Burnham and Son became the city's largest producer of cream colored brick, manufacturing fifteen million bricks in 1880 (Landscape Research 1981:29). Brick production on this scale was, of course, mechanized. The highest quality bricks were classified as "pressed;" these were smooth, very uniform in size and color, and extremely durable. "Common" brick was usually sold ungraded and displayed inconsistencies in size and color.

Although the city of Milwaukee exhibits the greatest number of cream brick structures, ranging from residences and commercial structures to churches and industrial buildings, cream brick buildings are common elsewhere in the state. Outstanding examples include the Tallman House (NRHP 1970), built in 1857 in Janesville; Villa Louis (NRHP 1966), built in 1872 in Prairie du Chien; and the Richards Octagon (NRHP 1971), built in 1854 in Watertown. By the late nineteenth century, competition from Chicago firms and a shift in taste in favor of dark masonry led to the demise of this industry.

Scattered throughout the city of Racine are over 110 cream brick workers' cottages identified in a 1979 intensive survey of that city. These cottages are typically one-and-one-half story, front gable houses. Most of them have rubble stone foundations, Italianate style segmentally-arched windows with brick hood moldings, and low-gable roofs

(Karr 1979:65). Constructed of pressed brick from Racine's northside brickyards, most of these cottages were built during the 1870s and 1880s. Although they are scattered throughout the city, several concentrations of the structures have also been identified.

Another distinctive display of brick craftsmanship is found in the Belgian enclaves of Brown, Door, and Kewaunee counties. Farmhouses in the area were veneered with locally produced red brick, while cream brick was imported to accent window and door openings. The resulting polychromy is a distinctive feature of this rural landscape. Other ethnic groups seem to have built very similar houses, but no other concentration in the state is as large as that in the northeastern Belgian settled area.

The "common bond" was most widely employed in early brick construction, but further study may identify areas where significant other bonding patterns were used. Structures that have unusual brick ornamental detailing merit further research, particularly buildings with rowlock trim found in the German and Luxembourger settled regions of eastern Wisconsin.

OTHER CONSTRUCTION MATERIALS

LUSTRON

"Lustron" refers to the prefabricated procelainized steel houses built in the late 1940s in response to the post-war housing shortage. Manufactured at a plant in Columbus, Ohio, the house components were packed in tractor-trailers for shipping to various parts of the United States. Every part of a Lustron house was steel, including the structural members, exterior and interior wall and ceiling materials, roofing, and built-in furnishings, all totaling ten tons of steel in the two-bedroom model. Lustron houses were built on a concrete slab and were heated by a forced-air furnace that poured heat above the ceiling; uninsulated ceiling panels allowed heat to radiate to the rooms below.

Lustron houses can be identified easily by the exterior two-foot-square panels that appear in a variety of pastel colors. Shingles on the gable roof are also porcelainized steel. The standard two-bedroom model is a one-story "ranch" type house, with an entrance at the left under an inset porch. To the right of the porch is a picture window. One-bedroom and three-bedroom models were also manufactured, but in lesser numbers. Companion garages were also available.

Only about 3,000 Lustron homes were built, but a surprising number were erected in Wisconsin (Snyder 1984:27). In the Madison area alone, at least a dozen Lustron houses are extant. Other forms of porcelainized steel were also popular in the 1940s and 1950s and companies othern than Lustron manufactued it. The most frequent use of the material was for gas stations, although it was utilized in a number of other types of commercial buildings as well.

STUCCO

Walls that are stuccoed are covered with Portland cement plaster, a moisture resistant sheathing applied to brick, stone, wood lath, or wire mesh. Often left in its natural gray color, stucco could also be painted or "tinted." Earth tones (brown, tan, green) or stark white were the most common hues. Although used from Colonial times, the popularity of stucco increased in the early twentieth century with the revival of ancient, medieval, and colonial stylistic references. From Spanish Colonial to Tudor to Colonial Revival, stucco was often preferred, at least as an accent material. New styles and design trends of the century, including the Craftsman, International Style, and Bungalow, also utilized stucco extensively. An interesting and often unfortunate aspect of the acceptance of stucco was its application to older buildings in attempt to modernize them. Clapboard houses were most frequently the recipient of stucco coatings. By the post-war years, stucco's popularity waned, perhaps because of the suitability of brick and wood siding to the increasingly popular ranch house.

