



COMPASS  
IRONWORKS

DESIGN GUIDES





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# COMPASS

## IRONWORKS



## ARTISTIC WORKS DESIGN GUIDE





# ARTISTIC WORKS DESIGN GUIDE



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Elegance and Integrity

At Compass Ironworks, we carry into the 21st century the Amish traditions that forged our artistic sensibilities: honesty, integrity, and dedication to family, community, and craft. We do no mass production here; every installation reflects your unique needs. We are master craftsmen who work with both traditional and 21st century tools. At the end of the day, we close the doors and leave our tools at the shop, not to be touched until the next workday begins.

For more information about Compass Ironworks, please contact us Monday through Friday at (717) 442-4500.



Using metal as an artistic material has been in practice for many centuries. Past artist blacksmiths created many unusual forms of artistic expressions, many which can still be viewed and appreciated today.

While Iron can be very heavy and bulky, under the spell of forge and heat it can be hammered and formed into flowing, graceful and elegant shapes. Or geometric and abstract objects can be created. Also, natural and organic trees, flowers and patterns can be fashioned for art and nature lovers. As Samuel Yellin said "Although Iron is the least expensive of all metals, there is no other material which lends itself to more beautiful treatment. Neither is there a material which can be worked more quickly."

Various metals can be utilized, and they can be used singly, or, jointly to add contrast. The highly polished surface of stainless steel, the depth and character of bronze or treated surface of aluminum can all be phenomenal attributes to enhance the wow factor of an exceptional artistic piece.

Our craftsmen have the skills and experience to create realistic and lifelike tree sculptures. Various textures can be done to create bark effect. Trunks and branches can be hammered and special effects such as dead branches and knots can accentuate the visual experience. By heating and hammering twigs can be shaped and tapered. And with that magic spell of forge and heat, leaf shapes, textures, veins and characteristics can be created for a natural and realistic effect. With the correct finish, patina or color, a forged Iron tree sculpture can have a visual impact, unparalleled by any other material on earth!

An artistic element can provide the ultimate touch in a landscape area, an entry foyer, on the wall or ceiling, or in the center of an immaculate garden. Utilizing the correct finishing specifications, the correct protective layer will not only enhance the visual aspect, but also provide many, many years of corrosion protection to allow future generations the opportunity to enjoy a piece of excellent craftsmanship.

Metal artistry is probably the least understood of any mediums of the arts, yet it evokes such a huge response of love and appreciation when people view a piece of superbly executed work of art.

Dialogue with us to see how Compass can put your artistic dream into reality to accentuate your phenomenal spatial design.

Iron rose vine  
frieze creates an  
awesome contrast  
to the rich look  
of walnut.







An Italian design from 1742 replicated in solid aluminum.

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Texture and scrolls are  
crafted to perfection.







Quad doors with glass canopy provides great security with spectacular visual ambiance

Repeating patterns  
exude bespoke detail





Cor-ten Moon Gate



Hand-forged beech tree





Leaf details are applied by hand



Japanese Maple Leaf ready for hand forging



## Artistic Works

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Petrified Maple Tree displays artistic sensibilities.



Iron clear coat displays awesome heat colors.



Hand forged twigs and leaves



Japanese Maple Clothes Tree



Japanese Maple  
Tree Root detail.





Oak Clothes Tree has natural, life like appearance.



Clothes tree top is complete with leaves and acorns.



Oak Leaf and Acorn Detail



# SQUIRREL STORY



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We were commissioned to do a Sculptural Iron Tree for Garden Spot Village, a local retirement community. We had a lot of fun as a team, creating this beautiful Iron tree.

As a special way of saying thank-you, we wanted to do something special. We debated about forging dragons, which are very popular in the forging community. But what would a dragon be doing in a tree in Lancaster County?

We also discussed forging roses. GSV's logo is a rose. Then we decided forge some squirrels and had a lot of fun! And by having magnets in the base of the squirrels the staff at GSV could move the squirrels in the tree every week for the residents. At the unveiling ceremony of the tree, Amos presented the squirrels to the GSV staff to take care of and the 150-200 residents in attendance clapped and cheered!! They loved it!

What Amos had been completely unaware of was that there was a love-hate affair going on at GSV. The residents loved squirrels for their antics and past time that they provided! The staff hated them for chewing up wood and damaging their building!

But the staff and residents have an equal love for these Iron squirrels that reside in the Japanese Maple Tree Sculpture. And with the staff periodically moving the squirrels in the tree, it makes for interesting moments for staff and residents alike to search for the new area in the tree that the squirrels have moved to.

One of the residents that is skilled in knitting used toothpicks to knit holiday scarfs for the squirrels. So, for once, the staff and residents at Garden Spot Village are unified in their love for the squirrels.



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Love sculpture for a wedding facility



Intertwining  
heart sculpture





A 1934 Pergola replication adds personality to this tranquil terrace.



Attention to detail that can be appreciated by homeowners and guests alike





Oak tree railing provides organic visual and safety for these stairs.



The entire railing has undergone the age-old process of antique blackening



The grape vine detail meets all code requirements.



The railing vine keeps growing over onto the next wall.



This grape railing adds a realistic and organic sensation to this hall and stairway.





Wrought Iron tree sculpture room divider for upscale restaurant



Metal art sculpture  
beech tree

Wrought iron tree sculpture  
and fence room divider





Twisted wrought iron bar footrail



Forged iron door  
grills for wine room



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Forged grills and top transom enhance the front door

