



## Fences and Walls



This cast iron fence in a hairpin design is located around the grounds of the former Wyeth-Tootle mansion, now the St. Joseph Museum, 1100 Charles Street, Museum Hill Historic District.

Fences and walls have traditionally been used to delineate property lines and to demarcate boundaries between public and private rights-of-way. Due to St. Joseph's topography, retaining walls are a commonplace part of the landscape in many of St. Joseph's historic neighborhoods, as well. Both fences and walls are site features that play an integral role in defining the "texture" of St. Joseph's historic streetscapes and often were designed to complement the architecture that was associated with the site.

Within St. Joseph's historic districts, a wide variety of fencing materials and types is found. Executed in wood, cast or wrought iron, or wire, fences reflected styles popular since the mid-19<sup>th</sup> century. The earliest fences in St. Joseph were more than likely wooden fences and

provided a dual function of demarcating property lines and keeping out livestock in a period when St. Joseph was sparsely populated and predominately agrarian in its orientation. Many of these fences were utilitarian in nature and lacked any sort of decorative character. By the late 19<sup>th</sup> century, however, as the town prospered and developed a more urban character, ornamental wooden fencing became more commonplace. There was an endless variety of styles and patterns of wooden fencing available to Victorian households. Many Victorian era wooden front yard fences of the 1870s and 1880s had ornamental pickets or sawn work balusters in a variety of geometric patterns. Fences were typically painted and were often under four feet (4') in height. Fence posts were often substantive and measured eight inches square or more. Said posts were situated in alignment with the rail instead of behind the rail as is found on more contemporary privacy fence installations today.

Privacy fencing historically has been used to enclose rear yards. These enclosures were intended to obscure domestic household activities such as laundry drying, wood storage, and vegetable gardening which were considered utilitarian and not landscaped for public viewing. Today, rear yards provide space for these same activities. Increased usage of backyards for swimming pools, decks, and other outdoor living activities has maintained the popularity of privacy fences. Such fences are typically taller than their counterparts in the front yard and are generally solid.

Many residential properties in St. Joseph were once surrounded by ornamental iron fences. Historically, there were two major types of metal fencing – wrought iron and cast iron. Wrought iron is made from iron bars that are fired under extreme heat until they reach a pliable state and are then pounded, cut, and formed into the desired shape through a process called hand-forging. Thus, each piece of wrought iron is truly custom made and unique. Cast iron, by contrast, is made from molten metal poured into molds. A multitude of designs crafted from wooden molds created a remarkable diversity of patterns, many of which were mass-produced in foundries. Cast iron represents the most common historic fencing material remaining in St. Joseph today. One of the most common fence patterns is the hairpin and spike which is found in numerous locations in the City's older, established neighborhoods.

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Due to the brittle nature of cast iron, fences that remain today often have missing finials, spikes, posts, and gates. Luckily, these fence components are still manufactured, albeit in steel or cast aluminum. Suitable replacements, particularly for the more common fence designs, can be purchased either through architectural salvage companies or manufacturers such as Stewart Iron Works Company of Covington, Kentucky, which has produced the same fence designs since 1886.

Woven wire fences, the forerunner of modern chain link fencing, first became available by the mid-19<sup>th</sup> century in this country. The earliest wire fences were formed from molten iron that was drawn from dies to produce wires 1/8" to 1/2" in diameter. Lengths of wire were then cold-bent around jigs to form diamond and loop patterns or were crimped for decorative effect. By the early 20<sup>th</sup> century, technological advances in wire production begun in Germany allowed for development of thinner, braided or woven welded wire that could easily be formed into a variety of patterns. Today, remnants of this early 20<sup>th</sup> century wire fencing are found in the City's older, historic neighborhoods

In addition to traditional fencing, masonry retaining walls are characteristic of St. Joseph's hilly topography. Many of these walls were constructed of limestone in varying patterns and were either dry-laid or more commonly set with mortar. The simplest stone wall type is the random rubble masonry wall consisting of irregular, randomly-dimensioned natural stones that are laid without continuous horizontal joints. This produces a rustic and informal wall design. Coursed rubble walls are made from irregular stone that is laid in recognizable rows or courses. Many of the walls found in the City's historic districts have regularly shaped, block-like stones known as ashlar. Random ashlar walls are made of blocks of ashlar stone of varying sizes that permit close-fitting joints. Regularly shaped stone blocks of the same size that produce continuous horizontal joints in precise patterns are used to create coursed ashlar walls. Frequently mortar joints between stones were tooled or formed to create visual interest and added texture to the wall. Large rectangular caps of stone were often added to protect the masonry from water infiltration and to provide a visual termination to the wall. Stone or brick walls were frequently parged or stuccoed and scored to resemble large blocks of stone. On walls surrounding some of St. Joseph's finest residential properties, elaborate walls were sometimes constructed with large newel posts and stairway cheek walls with carved sandstone ornament in foliated designs or with recessed or raised panels. Wall sections often incorporated entry stairs made of blocks of stone or poured concrete. Stone railings with turned balusters or iron railings provided further architectural interest to these building site features.