CARRARA GLASS

Pigmented structural glass, also know as Vitrolite and Carrara Glass, was often applied to buildings designed in the Art Deco and Art Moderne styles. The glass could be curved and colored to fit the streamlined look of these twentieth century styles and was often applied to older buildings in attempt to update them. It was generally 11/32" or 7/16" thick and was applied over masonry or plastered walls with an adhesive mastic (National Park Service 1984:3). Besides the easy maintainance of Carrara Glass, it was favored for its brilliant color and durability. Exterior commercial facades were the most common surfaces for the glass, but interior walls and counters were also covered with it. In Wisconsin, Carrara Glass was never as popular as in some parts of the country, and it has virtually disappeared in many cities, a victim of steel, metal, wood, brick, and plastic

replacement.

TERRA COTTA

Terra cotta is an ancient building material consisting of cast and fired clay units, generally larger and more intricately modeled than brick and usually glazed or painted. It became popular in the United States in the last quarter of the nineteenth century and was used as a decorative element in stone or brick buildings. In Wisconsin, it can be found on late Queen Anne, Richardsonian Romanesque, and late Gothic Revival buildings as inset panels, finials, and cornices.

Terra cotta was also used as a structural element in the form of glazed blocks. Relatively rare in Wisconsin, it was a material particularly suitable for facing steel skeleton buildings and was popular on tall commerical buildings well into the twentieth century. Other twentieth century commercial buildings were simply embellished with terra cotta panels, continuing the trend begun in the nineteenth century.

The use of terra cotta is not well understood in Wisconsin. Further study may reveal that it was more popular than presently suspected, particularly in Wisconsin's medium and large cities.

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AGRICULTURAL OUTBUILDINGS

Wisconsin has a long and diverse agricultural history. The third wave of settlers, after the fur traders and miners, was farmers ready to claim the plentiful land to till the deep, rich soil. Yankee settlers brought eastern farming methods, as well as its traditions of constructing barns and other outbuildings. Immigrants from Europe brought Old World agricultural traditions to Wisconsin. Environmental conditions in Wisconsin and unlimited opportunities for innovation led Yankee and European settlers alike to experiment with little known crops and build structures to accomodate them.

The diversity of crops grown in Wisconsin and the varied background of settlers to the state resulted in construction of a vast array of agricultural buildings. In 1983 the Division began to develop a list of the types of agricultural outbuildings that occur in the state. The list was useful in entering information in the computer on properties that had been inventoried over the years, and improved the field identification of outbuildings by surveyors. In 1985 the list was expanded and definitions for each type of building were developed. The definitions were reviewed by the state's experts on agricultural history and architecture, and amended accordingly.

The information in this section constitutes the Division's first attempt to delineate agricultural outbuildings by form and function. Much more needs to be learned. Although our knowledge of agricultural history is well-documented in many areas (see Agriculture Theme), a correlation between crops, technology, ethnicity, and architecture cannot always be made. With further field investigation and research, the list of terms will no doubt be expanded and the buildings will be better understood. The following definitions are presented as a preliminary effort to classify Wisconsin's vast array of agricultural buildings.

BARNS

Animal Barn/Stable. Barns used for horses or a few cattle, hogs, or sheep are usually rectangular in plan with a gable or shed roof. These buildings are usually a single story, perhaps with a loft, and often have more windows than other barn types. The windows often pierce the side walls in a regular pattern. Entrances may occur on all sides of the building and vehicular entrances are sometimes present. Animal barns and stables often have an attached pen or fenced yard. They are generally of frame construction with board or board and batten siding. Some Wisconsin examples are built of stone or stovewood.