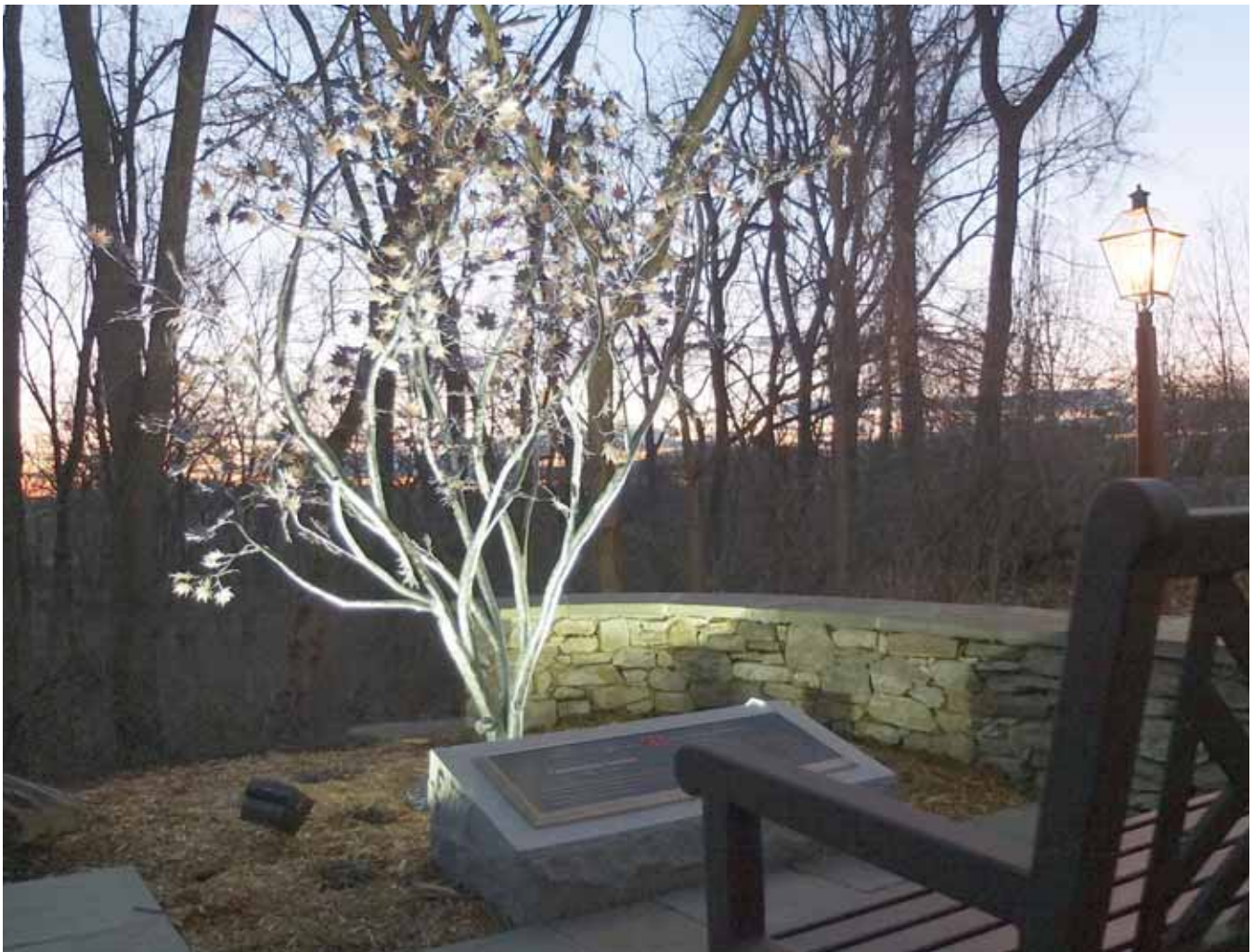


3-dimensional forged sculpture of flowers and vase



Custom Iron grills for front doors



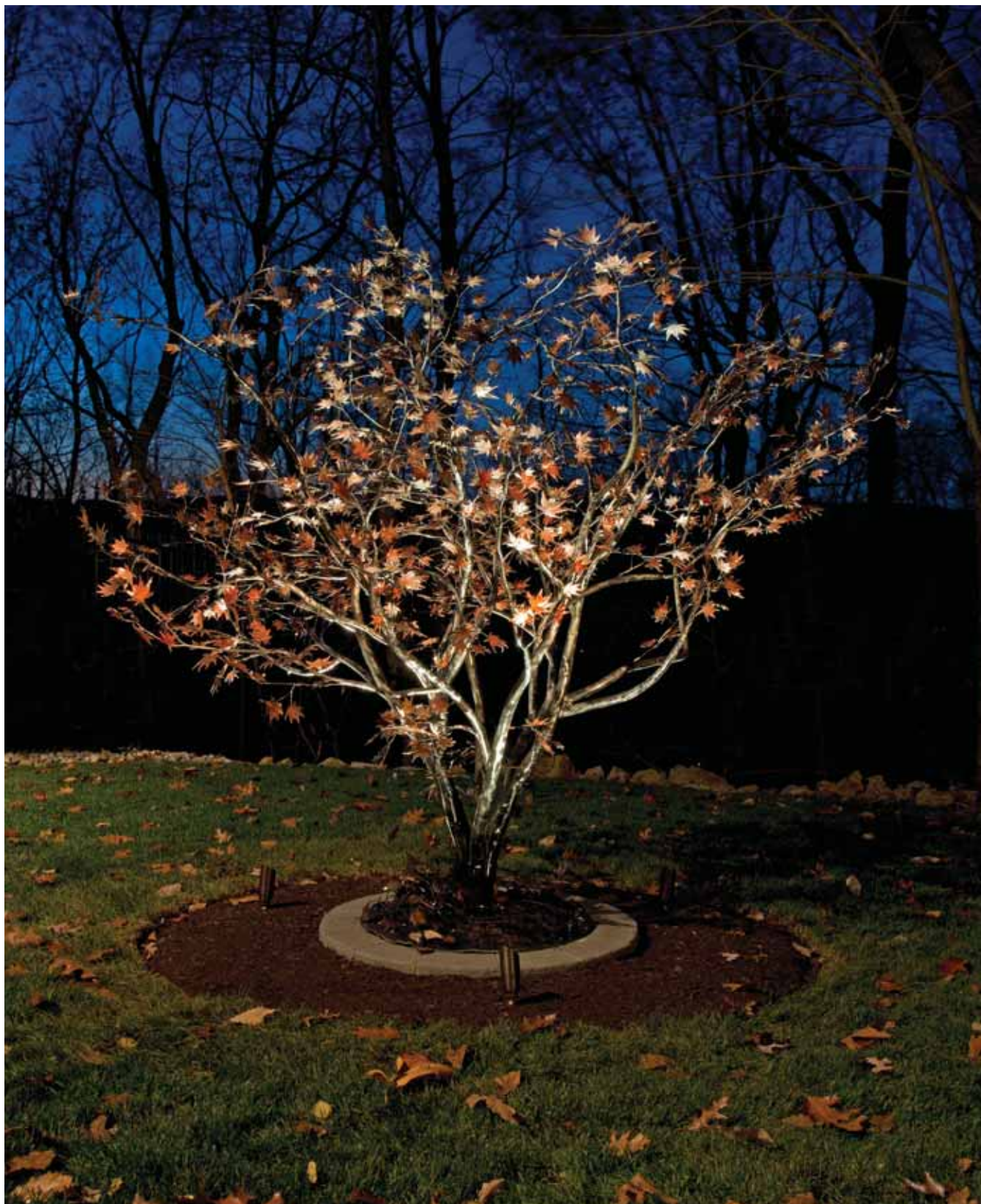


A Japanese Maple Tree in a Memory Garden to create a special place for children and their families.



Left: The hand-forged twigs and leaves look totally authentic. Middle: The lifelike branches, twigs and leaves provide a marvelous visual experience. Right: The plaque of this tree honors 25 years of special care at a children's clinic.





Hand-brushed red detail on the leaves makes for a sensational and realistic sculpture.







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## FENCE DESIGN GUIDE





# FENCE DESIGN GUIDE



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Please use this guide as a tool to selecting the design, style, and finish that best suits your property, lifestyle, and needs. Most of the work we do for our clients is custom, and if you have an idea that is not in this guide, we will work together to custom-craft the appropriate design for your property. Before meeting with us, please consider what ideas you have for the design, finish, and detail of your project.

## The (big) difference between a production aluminum fence and a custom built aluminum or iron fence.



Iron fence has been the ultimate choice for providing security and stately aesthetics to distinctive properties for centuries. Beautiful hand-wrought iron fences remain sturdy to this day and provide design inspiration for today's craftsmen and homeowners alike.

The past few decades have seen an astounding influx of lightweight, mass-produced, and imported fence—made from thin, hollow tube, loosely riveted or screwed together—that attempts to resemble genuine “iron” fence. Some of these imitation fence manufacturers have factories that produce an eight-foot-long fence panel every twenty-six seconds!

You can easily find these “McFences” in large building supply stores everywhere, all looking exactly like your neighbors’ fence, with absolutely no character or expression. A large dog can easily force his way between the pickets. An adolescent boy can bend and twist a passable hole in no time. Small children are relatively confined, but not protected from intrusion.

The only benefits of these fences are fast installation and cheap prices, at the expense of durability, beauty and security. Cheap fences can be twisted to fit sloping ground; the sections simply clip into the posts. In contrast, custom-welded panels are built specifically for the angle of slope under each panel and sized so that each panel is the same length in a given stretch of fence, providing strength and stability. After fabrication, it is impossible to twist custom panels to fit in a different spot.

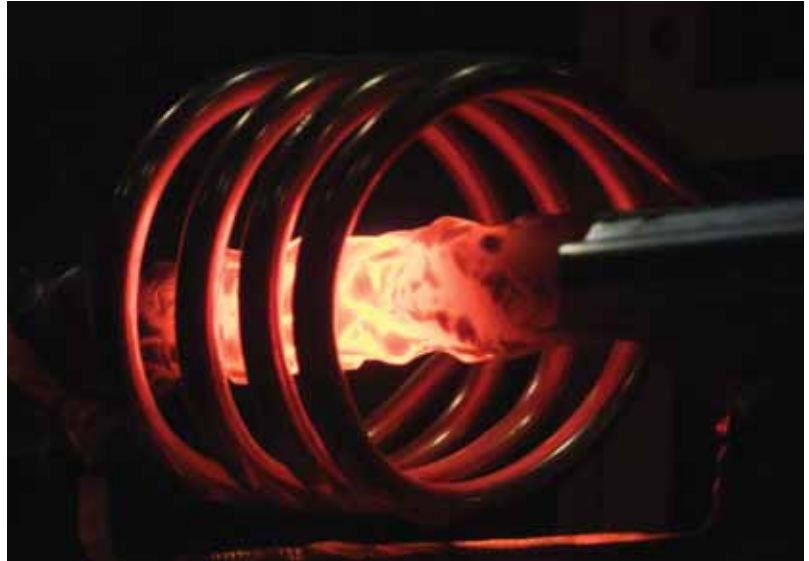




## Exceptional fences from repurposed material

Another stark difference in production fence is the material it is made from. It utilizes thin-wall tubing that is simply smashed together at the top of the picket to resemble a tip. If it does feature a small cast-aluminum finial, it is often glued or sometimes even just pressed on.

Custom fences by Compass Ironworks, however, are built with solid-iron pickets made from 98% recycled metal. These pickets are welded into heavy wall, punched channels top and bottom, and sections are fastened to the posts using the centuries-old bracket and bolt system with stainless steel or plated bolts.



Finials, rings, scrolls, and other customizable design elements are a vital element in a custom fence, but are severely limited (or eliminated) by an assembly line production model. If offered at all, they are often glued or pressed on and sometimes break by the time they arrive at their destination.

A custom fence lets you dictate the size, pattern, and detail of your design elements—limited only by your artistic imagination and budget.

Customized ornate additions give your fence individual character and set it apart from other fences in the neighborhood.

Mass produced fences must be installed in a series of awkward angles to accommodate lawns or pools with curved or rounded sides. This is where a custom fence really stands apart. Our skilled craftsmen will carefully template and photograph the site and make a fence that perfectly follows the contours of your property.

## Your fence, your security, and your self-expression



Your fence, your security, and your self-expression ultimately are dictated by your choice of product. If you want a plain, cheap fence, the local big-box store has a crate of fence panels ready to go. Or a local fence contractor can buy the same shoddy materials and install them for you.

On the other hand, if you need a fence with elegance and character that defines your property as uniquely you, then call a custom fence shop—where the craftsmen take pride in their craft and you can dictate your desires to the smallest degree. The finished quality product will last several lifetimes.

Production-line fence is usually made from thin-wall, hollow aluminum tubing, so many people believe that an “aluminum fence” must be a step backwards in quality. That is true for this type of aluminum fence.

Compass Ironworks builds solid aluminum fences that are extremely sturdy, with the added benefit of customizable design, lighter weight, and zero maintenance. Best of all, our aluminum fences look exactly like true “iron” fences because they are welded, forged, coated, and installed using the exact same process. These fences can withstand saltwater environments, due to our eight-step finishing process on the solid aluminum material.

This is a huge leap in quality for a small additional cost, making it a very good option for many clients.



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## Compass Ironworks

Compass Ironworks is a family-owned business based in Lancaster County, Pennsylvania. Our area sports a unique combination of traditional and modern lifestyles, and horse-and-buggy rigs mingle with cars on the country roads.

Lancaster County is Amish country—and is internationally famous for its skilled artisans with impeccable craftsmanship and superb work ethics. It is a fitting home for Compass Ironworks: in our 15,000 square-foot shop, centuries old decorative iron styles are created by a talented team of fewer than ten artisans, using modern tools and up-to-date, highly durable finishing techniques.

Our craftsmen are keenly aware of the demand for high quality iron and aluminum custom fences.

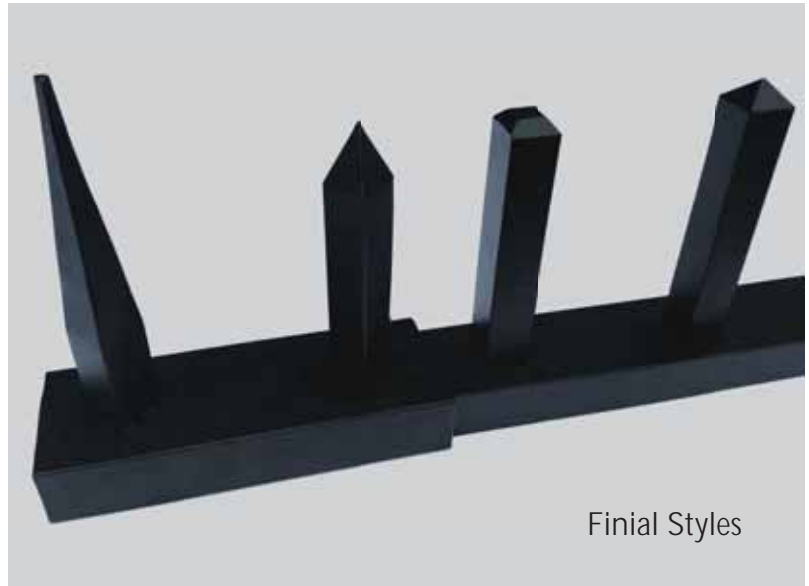
We are happy to lend our expertise and experience to design elegant barrier fences that are both durable and crash-resistant. We also provide guidance for building classic, historically correct perimeter fences to define a client's private residence. We use American-made raw materials whenever possible.

Research, design, and testing are extremely important—not only to replicate historical projects, but also to maximize fence integrity and prevent break ins. We select the proper metal alloys for maximum rigidity and create the actual fence according to the proper finish protocol. Our craftsmen work hard to exceed your expectations and finish your project correctly and on time.

Our desire is to grant our clients the security and privacy of a better fence. We seek to build long-term relationships by creating products that align with our client's landscape, property, and personal taste. The top priority is always a satisfied client.