Plant materials such as privet hedges, forsythia, and other plantings that form hedgerows were also used to demarcate property lines and to define public and private spaces in lieu of fencing. Efforts should be made to maintain mature plantings and to use traditional plant materials in a new landscaping project. A look at other established plantings in the neighborhood could provide clues to the types of plants that are characteristic of the local landscape.



Many of St. Joseph's Victorian residences incorporated elaborate stone carvings and staircase railings into ashlar stone retaining walls to define their entrances.



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Wrought iron fences found in the City's historic districts show a remarkable diversity of design.

The introduction of new fences and walls should be handled with concern for design, materials, height, details, color and placement. Fences and walls were often architecturally and/or materially consistent with the building or structure in which they were associated. These important landscape features should be compatible with the surrounding structure and should relate to the areas of visual concern in which they are to be located, including the overall streetscape. Repetition of fences and walls provides a strong sense of definition and continuity to the streetscapes found in the City's historic districts. For example, the Hall Street Historic District is characterized by large estate-type lots along Hall Street. The "Golden Age" mansions that line the street sit on elevated lots that are separated from the public street by stone retaining walls that serve to demarcate public and private spaces. These walls often incorporated low stone balustrades at the top to reinforce the separation of public and private streets. The combination front wall and fence afforded the passerby a relatively unobstructed view of the house, but created a physical barrier from the public sidewalk. Decorative iron fencing, usually not exceeding a height of four feet (4') might be found along the side property lines as a further demarcation of private property. The overall effect, however, was the sense that these grand Victorian houses sat in a park-like setting with few or no visual barriers between properties.

The Landmark Commission requires that the applicant requesting permission to erect a fence or wall submit a site plan locating the fence and wall configuration and a drawing sketch, or photograph of any proposed fence or wall installation. The City's Preservation Planner maintains images of historic fences that are appropriate for new fence installations.

Material selection for fencing is very important. Wood and iron were traditionally the materials used for fence installations. However, the recent development of vinyl and other synthetic fence products has created a new consumer demand that is inconsistent with most historic properties. While these new synthetic fence products are touted as being "maintenance free", the reality is they do succumb to deterioration due to prolonged exposure to weathering. Cracking, discoloration due to UV exposure, and problems blending replacement pieces with the original installation are just some of the problems that plague the product. Such problems are also found with vinyl siding applications. New vinyl fence installations also exhibit a sheen and texture when newly installed that is different from painted wood.

Fencing or wall installation is also desirable as a screen for parking lots, particularly in Downtown St. Joseph. Such fencing or walls should not exceed a height of three feet (3') and should be positioned around the perimeter of the lot. Trees and other vegetation may also be used in combination with the fencing or wall to enhance and soften the site.

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Section 31-054 of the Zoning Ordinance of the City of St. Joseph places some restrictions on fence placement, design, and height. In residential applications, fences in front yard and side yard areas may not be sight-obscuring. By definition, a sight-obscuring fence is one that is over three feet (3') in height and is more than 50% opaque. Fence designs that utilize pickets, balusters, and other vertical components should maintain a space separation between components at a minimum that is equal to the size of the individual components. Amendments to the Zoning Code pertaining to fences allow for exceptions to the sight-obscuring fence provisions with approval of the Landmark Commission.



## Repair and Maintenance

Wooden fencing by its very nature is one of the most vulnerable historic features of a building site. Thus, it is not surprising that very few historic examples survive. A lack of periodic repainting can be one of the major factors contributing to the deterioration of wooden fencing. In new fence installations, it is advisable to use pressure treated or rot resistant wood and to prime and paint or stain all of the individual fence components before assembly to better seal out moisture. The typical wooden picket fence tends to trap moisture where the pickets or boards lap the horizontal cross pieces. Moisture penetration can be minimized by recessing horizontal members in wide grooves or rabbets cut into the fence pickets. Caulking the vertical joint at the rabbet will help to ensure that moisture is not trapped in the groove cavity. Another method is to fasten wooden fence components with a galvanized screw or nail and a galvanized washer that is positioned between wooden elements. This will allow for a slight separation between building elements and help facilitate drainage at the joinery location. Beveling horizontal fence components, when possible, can also help to avoid locations for standing water that can lead to rot and decay.



More examples of cast iron fencing found in St. Joseph's historic districts.

Rust and bent or broken metal components are the two most prevalent causes for repair of ornamental iron work. Complete removal of rust is necessary in order to successfully combat metal deterioration. Sandblasting is one of the most effective methods for rust removal. While not recommended for soft metals, brick or wood, sandblasting will remove old layers of paint, scales and rust and leave sound metal untouched. Bare metal must then be primed and painted immediately with a high quality metal primer and paint to prevent additional rust from forming. Maintaining a sound paint layer on the fence will help to ensure its continued preservation.