Bank Barn. The bank barn is a large or medium sized rectangular barn with two levels, the upper used for hay, feed, implement, or vehicle storage and the lower used for animals, often dairy cows. An identifying feature of the bank barn is the construction of the lower level into a rise or hillside. The lower level of a bank barn is masonry, while the upper level is often board or board-and-batten, and sometimes log. In Wisconsin there are examples built entirely of stone or brick. Windows or vents (sometimes louvered) typically pierce the upper level. The lower level usually has one or more entrances and small windows in the end walls. The roof is gable, gambrel, or arched and ventilation cupolas and dormers are quite common. Gabled roofs may be assymetrical. The upper level has a large door opening directly onto the top of the rise. The opposite wall sometimes has the distinctive forebay, a slight extension of the upper floor over the lower along the long wall, cantilevered or supported by posts. The forebay provides a sheltered area for animals and usually contains one or more doors for animal entry. Older gable roofed bank barns may have been threshing barns that were raised to accomodate a milking parlor, with hay storage above. Horizontal collar tie beams and interior partitions had to be removed, and other modifications may have been made, for installation of the haytrack.

Basement Barn. The basement barn, one of the most common barn types in Wisconsin, is a medium to large barn with a raised masonry foundation at least the height of the doorways and forming a lower story. Most often, the upper story is framed and sheathed in boards or board-and-batten, although examples built entirely of masonry are found in Wisconsin. The roof shape varies, with gable, gambrel, and arched roofs all being common. Gable roofed basement barns may have originally been threshing barns. With the decline of wheat farming, many were converted to basement barns to accomodate dairy farming. A track for the pulleys that operate the hayfork runs under the roof ridge and often the barns have an exaggerated peak at either end of the ridge, called a "hanging gable," to house and shelter the hayfork and protect the loft opening from the weather. Sometimes this shelter actually boxes in the hayfork and is called a "hay-hood." Cupolas and dormers for ventilation are both common. Multiple entrances at the basement level, including in the end walls, are fairly standard. Used for purposes similar to the bank barn, the lower floor of the basement barn was intended for animal shelter and machinery or implement storage, while the upper level was devoted to hay and grain storage. Many basement barns have an earth or frame ramp leading to the second story. Noble also refers to the basement barn as the "raised three-bay" barn. Wisconsin surveyors should classify threshing barns raised on foundations as basement barns (see "Threshing Barns," below).

Centric Barns. Centric barns are either built into a slope like the bank barn or on level ground as the basement barn. Generally used for dairy purposes, cows would occupy the lower level and the upper level would be used for hay and other storage. One reason centric barns became popular is because they enclosed more space with fewer materials than conventional rectangular barns. Foundations are usually masonry, with the remainder of the structure of frame. At least one example built entirely of stone is known in Wisconsin, the Annala round barn in Iron County. Roofs on centric barns are conical,

hipped, or gambrel-like, often with vents or a cupola. Some examples have a silo piercing the center of the roof, however, sometimes this feature has been removed. Centric barns are fairly rare and have been studied more than most other barn types.

Crib Barn. The crib barn is a hay and grain storage facility characterized by a tall midsection flanked by matching lower wings that span both long walls. Usually the side wings have simple shed roofs, and the center portion is gabled. Typically a board or board-and-batten structure, the gable roof often presents a striking profile, sweeping down to cover the lower wings with a "broken gable." The interior contains a transverse wagon-way, with space for storage on either side. A loft for hay storage generally occupies the upper level of the center section. The true crib barn may not really exist in Wisconsin, as the type is generally considered a southern barn. However, shed additions on other gable roof barn types sometimes lend the appearance of a crib barn. Further study is needed to determine the occurrence of crib barns in Wisconsin. The term should be used sparingly.

Hay Barn. The hay barn is intended as a generic term for the many medium sized barns that do not fit into the category of basement or bank barn. These barns have a variety of shapes and uses, but two common features: an upper loft and vehicular entrances. They have either a gable or gambrel roof and do not have a masonry foundation like the basement barn. A portion of this barn type may be a corn crib, apparent because of the partially slatted exterior walls. The "field hay barn" was built by Finnish settlers. It is usually a crude log building with a gable roof and entrances at either gable. Sometimes walls are canted. The distinctive feature of this barn was its siting away from other farm buildings in a field. They are found in Bayfield, Douglas, and Iron counties, and perhaps elsewhere.