Finish integrity is what makes it possible for us to view and admire the work of past experts and what keeps your project looking beautiful for decades to come. For this reason, we have our own in-house powder-coat finishing system that allows us to maintain complete control over the quality of the finished product. We begin by sandblasting the raw metal to remove all mill scale, dirt and organic matter. Next, the project is washed with a heated phosphate solution and a double water rinse for extreme cleanliness. If the project is on the waterfront, it is sprayed with a special chemical for salt spray resistance. Finally, a resilient primer is applied, followed by two coats of super-durable powder-coat. We take anti-corrosion very seriously.

In fact, we even had an independent laboratory test our finish integrity in a salt spray chamber known as ASTM B-117. After 2,750 continuous hours of exposure—the equivalent of fifteen years of natural conditions—our test piece came through with flying colors. We realize that our reputation is only as good as our finished product.



Finial Styles



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Custom swimming pool fence makes a subtle statement by blending into the environment

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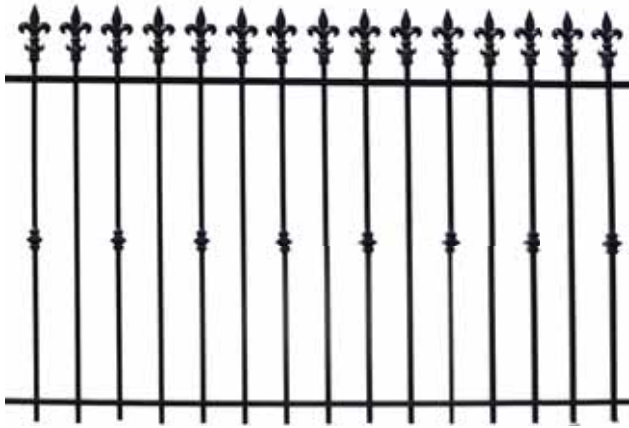


Bryn Mawr

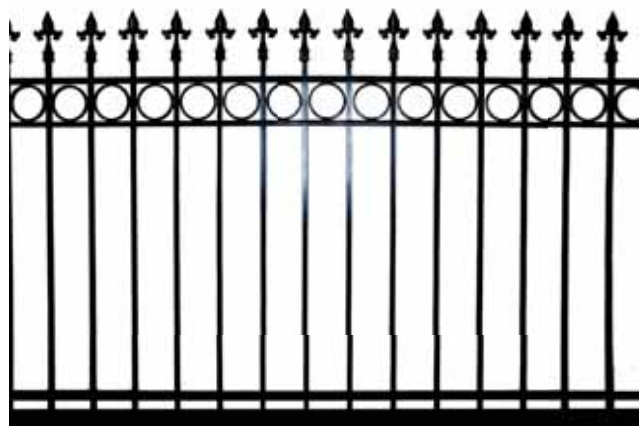


Mainline with Rigibar





Stafford with knuckles



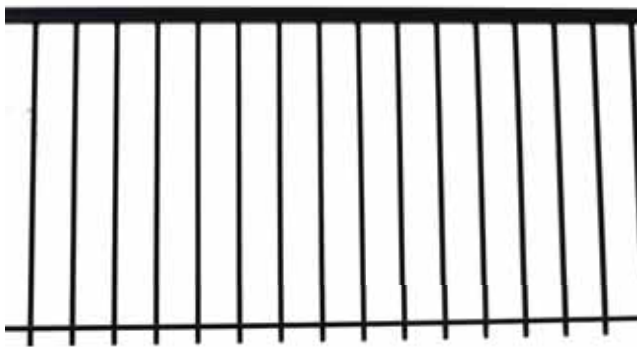
Stafford with Rings



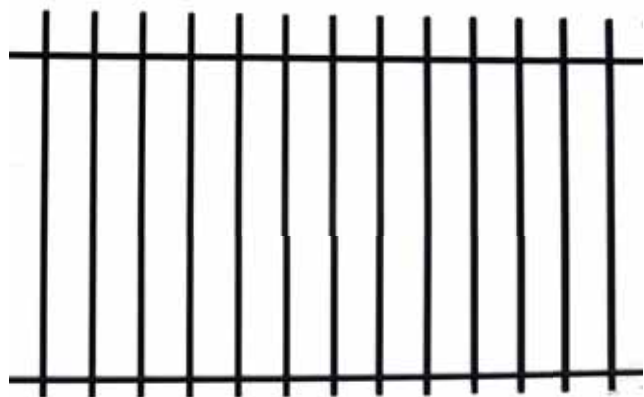
Devonshire



Saratoga 3 Rail with Rigibar



Saratoga with Rigibar



Saratoga with Classic Pickets

# SECURITY FENCES



Villanova fence provides security for a private estate

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Detail of Privacy Fence Top  
(The top portion can be your choice of style to fit your taste)



Finials



Picket Castings



## Security Fences

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These fences are swimming pool code compliant



Stafford with Rings in Solid Aluminum, 5/8" Pickets



Chester in Solid Aluminum, 3/4" Pickets



Mainline in Solid Aluminum, 5/8" Pickets



Villanova 6 Ft high in Solid Aluminum, 1" Solid Pickets



Manhasset Privacy Fence



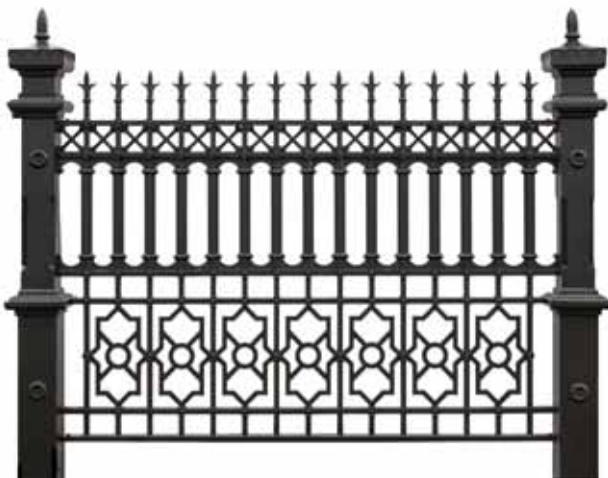
Close-up of time tested panel and post connection detail

# CUSTOM FENCE STYLES



Bryn Mawr fence adds personality to this property

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Yorkshire Style

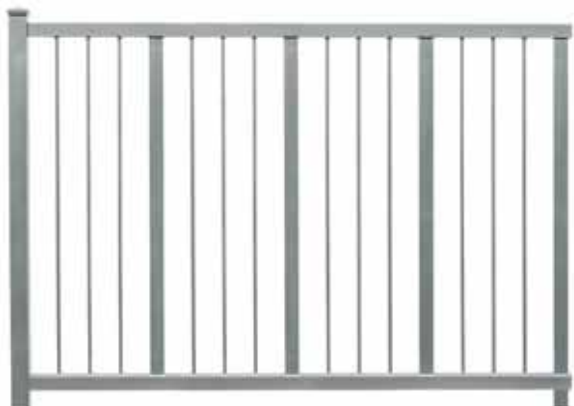


Mainline Style



## Custom Fence Styles

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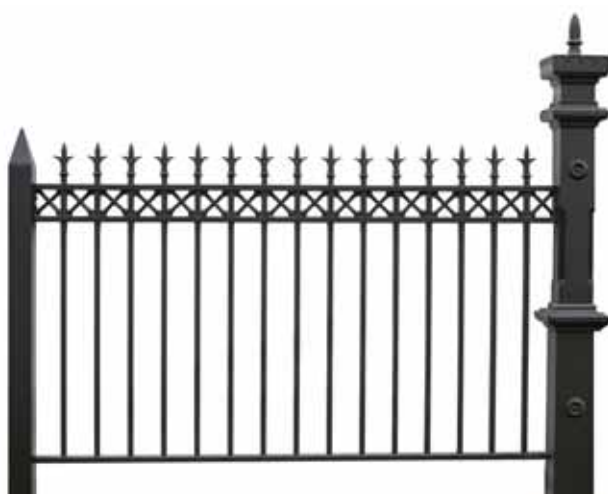
Modern Style



Rustic Modern



Privacy Fence



Kent Style



Pradero Style



Fortuna Style

# FINISHES AND TEXTURES



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By embracing the visual dimension of textures on Ironworks, you can really elevate the character and expression on your project. It gives you the ability to portray design sensitivities and take your project from ordinary to extraordinary.

For instance the Chiseled Center replicates blacksmith hand-hammering with a chisel, creating line in the picket for authenticity, and if you combine another texture as well, you really get the hand-hammered look.

To add even more visual character, if you add a twist to this picket you really transform a standard picket into a 3-dimensional visual experience.

Left: A great example of how twisting transforms the visual experience



#1 Chiseled Center

#2 Chiseled Center in Wood Grain

#3 Wood Grain

#4 Chiseled Center in Italiano

#5 Italiano



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#6 Chisel Line  
with Surface  
Hammering

#7 Surface  
Hammered

#8 Chisel Line  
on Tuileres

#9 Tuileres with  
Italiano

#10 Tuileres



#12 Chisel Line  
on Cadiz

#13 Cadiz

#15 Cadiz and  
Italiano



#16 Chiseled Center on Chatsworth

#17 Chatsworth

#18 Chiseled Center on Chatsworth & Cadiz

#19 Chatsworth, Cadiz and Italiano

#20 Chiseled Center, Cadiz and Italiano



#21 Chiseled Center and Hammered Corners

#22 Hammered Corners

#23 Chiseled Center and Flat Corners

#24 Flat Corners



# POSTS



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Acanthus Post



Linden Post



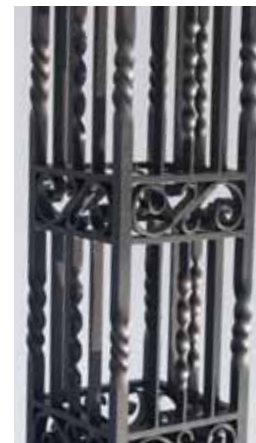
Hampton Post



4" sq. with Post  
Ball Cap



Iron Weave Column



Beverly Column

# HISTORICAL FENCE CASE STUDY



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In 1927, utilities entrepreneur Clarence Geist enclosed his fifty-acre estate—including what was the largest private pool in the Main Line area—with a custom, solid wrought iron security fence, eight feet high. The fence is still as beautiful and resolute as ever. This style of fence has become predominant in the Main Line area due to its simplicity and authenticity.

A client of ours wanted a version of this fence reproduced. We carefully recreated the connectors and posts in a solid aluminum material, selecting a specific alloy for the strength that the application required. The estate that this new fence was being built for had eighty-two feet of elevation change from front to back, resulting in significant slopes and some embankments. Huge and ancient trees on the property made it necessary to minimize our footprint during installation, as well as presenting some design challenges.