Straightening bent metal sections of wrought iron fencing can usually be accomplished by a competent blacksmith or metal works shop that specializes in hand-forged work. The metal is reformed by subjecting it to intense heat and pounding or bending it back into shape. Cast iron, on the other hand, is a very brittle iron that tends to break rather than bend. Repairs will usually involve the production of new pieces formed from molds matching the original pieces.



# Fences and Walls



Coursed ashlar retaining walls (top) consist of regularly shaped stone blocks of the same size that provide continuous horizontal joints. Random rubble retaining walls (bottom) consist of irregular, randomly dimensioned natural stones laid without continuous mortar joints.

Retaining walls often fail as a result of the effects of the freeze-thaw cycle. Moist soil that freezes in winter will expand and cause a masonry wall to move resulting in the failure of mortar joints. Likewise, movement will also occur in spring when the soil contracts. Water penetration into masonry, erosion of soil behind the wall, and root systems from plantings can also contribute to its failure. New masonry retaining walls should be set on deep footings that are set well below the frost line. Mortar joints should be maintained and efforts should be made to minimize water penetration to the top of the wall through the installation of a cap. Joints in the capstones should be sealed. Deteriorated stones should be replaced as evidence of spalling occurs. Walls should be monitored for evidence of leaning and bulging and corrective measures taken before collapse occurs.

## Fences and Walls: Guidelines

1. Preserve historic fences and walls. Preservation requires continuous maintenance and repair. A sound paint surface is essential to maintaining and protecting wooden and iron fences. On wooden fences, seal all joinery to avoid moisture damage. To prevent rust and corrosion on iron fences, clean surfaces with a wire brush to remove all loose paint and rust, then prime immediately with a high quality metal primer before the finish coat is applied. Brick and masonry walls are vulnerable to uneven ground settling and mortar failure due to weather exposure, freeze-thaw cycle and vegetation. Resist the tendency to allow plants such as ivy to grow on brick walls as the plants will trap moisture and cause deterioration.
2. Retain and preserve all character-defining features of historic fences and walls including gates, decorative pickets, finials, newel posts, stairway systems and hardware.
3. Repair rather than replace historic fence and wall materials. If replacement is necessary, replace only those sections that are in need of replacement. Match the original in composition, height, scale, proportion, color, texture, material and design.
4. Design new fences and walls that are compatible with the associated building, site and streetscape in terms of composition, height, scale, proportion, color, texture, material and design. Fences and walls based on historic designs are encouraged. Vinyl or other synthetic plastic fencing is prohibited.
5. Utilize historic stairways in retaining walls as entry locations to a building site. If a historic retaining wall surrounds a now vacant lot and new construction is contemplated, orient the new construction to take advantage of existing historic stairways.

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## Fences and Walls: Guidelines continued

6. Avoid adding architectural features or embellishments to a fence or wall in an attempt to create a false historical appearance.
7. Use fences and walls in a manner that is historically appropriate such as for demarcating property lines and screening private areas and parking lots from the public right-of-way.
8. In front and side yard areas, fences and walls should not exceed a height of three feet (3') and should meet the standards pertaining to sight-obscuring fences as detailed in Section 31-054 of the Zoning Ordinance of the City of St. Joseph. The Commission may grant exceptions to these provisions if the proposed fence design is based on historic documentary pictorial or physical evidence.
9. In rear yards, fences shall not exceed a height of six feet (6'). Privacy fences and walls (opaque) shall be permissible. Privacy fences shall not extend forward of the rear building line of the principal dwelling on the lot.
10. Fences, walls, vegetation, and trees should not be placed within a street or driveway sight visibility triangle.
11. Use plant screening in the form of hedgerows as an alternative to fences and walls. Screening between different land uses and around parking lots is encouraged. It is recommended that hedgerows be kept low (under three feet (3')) so as not to obscure views of buildings and architectural details.
12. Avoid placing fences and walls in such a manner that they obscure the architectural details of buildings.
13. In conjunction with plantings, chain link fencing may be allowed only in rear yards and areas not visible from the street. Screen chain link fences with vegetation such as ivy, climbing vines, and evergreen shrubbery.
14. Avoid the use of horizontal board, split rail, solid board, and privacy fences in front yard areas.
15. Paint or stain (with an opaque stain) wooden fences. Iron fencing should be maintained in a painted state in traditional dark colors such as black or forest green.



Woven wire fencing, the forerunner of modern chain link fencing, is still found in some of the city's historic districts. The top example is located on the 1100 block of Ridenbaugh Street in the Cathedral Hill Historic District. The bottom photo shows a fence located on the 1800 block of Clay Street, Kemper Additoin Historic District.