Pole Barn. The pole barn is a newer barn type, generally dating from after World War II, according to Noble (page 47). A one story structure, pole barns are often quite large and have slightly sloped gable roofs. They are built of wood or, more recently, are steel or aluminum sided. All sides may have doors and windows. Pole barns are used for many purposes, but seem particularly well suited for housing cattle.

Small Animal or Poultry Barn. Built to house chickens, hogs, sheep, and other small animals, the small animal or poultry barn is typically rectangular with a shed or gable roof. Although these barns can be large, on the typical small to medium size farm it is a diminutive building. A traditional aspect of the roof of a chicken house are the two shed roofs sloping in opposite directions, one higher than the other, allowing for windows and vents on the intervening wall space. The windows usually face south. Some examples have monitor roofs instead of the two shed roofs. Many chicken houses also have fairly large windows on the south facing wall of the building. Brooder houses may not have this distinctive appearance, and are the smallest of the poultry buildings.

Threshing Barn. This is an early barn type in Wisconsin, built when wheat agriculture flourished in the state. Wheat was threshed in the central part of the barn, an open area reached by a central wagon-way running the width of the building. Built with a gable roof, the threshing barn was medium sized. These early barns may be timber framed or of half-timbered construction, although the framing is nearly always covered with plain vertical board siding. Windows are scarce on threshing barns, although a small window in the gable end usually vented the loft. Threshing barns are identified as English barns or three-bay barns by Noble. It was common to raise threshing barns on a masonry foundation as farm needs changed, creating the "raised threshing barn." For survey purposes, the raised threshing barn should be identified as a basement barn.

Tobacco Barn. Tobacco barns are common in some parts of Wisconsin . The buildings present a long, low profile, generally with a gable roof, although sometimes gambrel. They were typically built of lighter pole construction than animal barns and, to allow

ventilation to dry the crop, every third or fourth board was hinged to allow the boards to be sprung open. Although usually boards were placed vertically, sometimes they were placed horizontally. The interior has rows of poles on which the tobacco is hung to dry. Tobacco barns vary in size, but are generally rectangular in plan and many had a door at either gable end to create a drive-through.

Wisconsin Dairy Barn. This barn type was developed and promoted by the University of Wisconsin in the late nineteenth century. It is a long, narrow barn with two rows of stalls in the interior, divided by a corridor running from end to end. Several windows regularly spaced generally pierce the side walls. The Wisconsin dairy barn is generally built on a concrete foundation. Its gambrel roof usually has ventilators of some sort.

OTHER AGRICULTURAL OUTBUILDINGS

Blacksmith Shop. These small outbuildings were fairly common on older farms. Typically built of stone, they either have a chimney or stove vent. Although they sometimes appeared slightly offset from the farmstead complex, the same type of building was also found in small communities.

Cellar. These low buildings were built to store vegetables, fruits, and other products that required a cool temperature. Cellars were also built as shelters from tornados. Gable or shed roofs are common, and the construction material may be log, stone, concrete or wood. The structure shelters a chamber recessed in the ground that may be windowless. Cellars were often built into hillsides or slopes. For domestic use, cellars were usually of small in proportion, however, in fruit and potato growing parts of the state they may be quite large in area although low in height. These cellars usually have two doors, creating an air lock entry.

Corn Crib. The corn crib is usually a rectangular building with horizontally laid lath or slat walls for ventilation. It was often constructed on blocks or pilings to prevent rodents from nesting underneath and the walls are frequently sloped, creating a narrower base. Corn cribs vary in size, with earlier cribs being quite small. On large operations they are much bigger. The roof shape is usually gable or shed, although gambrel roofs do occur.