We carefully staked out the entire perimeter and took specific measurements for each individual fence post and panel. We cataloged the slope factor for each panel before commencing fabrication. As each panel was welded solid, it was assigned a number that corresponded with its location. And through the entire fabrication, pretreatment, and powder-coating process, the panels were treated with care until they were installed in the proper location to match the site's terrain.

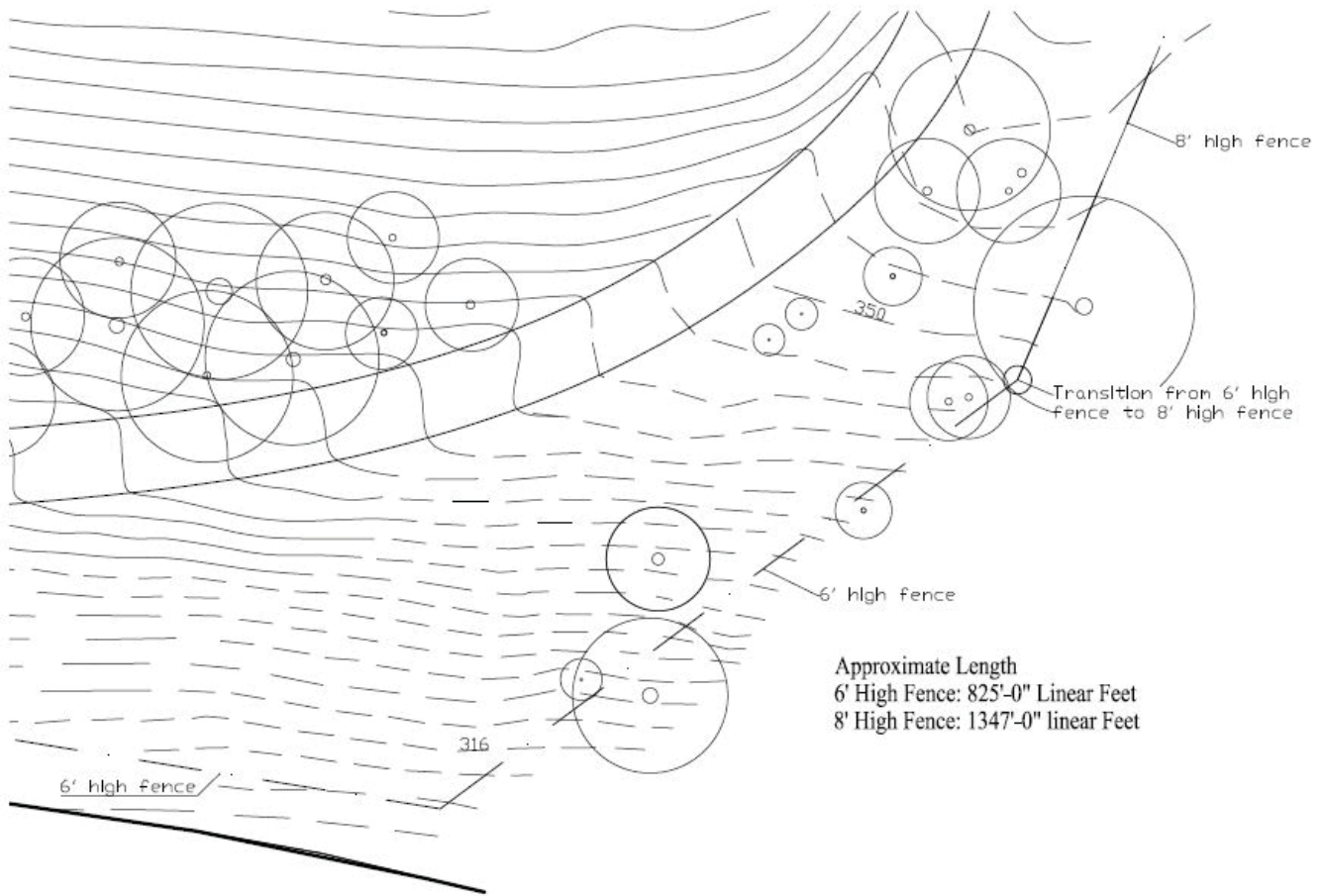
This careful protocol ensured that code and security issues were dealt with ahead of time.

The project was a great success. The finished fence is completely indistinguishable from the 1920s version, yet is maintenance-free and will never corrode. The client now has a solid, durable barrier that enhances the property, expresses beauty for all passersby to see, and will never be mistaken for a production factory fence.



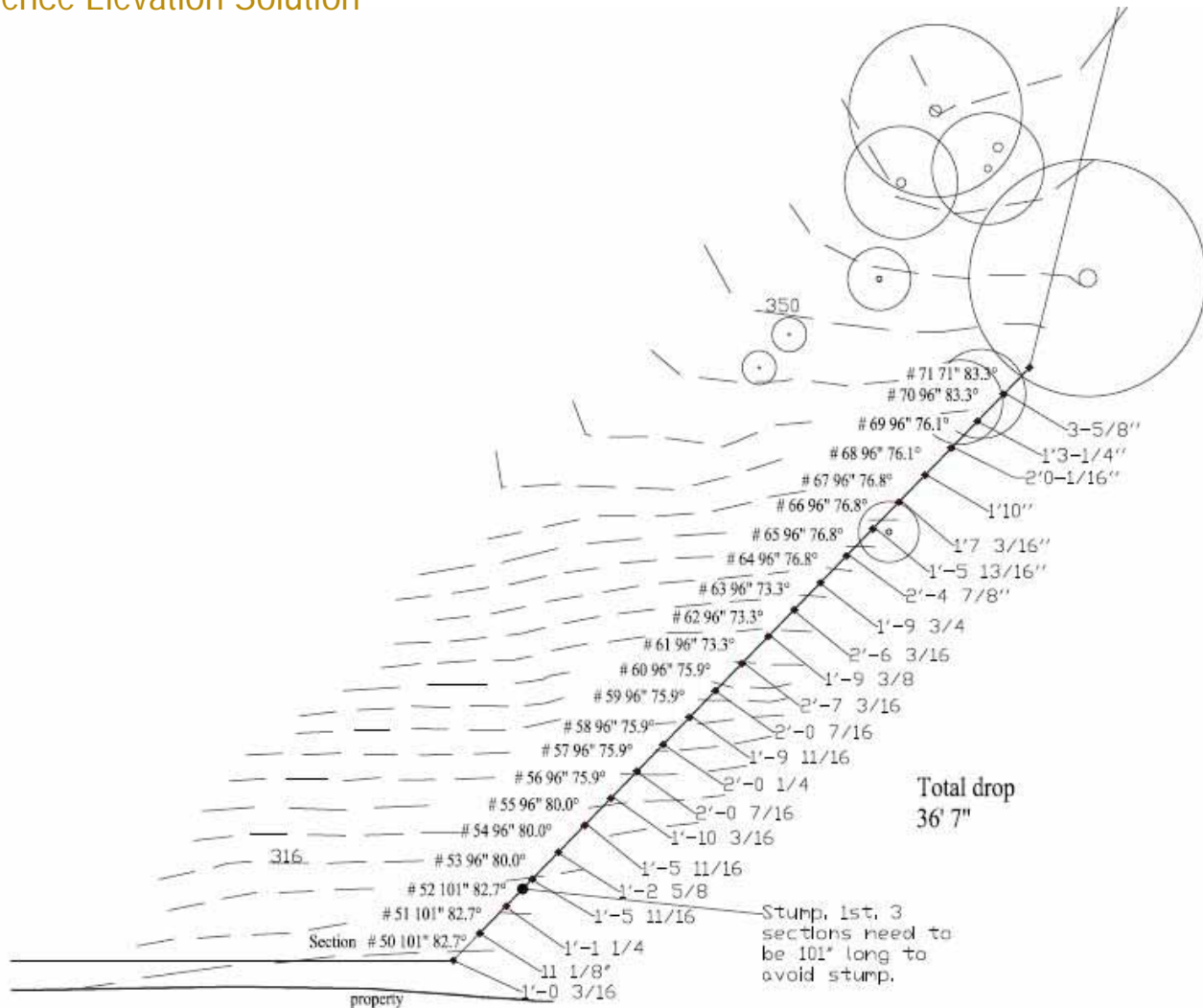


## Fence Elevation Challenge



The homeowner and landscape architect desired the rigidity of a custom built fence, replicating a 1927 fence for their specific estate. The property posed some challenges, as there was an elevation change of 82 feet from the front of the property to the back, resulting in various slopes, inclines and embankments. This illustration depicts a layout of part of the property perimeter. In the illustration, each of the lines denote a 2-foot elevation change, showing that the area the fence was to be placed was quite rugged terrain.

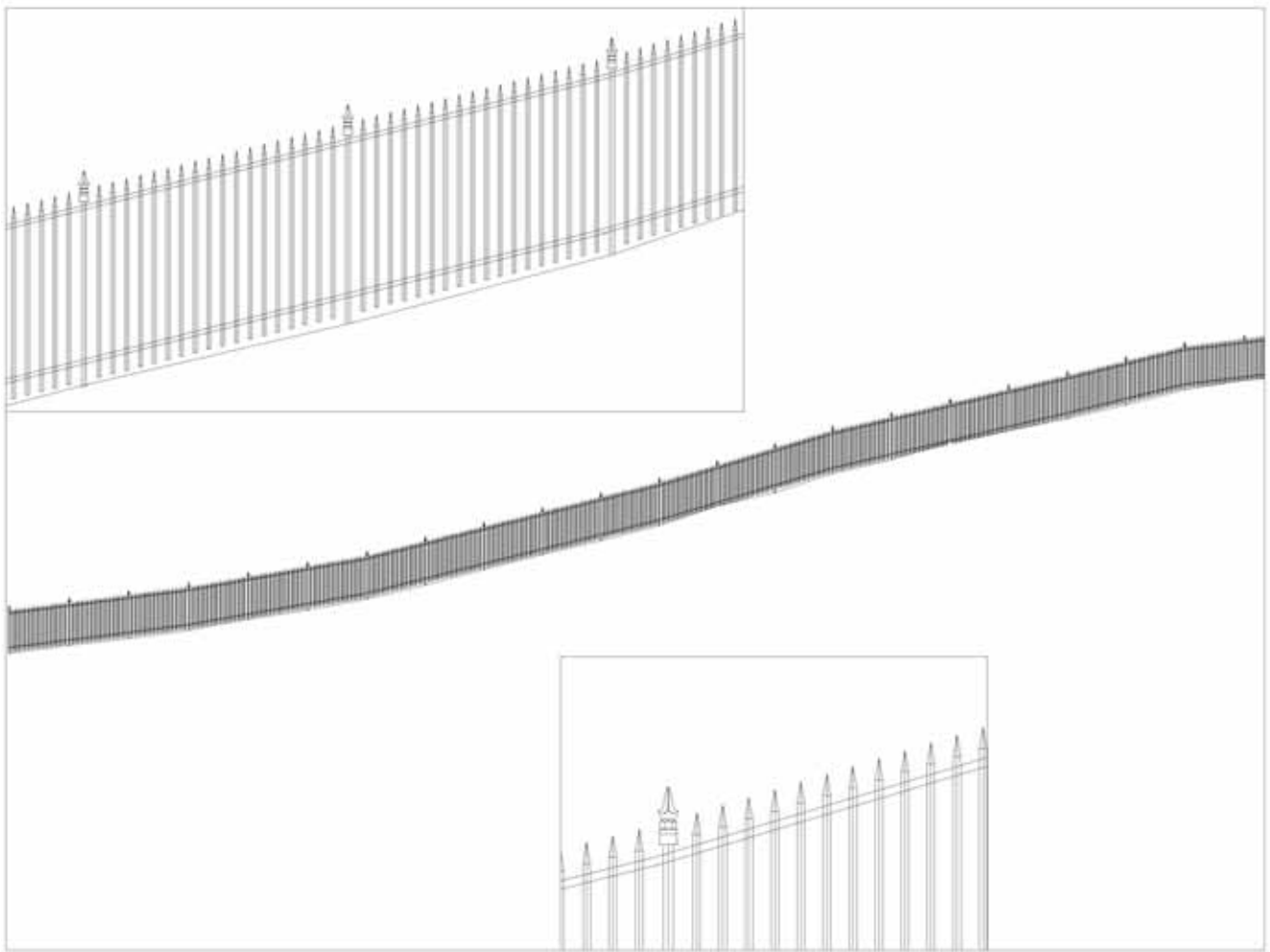
## Fence Elevation Solution



This drawing shows the survey of the perimeter—the first step in building a custom fence is determining the exact location of every post onsite. Then every post location is staked with a marker. The next step is determining the exact elevation of every post (shown on the right of the fence line). Based on elevations, degrees for each individual panel are calculated, then evaluated for aesthetics, and averaged out (degrees shown on the left of the fence line). The same angles are kept together to eliminate abrupt changes in the line of fence. Then they are reevaluated to best conform to the terrain. The next shop drawing shows the fence as determined for the best look. Then each panel was assigned a specific number, which was attached to the panel immediately upon being built to its specific angle. This number was tracked through blasting, pre-treating and all of the powder-coating stages. Upon arrival onsite, the number was verified and installed in its designated place.

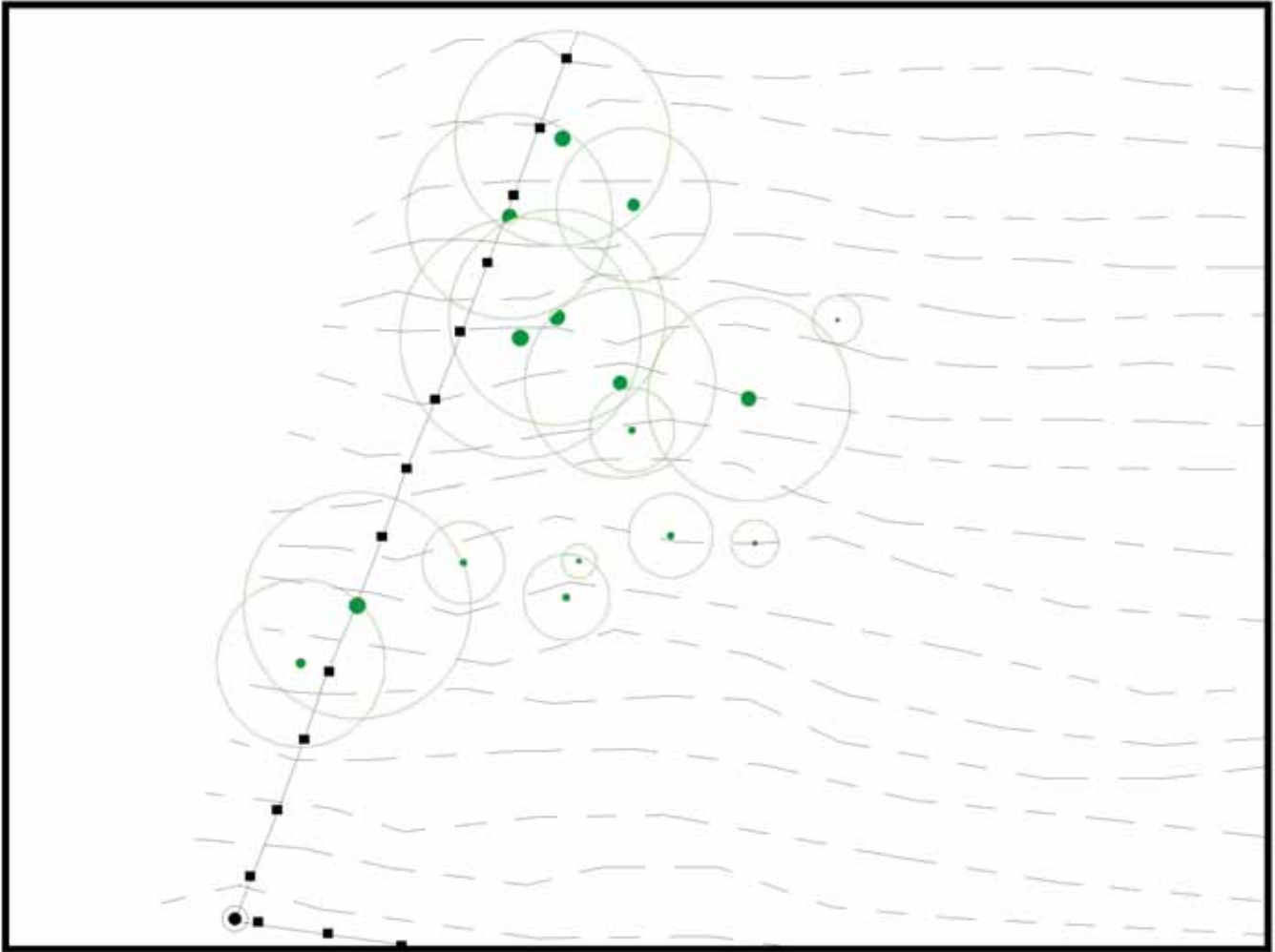


## Overall Fence Project



This illustration shows the final installation of the panels on various slopes conforming to the terrain, yet having minimal disruptions in the aesthetics of the fence as it flows up the grade. Another attribute to this project is that it was 100% US made. The channels were custom, the finials were custom cast, the brackets were custom made and pickets were all forged in this country. This project was exceptional, but it also gave the homeowner the assurance of knowing that 100% of his money supported the American economy, instead of going to China.

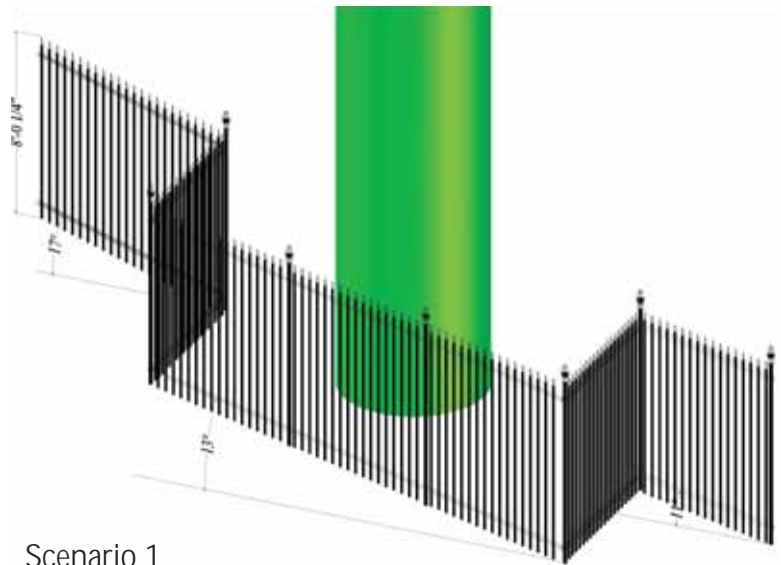
## Specimen Tree Challenge



This property also had beautiful, valuable specimen trees. These trees were as much as 60-80 ft. in height and 3-4 ft. in diameter. The trees had sentimental value as well, as the homeowner had played in them as a boy. The specimen trees posed two challenges: first, the fence installation could not harm or have any adverse effects on the trees or their root systems; secondly, some of these trees were located directly in the line of the security fence. So great care had to be taken to have no fence posts close to any roots, yet not allow for any security breaches.

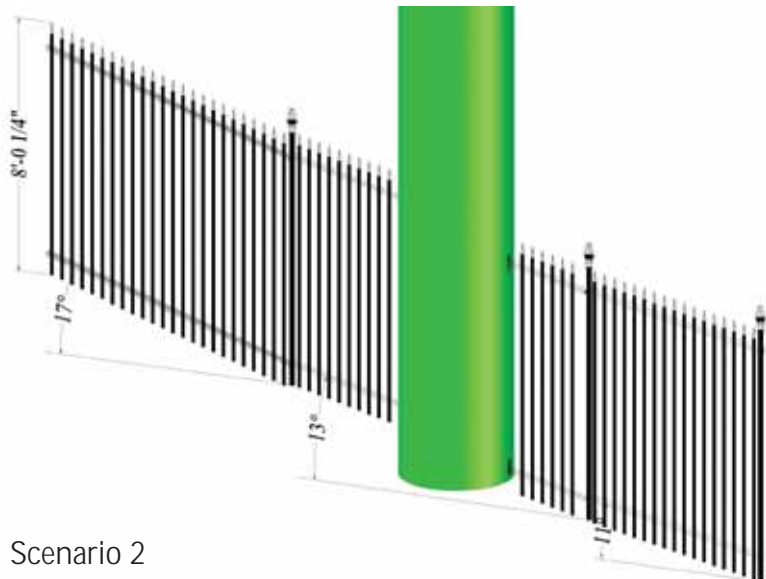


The homeowner and design team desired to be informed of all possible scenarios. This page shows 2 of the 4 possible scenarios. The first illustration, shows the fence squared off, where the fence post on the line was anchored as close to the tree as the root system permitted, then it was angled out 90° out to clear the roots. This scenario dictated going out approximately 66" to clear the roots to work aesthetically with the picket spacing. Then 90° again and continue past the tree. The targeted panel size was 96" throughout. However, this conflicted with the roots for post installation, so the only alternative was to break that into 3 panels before turning to go back to the fence line.