Granary. Granaries were a common type of outbuilding when wheat agriculture flourished in Wisconsin. With its demise, granaries became an infrequently built farm building, but today some survivors are apparent. Although most frequently built of frame, masonry, fachwerk, and log granaries are also found in Wisconsin. The structures are generally small, and square or rectangular in plan with gable or shed roofs. Some are built on pilings or blocks. A doorway can be found in either the gable end or along the long wall. Many granaries have distinctive sloped walls, narrower at the base. In Scandinavian settled areas granaries often have low wings on the long sides to shelter machinery or work areas.

Hop House. Built during the relatively brief period when hop agriculture flourished in Wisconsin and in a fairly limited part of the state, hop houses were used for drying the crop. They are usually small and square in plan, with one-and-a-half or two stories and a gable or hipped roof. Often built of masonry or grout (sometimes with a log or frame upper story), the first level housed a stove and the second story was used for drying. The upper level was floored with narrow boards, spaced to allow ample ventilation from below.

Ice House. The ice house was an insulated building used to store ice for sale or for cooling dairy and other farm products. Often the framing of the building is apparent from the exterior, with board siding on the interior. Hay, sawdust, or straw would be packed or stacked in bales between the wood members for insulation. Sometimes the ice houses are sided on both the interior and exterior with insulation between the walls. Gable roofs are common on these windowless buildings, which may have tall doors in either gable end.

Machine Shed. Farm machinery was often stored in a machine shed, a long, low building with a shed or gable roof. Usually of frame construction, machine sheds typically are rectangular in plan and have sliding or hinged doors on one long side.

Milk House. The milk house was a multi-purpose dairy building used to wash cans and equipment and temporarily store milk. Usually a small building attached or close to the dairy barn, the milk house was built of frame, brick, concrete block, or stone. Older milk houses generally had cold water piped into an open tank from a well or spring. With modern dairying practices, milk houses often have refrigerated tanks that milk is carried to via pipes from the barn.

Outdoor Bakeoven. The outdoor bakeoven is a cooking structure that may be connected to a summer kitchen, but is sometimes a separate unit. They were built of stone or brick and usually had a gable roof, extended to provide a shelter for wood. The bakeovens are associated with certain ethnic groups, particularly the Belgian.

Privy. The privy or outhouse was a latrine, usually built of wood, although stone and brick examples are also known. The small building most often had a gable roof, and small windows or vents were often placed high in the gable wall. A clean-out trap door is usually located on the rear wall. The diminutive size of the building and its proximity to the house are its strongest identifying features.

Pump House. The pump house provided an enclosure for a farm's water supply. Sometimes the structure was heated with a wood burning stove to keep the system from freezing in the winter. A "tank house" may house an elevated water tank that provides pressure for the entire farm water system.

Roadside Chapel. Although not an agricultural building, the roadside chapel is associated with rural Belgian settlement in Brown, Door, and Kewaunee counties. It is a small, gable roofed building with a doorway centered in the gable wall closest to the road. Sometimes small windows are apparent. The chapels are built of masonry, log, or frame. Roadside chapels should not be confused with the roadside shrines built by the Polish and Bohemians.

Sauna. Finnish farmsteads are characterized by saunas, steam bath houses, partitioned into two or three rooms. Saunas were built of log or wood frame and contained a wood burning stove. A brick chimney is usually evident.

Shed. Sheds are small utilitarian buildings usually used for storage. Historically, they may have been used for wood or coal storage. The shed roof is typical, but any small building not identifiable as a small animal barn, milk house, springhouse, or smoke house can be classified as a shed. They are usually of frame construction, and less frequently of log.

Silo. These tall, narrow structures used to store grain or silage are common features on the Wisconsin landscape. Initially square in plan, the centric silo rapidly became dominant. In Wisconsin they are built of stone, poured concrete, wood, glazed brick, concrete block, or steel, and are sometimes attached to barns. The wood and stone silos are probably the oldest and warrant special attention by surveyors. A fuller description of silos can be found in the study unit "Feed Crop and Grain Cultivation."