Scenario 1

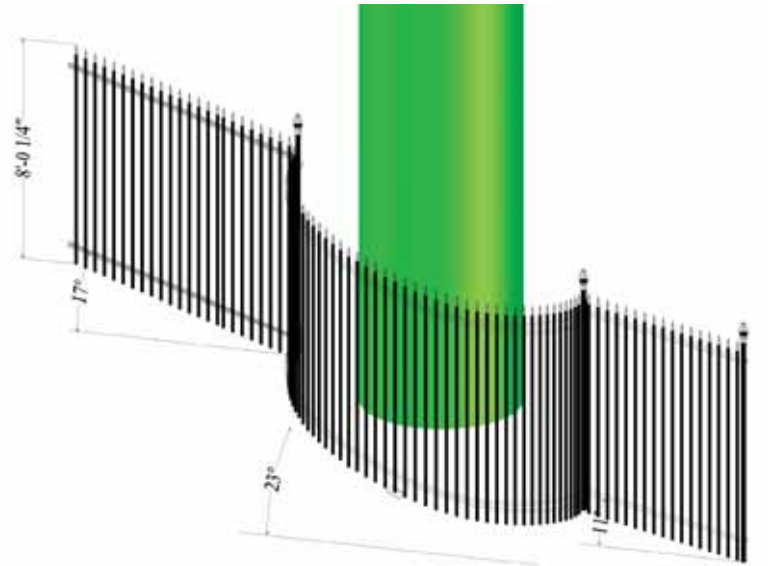
The next scenario was to continue on the fence line and die the fence line into the tree, with special brackets to compensate for the growth of the tree.



Scenario 2

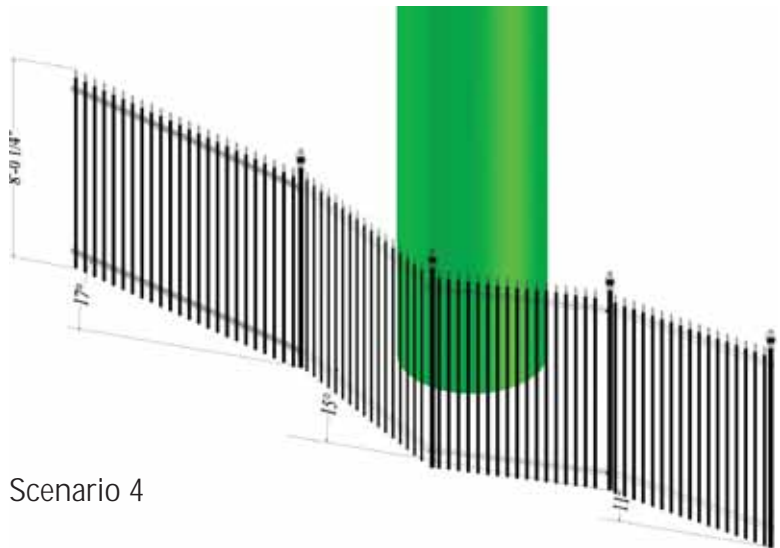
## Specimen Tree Challenge (continued)

The third scenario shows where the fence was continued to a point 32" from the center of the tree, then a custom radiused piece was water jetted from 1.25" thick solid aluminum, including the picket holes on a 23° angle to compensate for the slope at the tree. This then circled the tree 180° and fastened into the fence line on the other side. To avoid impacting the tree by having a post in the ground, a floating plate system was devised for the outside quadrant of the fence circle.



Scenario 3

The final scenario was where the fence line was jogged out at a diagonal to miss the root system. Then it turned back to the fence line, relative to the center of the tree.



Scenario 4



# FENCE DESIGN IDEAS



Custom ornamental fence

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Iron fence creates  
a resolute barrier





Hand-forged gate has excellent security



Close-up of knuckle detail





Iron Acanthus posts atop brick wall



The classic braces on a Villanova fence add stability





The owner's initials were forged into the gate



Custom forged wall art





Hand-forged iron fence adds character to the front of this Main Line residence



Rose casting adds interest



Custom fence around circular dog run



Saratoga fence with classic pickets adorns the top of a retaining wall



Enhanced security, yet aesthetically pleasing



Detail of a forged picket and custom finial



Beautiful forged fence at a restaurant overlooking NYC skyline



Security without obstructing panoramic views



Canterbury fence at the beach





Brick walls with iron fence and gate



Bryn Mawr fence at the 2010 Philadelphia Flower Show



Top detail of iron weave column (see pulled back image of fence on page 6)

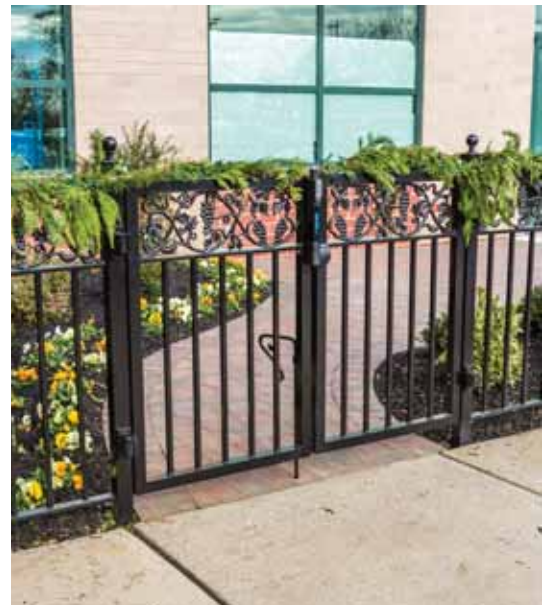




Cancer hospital provides private space for patients and families with custom aluminum fence.



Custom grape theme for this garden space for exceptional privacy.



Lockable gate provides controlled access.





8 ft. high Iron fence is part of a revitalization from a 1928 train station.



Left: Iron fence provides a safe and authentic barrier for today's commuters. Right: Custom forged pickets for authenticity.





Swooping pattern with fleur-de-lis finials provides enhancement and safety.



Distinctive beauty while meeting all building and safety codes.



Iron fence provides  
security and lasts  
for ages







1100 ft of marine grade fence provide beauty and security for a seaside retreat.



Solid aircraft grade aluminum fence provides an aesthetic barrier around the grounds of a family estate.





Custom fence creates a private haven for this family's shore home.



Design elements provide a distinct separation from average neighborhood properties.



Fence on top of wall for perimeter of property



Left: Forged aluminum scrolls and basket

Above: Scroll detail close-up





Custom garden fence and gate accentuates the landscape



Garden fence for beauty to last for decades



Custom medallion accentuates this garden gate





Custom fence to simulate an entrance gate



Refurbishing and replicating old iron fence

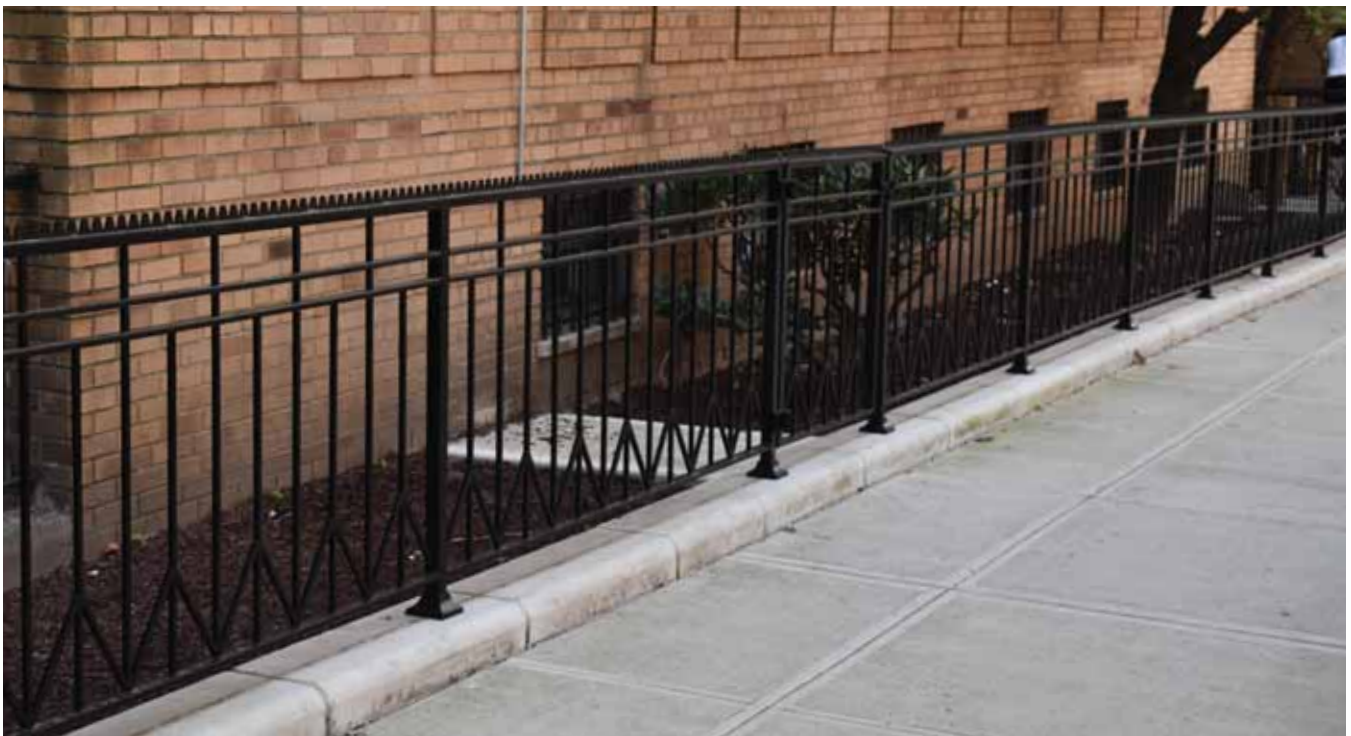


Old wrought fence replication





Metal fence for a garden area



Iron railing and iron fence custom built to the radius and rise of the project





Code compliant pool fence built in aircraft grade aluminum



Contemporary Champfer –  
top on security fence





Phenomenal security fence follows grade cohesively and is an asset to the landscape and the property



6 ft. high solid aluminum pickets create the best security fence



The beauty of iron fence and masonry





Solid picket security fence has unparalleled rigidity, yet provides beauty to the landscape



Above: Pool code entrance gate



Right Top: Fleur-de-lis finials have beauty for a custom pool fence



Right Bottom: Pool landscape fence that blends into the landscape





Aluminum fence built with marine grade components to withstand elements at a water front location.

Beautiful fence  
overlooking the lake







7ft. high residential security fence with creative design elements and Roman Bronze color.



Beautiful oval design in front security fence



Oval detail





Beautiful iron fence for a personal dog park



Metal fence for dog enclosure





Custom created pool fence and pool gate



Left: Custom created knuckle for gate

Above: Custom pool fence for difficult terrain





Wrought iron pool fence



Iron railing to iron pool fence transition secure pool fencing





Security fencing for senior resident



Egress courtyard gate in security fencing



Chamfer top pickets staggered with alternating twisted pickets create a rigid but classic retaining wall fence.





# COMPASS

## IRONWORKS



## GATE DESIGN GUIDE





# GATE DESIGN GUIDE



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**IRONWORKS**

Elegance and Integrity

At Compass Ironworks, we carry into the 21st century the Amish traditions that forged our artistic sensibilities: honesty, integrity, and dedication to family, community, and craft. We do no mass production here; every installation reflects your unique needs. We are master craftsmen who work with both traditional and 21st century tools. At the end of the day, we close the doors and leave our tools at the shop, not to be touched until the next workday begins.

For more information about Compass Ironworks, please contact us Monday through Friday at (717) 442-4500.



*IN RECOGNITION of completion of all prescribed requirements  
and meeting the eligibility criteria as established by the  
Institute of Door Dealer Education and Accreditation Board of Directors:*

*Amos Glick*  
*Compass Iron Security*

*is hereby designated as an  
IDEA Certified Automated Gate Systems Designer,  
and is granted all privileges associated thereof.*

*Deborah Nagels*

Deborah Nagels, President  
on Behalf of the Board of Directors

*July 31, 2021*

Valid through above Date

## Certification

Not only does Compass Provide beautiful gates and ornamental security fence, they are also certified as CAGSD (Certified Automated Gate Systems Designer) and as such are uniquely qualified to produce gate systems compliant with MUTCD, ASTM F2200 and UL 325 standards.

This level of knowledge and expertise provides a higher level of safety and detail into multiple area of an automated gate system. There are many driveway gate installers that provide quick, cheap and easy automation systems, these can turn around to actually become a liability. Not only to the property owner, but also any designer or architect that may have been involved. If any injury or fatality occurs, a lawsuit is initiated, sometimes in the hundreds of millions of dollars! So, it is extremely important that latest safety standards are being followed.

These safety protocols affect specifying the correct operator, knowing safe opening/closing speed, and pressure setting. Plus correct sensors such as safety loops, photo eyes, even emergency response sensors, to name a few. Again, there are many aspects of automation that safety standards pertain to. Utilizing certified personnel is an excellent way to assure you have a safe gate operator system to protect you, your family and loved ones.



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Please use this guide as a tool for selecting the design, style, and finish that best suits your property, lifestyle, and needs. Most of the work we do for our clients is custom, so if you have an idea that is not in this guide, we will work together to custom-craft the appropriate design for your property. Before meeting with us, please consider what ideas you have for the design, finish, and detail of your project.

## Secure your home with a work of art.



Wrought iron estate gates bring aesthetic value and curb appeal to properties across the country. For centuries, these iron masterpieces have been viewed and admired, giving a home elegance and grace, while ensuring privacy.

Estate gates make your property safe. Your children, grandchildren, or guests can be in the yard or driveway without the worries of strangers intruding within your safe haven.

Wrought iron gates substantially increase the security of a property and provide a physical barrier against burglars canvassing the neighborhood. Gates deter intruders from pulling up to the house or garage and targeting valuables that may be visible from the street.

Gates give you control over your privacy. Irritating salesman and hucksters will no longer have access to your doorbell—stopped at the gate, they will be forced to move on.

Seclusion is guaranteed when you limit the access of traffic in your driveway. You can unwind in the rose garden or relax in the pool without worrying about unwanted guests.

Estate gates also increase property value by providing controlled access. This deters foraging predators and deer from wreaking costly damage to the flowers, shrubs and landscape of your property.

The expression of wrought iron estate gates is instrumental in creating positive first impressions of your home. Ironwork makes sweeping, subtle statements that cannot be made by any other element on earth.

Wrought iron has a poetry and rhythm to it that displays taste and an appreciation for handcrafted works of art.

Iron gates are masterpieces built for the ages. These sculptural statements live on for generations, providing grace, elegance, and undying beauty for centuries.



## Experienced Gate Craftsmen

Experienced gate craftsmen take extra steps and pay special attention to details so your gate can be built to your taste. Our craftsmen can forge custom accent pieces or initials that make a memorable impression as guests arrive in your driveway.

Our workers create exceptional design elements that will make your gate a functional masterpiece, such as custom steel columns with iron trim details, short sections or wings that can carry your design from the hinge post and create a fluid look. Four-sided columns can include design elements from the gate, creating a cohesive atmosphere reminiscent of a genuine Gold Coast entryway of the 1920s.

We firmly believe that “people don’t care how much you know, ‘till they know how much you care,” and it shows in our work. Our normal protocol is to go the extra mile on all projects. We facilitate on-site meetings with all involved parties—client, contractor, electrician, and security personnel—to make sure that construction runs smoothly. Our goal is to install the complete unit at once, with no onsite welding or grinding.

The most important (but often overlooked) part of any low-maintenance gate system is the hinge selection. Ease of operation is the key to less downtime for repairs, problems or operator maintenance. Sealed bearings and greasable ball bearing hinges are the two types we use that withstand the elements and heavy use.

All gate pickets, scrollwork, and accent pieces are forged from solid bar material just as master craftsmen did for centuries past. Today, the solid bar we use is 97%–100% recycled material, making our gates the perfect choice for responsible stewards of our planet.

## Superior Finish to Withstand Elements

Proper powder-coat application is crucial for finish longevity. At Compass Ironworks, the powder-coating process is carefully developed and closely monitored, as pretreatment is our defense against corrosion. Pretreatment starts with aggressive sandblasting to remove all dirt, grease, and organic matter. More importantly, the process etches the metal surface and opens its pores for better finish adhesion. A hot water phosphate bath is applied, followed by two clean water rinses. At this point, the metal is ready for the powder-coating process, starting with a primer and followed by not one, but two durable top coats. Then, the entire project makes a long, slow pass through the curing oven. As technical as it sounds, our finishing process is very eco-friendly and emits zero VOCs into the environment. Our entire facility meets or exceeds both DEP and EPA requirements.





# HINGE DESIGN



Hinges are one of the most critical but often overlooked components of a gate. Hinges perform the most important job of any estate gate regardless of the sophistication or simplicity. For centuries, hinges were simply a rounded pin inside a “barrel” that was periodically lubricated. If the gate was very heavy, a support plate was mounted on the ground and the hinge side of the gate rested directly on that. This resulted in metal grinding against metal, with the force of hundreds of pounds. The friction was not a serious issue, as guards, gatekeepers or footmen were hired to manually open the gate as a carriage desired to pass through.

gate that is standing ajar because of non-working hinges provides nothing for security. A gate in the open position is also detrimental to the ambiance and first impressions of an exceptional property, so hinges are extremely important!

Here at Compass, we take hinges very seriously. When we first started, we used an industry standard hinge. They were OK, not great and we were dissatisfied and about 5 years ago designed our own hinge with less maintenance, less hassle and less downtime, in mind. This hinge completely solves the friction issue, allowing 1,000 lb gates to be opened with the tip of a finger.

A shoulder/collar option allows for micro onsite adjustments so that perfect alignment can be achieved initially and also for years down the road to compensate for pillars shifting in freeze/thaw cycles. We feel the triple bearing design and double yoke thickness gave us the assurance of the best value for our clients.



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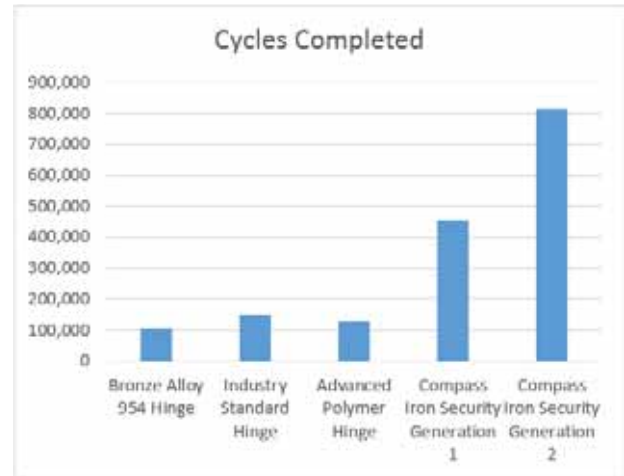
About a year ago, a couple industry experts were pushing for advanced polymer bearing hinges. We were open to recommendations, but wanted the proof that we were truly doing the right thing. So we built our own test lab, simulating 1,000 lb gates with a 10 ft swing, and tested 3 different hinges, the industry standard, our own design and the industry recommended advanced polymer bearings. We automated the gates for continuous duty and let them go. At 128,006 cycles the ears broke off of the advanced polymer bearing due to the

higher friction caused by these bearings. At 150,316 cycles the industry standard bearings seized up. Our bearings kept going to 454,923 cycles, 0 3 times what the industry standard last, which is equivalent to 49 years of use on the average residential property. We were happy, but we learned some tips and are in the process of developing the next generation of hinges. Our goal is a million cycles with ZERO maintenance.



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### THE MILLION DOLLAR HINGE!



- Onsite adjustment, allowing for re-alignment, at installation and in the future!
- Frictionless operation, you can easily open 1,000lb gates with the tip of a finger!
- Fine threaded bolt can be removed to set aside gates to protect them or for work on hinge column
- 200% Yoke thickness over Industry Standard!
- No Welding, Grinding or Painting on-site needed.
- Over 5x the life of off-the-shelf hinges
- ZERO MAINTENANCE!
- Available in Steel or Aluminum body
- Enhanced Contaminant Protection



# POSTS



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Beverly Column



10" Hampton Post  
with Base Detail



Linden Post



Hampton Post



Acanthus

# GARDEN & POOL GATES



Canterbury

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Bryn Mawr



Villa



Bayside







Top crests custom forged on decorative metal gates

Intricate details for code-compliant pool gate





Elegant barrier keeps out onlookers taking photographs and armed intruders while allowing controlled access.

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English design from 1861 is created with today's non-corroding metals.





Beautiful hinge post provides durability and detail.



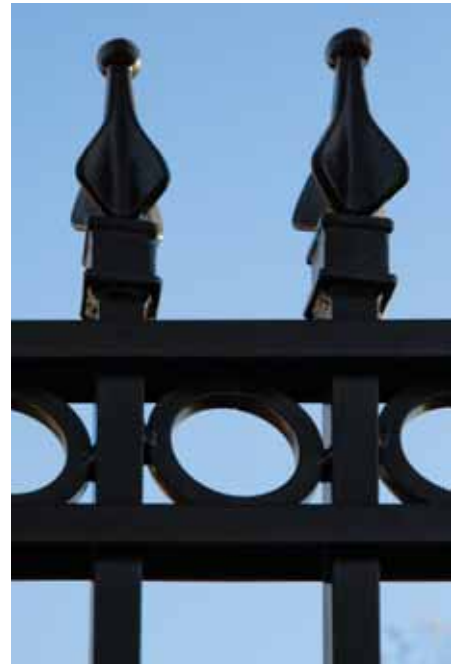
Close up of custom detail and forged rosettes



These automated gates keep out foraging animals from destroying the beautiful landscapes.