Smokehouse. Smokehouses are generally small buildings and can be confused with other outbuildings, such as wash houses. The smokehouse is characterized by the presence of a chimney or vents in the gable walls. Used to smoke meat and fish, the smokehouse was built of masonry or log. It frequently has a gable roof, and windows may be apparent.

Springhouse. Small buildings, often masonry, located near water sources are often springhouses. The springhouse may have a channel that water flows through used to cool milk and other products. Springhouses are most common on Wisconsin's nineteenth century farms.

Summer Kitchen. The summer kitchen was common only in some parts of the state. Its proximity to the house and chimney identify these small to medium sized buildings. Gable roofs are common, and sometimes a shed addition (for firewood) or a bake oven can be found at an end wall. Summer kitchens are constructed of a variety of materials: masonry, log, and frame examples are found in Wisconsin.

SURVEYS OF WISCONSIN FARMSTEADS SINCE 1920

Several efforts to survey Wisconsin farmsteads have been undertaken since 1920. The information may be useful in assessing changes that have occurred in farming over the years, but is particularly useful for studying individual farms. Data collected on a county basis could be an asset in studies of those counties. The most useful information on individual farms is contained in the 1934 Farm House Survey and in the Bankers Joint Stock Land Bank papers. A description of known surveys follows.

A. "A Census of Old Homesteads," performed by Joseph Schafer and Edna Louis Jacobson from 1920 to about 1925, probably as part of the research for Schafer's A History of Agriculture In Wisconsin (1922). This history contains an appendix describing the study and includes several summaries of the "considerable amount of data" that was compiled on individual farmsteads owned by the same family for sixty or more years. These reports provide the location, a short history of the early settlers, current owners, and sometimes a description of the farmstead properties. Although the SHSW archives and manuscript collections were searched, none of the field sheets from these or the other farms seem to have survived. As such, the few descriptions in the Schafer are useful only for particular properties.

B. "Farm Housing Survey," directed by the Home Economic Bureau of the United States Department of Agriculture through the Civil Works Administration, in cooperation with the Bureau of Agricultural Engineering Extension Service and the Office of the Secretary, 1933-34. This was a national survey that sampled the condition of farms and farmsteads in every state of the Union. Seven Wisconsin counties were sampled: Calumet, Dane, Oneida, Richland, Walworth, Washburn, and Waushara. These seven counties were selected because they represented various levels of agriculture in the state. Every farmstead in each of the counties was surveyed for nature of ownership, type of construction, age and present condition, level of services, and size of structures. Most of the field sheets show floor plans, many show elevations, and a few have pictures attached. The field sheets are available at the University Archives in Steenbock Library as: College of Agriculture, Agricultural Engineering, Miscellaneous Subject Files, C.W.A. Housing Survey, 1934. Series # 9/12/3 Box #20. However, of the hundreds of farmsteads surveyed, only the best or the most complete field sheets have been preserved, approximately 250-300 in number. If all of the field sheets were available, they would be representative of their counties. However, those that have been preserved may or may notbe representative of the whole. As such, they probably are useful for particular properties, but should not be regarded as a statistically sound sample. The Farm Housing Survey, (United States Department of Agriculture, Miscellaneous Publication No. 323, 139) is the final report.

C. "Farm Building Surveys in Wisconsin, Kansas, Georgia, and Illinois," performed by the United States Department of Agriculture, Bureau of Agricultural Engineering, in Cooperation with the Universities of Wisconsin, Georgia, and Illinois and the Kansas State Agricultural College in 1937. A representative township in each of the states was chosen for study, although the criteria for selection is not given in the final report. The Town of Verona in Dane County was chosen for the Wisconsin portion of the survey. Each of the 133 farms was visited but complete information on each was not obtained. The results of the survey were published in a report of the above name as Miscellaneous Publication no. 311 of the United States Department of Agriculture, June 1938. This is located in the SHSW library.

D. "Century Farms" program, begun in 1948, the centennial of Wisconsin's attainment of statehood. It is an ongoing project under the supervision of the Wisconsin State

Fair Board, with awards presented every year to farm owners who can prove that their farm has belonged to the same family for 100 years. The SHSW Archives holds some of the early applications (approximately 1948-1954) in file MS/E.F./9W81, "Wisconsin Pioneers and Century Farms." These are little more than certifications that the farm has belonged to the same family. The State Fair Board keeps all other records, but no longer retains even the applications. Instead, all information is reduced to a single file card.

E. State Historical Society of Wisconsin surveys. Numerous farm buildings have been recorded in surveys undertaken by the Historic Preservation Division. Intensive surveys funded partially by the division include the most detailed information, but such rural surveys are not common. Green County, Mequon, and Menomonee Falls survey reports should be consulted for information on agriculture in these areas. Some information was obtained from county extension agents in the mid-1970s as a result of a direct mailing. Information from this effort was filed by individual farm and added to the division's "site files."

   Prior to the development of Old World Wisconsin the Society undertook thematic surveys of various ethnic groups. Some survey work continued for several years after Old World Wisconsin was opened. Results are filed at the outdor museum at Eagle, Wisconsin.

F. Another source of farmstead information in the SHSW Manuscripts collection are the records of the Bankers Joint Stock Land Bank of Milwaukee from 1919 to 1938. This bank was established by the federal government after World War I to aid Midwestern farmers by providing farm mortgages. It quickly overextended itself and, not being federally insured as many thought, went into receivership in 1927. The liquidation process included numerous field trips, which yielded field reports on the various farmsteads mortgaged to the corporation. Filed with the monthly reports in cartons 4 and 5, these reports give detailed descriptions of farms and buildings and include several photographs of each farm. The farms were located in Wisconsin and Minnesota. This is a very useful set of documents, but it is not easy to use because the records are filed by monthly report and not by any system relating to the farm locations. An index would prove quite useful.

G. Wisconsin Agriculturalists Oral History Project. The History of Wisconsin Project of the State Historical Society of Wisconsin resulted in several good additions to the State Historical Society's Archives. Especially pertinent to agricultural history are the tapes made by the Society's oral historian and filed in the Archives under "Wisconsin Agriculturalists Oral History Project." Eighteen interviews with a variety of rural people were taped, from small family farmers to cooperative directors to rural priests. They are rich in information on Wisconsin's agricultural heritage.

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In 1983 a group of architectural historians met in Madison to discuss various issues that would be addressed in the comprehensive planning process. Called the "RP3 Architectural History Advisory Committee," members discussed architectural styles and vernacular architecture, as well as the foremost architects who practiced in the state. Their discussions resulted in the compilation of a list of architects and firms that could be considered "masters" for National Register evaluation purposes. Some of the architects on the list are of international repute, while others are of regional or local importance. All did not reside in Wisconsin, but nevertheless their impact was significant. The list should not be considered comprehensive. As surveys and scholarship progress, additional names will be found to be worthy of adding to the list. Information on many of the architects is available in the files of the Historic Preservation Division and in intensive survey reports, available at the division offices or at the State Historical Society library. Information on some of the architects can be found in published books and articles, and in theses and dissertations.

NOTABLE ARCHITECTS AND FIRMS

Beatty and Strang

Bentley and Merman

D. H. Burnham & Co. (Burnham and Root)

Claude and Starck

Conover and Porter

James Douglas

Harvey Ellis

Alexander Eschweiler (Eschweiler and Eschweiler)

Ferry and Clas

Frost and Granger

Charles Hilpertshauser

Charles Hove

J. T. W. Jennings

George Fred Keck (Keck and Keck)

H. C. Koch & Co.

Kutzbock and Donnel

Laird and Cret

Law and Law

Eugene Leibert

George Maher

Edward Townsend Mix

Parkinson and Dockendorff

Arthur Peabody

Purcell and Elmslie

John F. Rague

Frank Riley

Howard Van Doren Shaw

Joseph Silsbee

Alvin Small

Stoltze and Schick

Schick and Roth

Otto Strack

Louis Sullivan

Martin Tullgren and Sons

William Waters

Henry Wildhagen

Russell Barr Williamson

Frank Lloyd Wright