The beauty of an arched gate creates remarkable distinction



Custom finials close up





Marine grade, solid aluminum gates to add beauty and security while withstanding the elements

All decorative elements are pretreated and powder-coated with a robust shore process







Red Bank with Beverly Column



Vail





Neshanic



Roselle Park





Rumson



Gate Details



Family Crest





Montauk



Bayshore





Mainline



Owner's Initials





Chester

Fleur-de-lis medallion  
and finials accent this  
European style villa





Beautiful aged bronze finish gates



The top crests accentuate these phenomenal driveway gates





Custom design element on estate entry gate

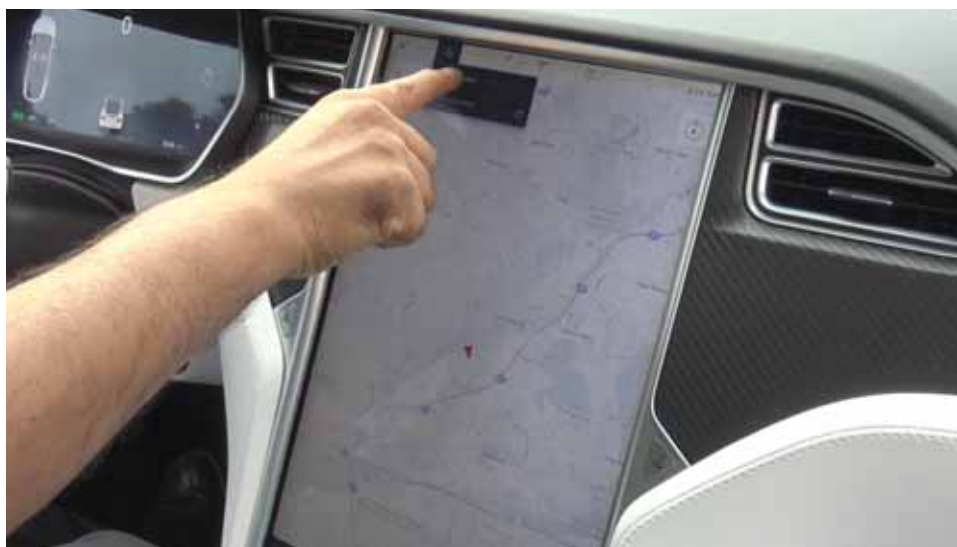


Above: Custom created solid aluminum castings to match design elements of existing bronze railings

Bottom Right: Close-up of the beautiful aged bronze patina with blue and green hues showing thru as well as some gold color



A simulated wood gate done in non-corrosive aluminum



Gate opener programed into car





Executive security gate with hidden gate openers



Left: Center crest of initials for the gate

Right: Detail of pierced and forged scroll





Landscape security gate with hidden automatic gate openers



Gold detail on baskets





Custom driveway gate in solid aircraft grade aluminum



The wifi keypad for gate opener in foreground and awesome security fence in background





Beautiful gate with hidden automation



The mobotix keypad to integrate into smart home system to operate gate openers



Smart home security camera reports estate gate area for observation



## Estate Gates

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Above: Detail rich pedestrian gate



Top Right: Antique strap hinge and speakeasy grill on property gate



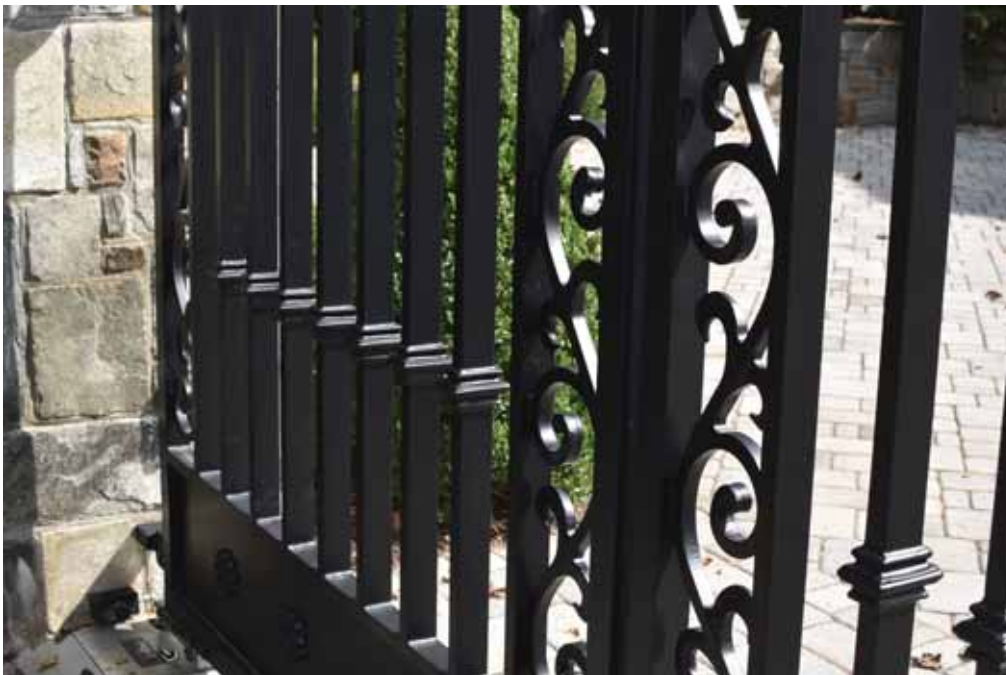
Middle Right: Mechanical keyless latch for security gate

Bottom Right: Hidden gate openers, antique strap hinges, and hidden heavy duty driveway gate hinges





Wrought Iron estate gates built in solid aluminum



Visual of the depth and strength of security gates





Hand forged  
aluminum  
scroll work on  
driveway gates



Property security gate with electronic strike



Custom knuckle detail for driveway gate



Custom scroll gate



Beautiful hand forged  
scroll and acanthus leaf  
detail on driveway gate





Montauk

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Red Bank with Beverly Column



Palisades





Villanova gates provide simplistic and historic elegance



Estate gates provide controlled access while deterring predators and deer from the estates' lush landscape





Custom estate gate with automatic operation provides security with automatic access



3/4" square knuckles add character to this personalized gate





Custom iron gate creates a resolute barrier in Alpine, NJ

Forged details and  
fleur-de-lis finials







Custom front gate with hidden gate openers and wifi keypad

Remote phone access  
to control gate access  
through wifi keypad







Custom aluminum country estate entrance gates



Above: Custom driveway gate emblem

Right: Pile of cannon balls for authenticity

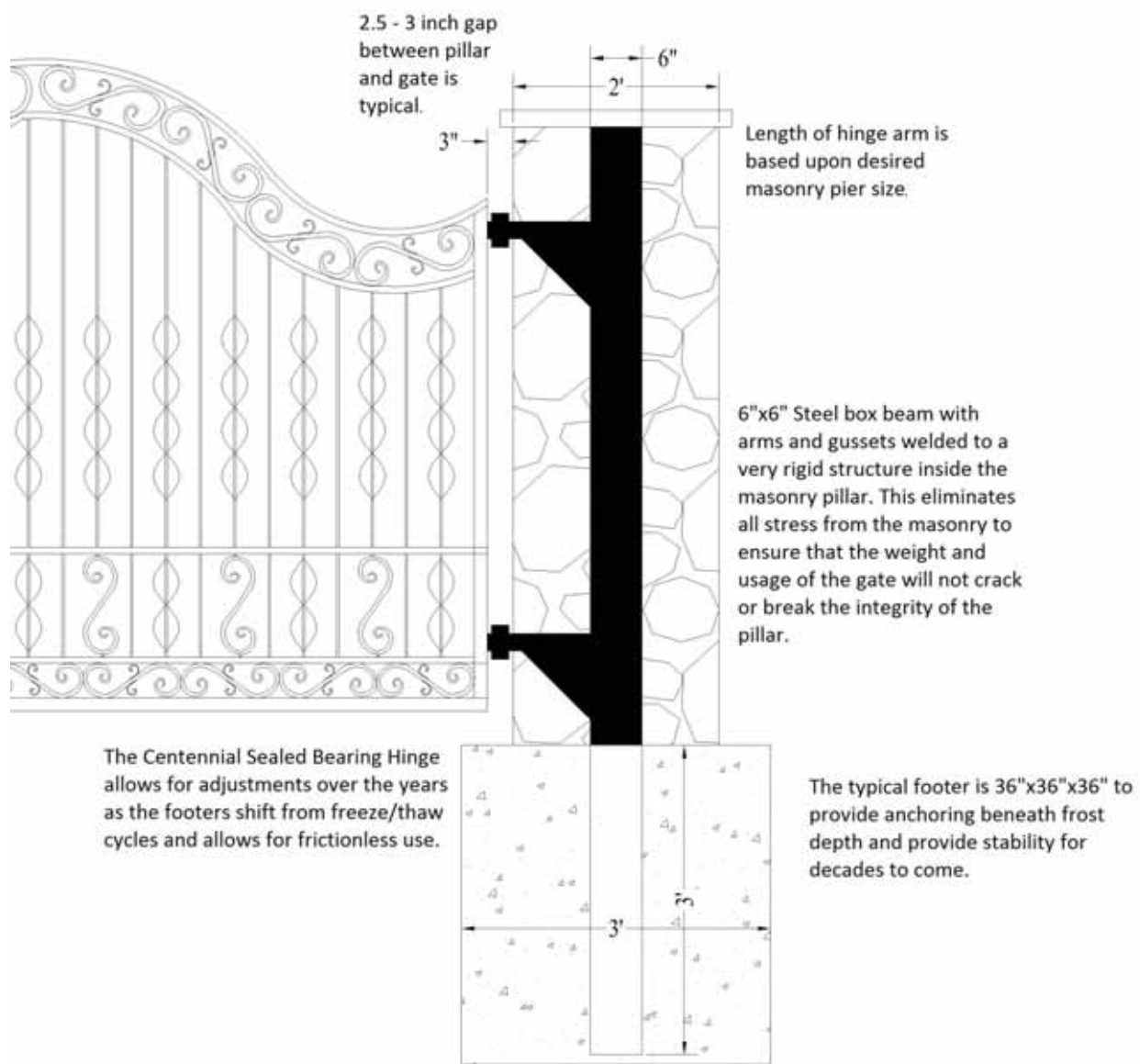






## Typical installation of steel structure to support iron gates

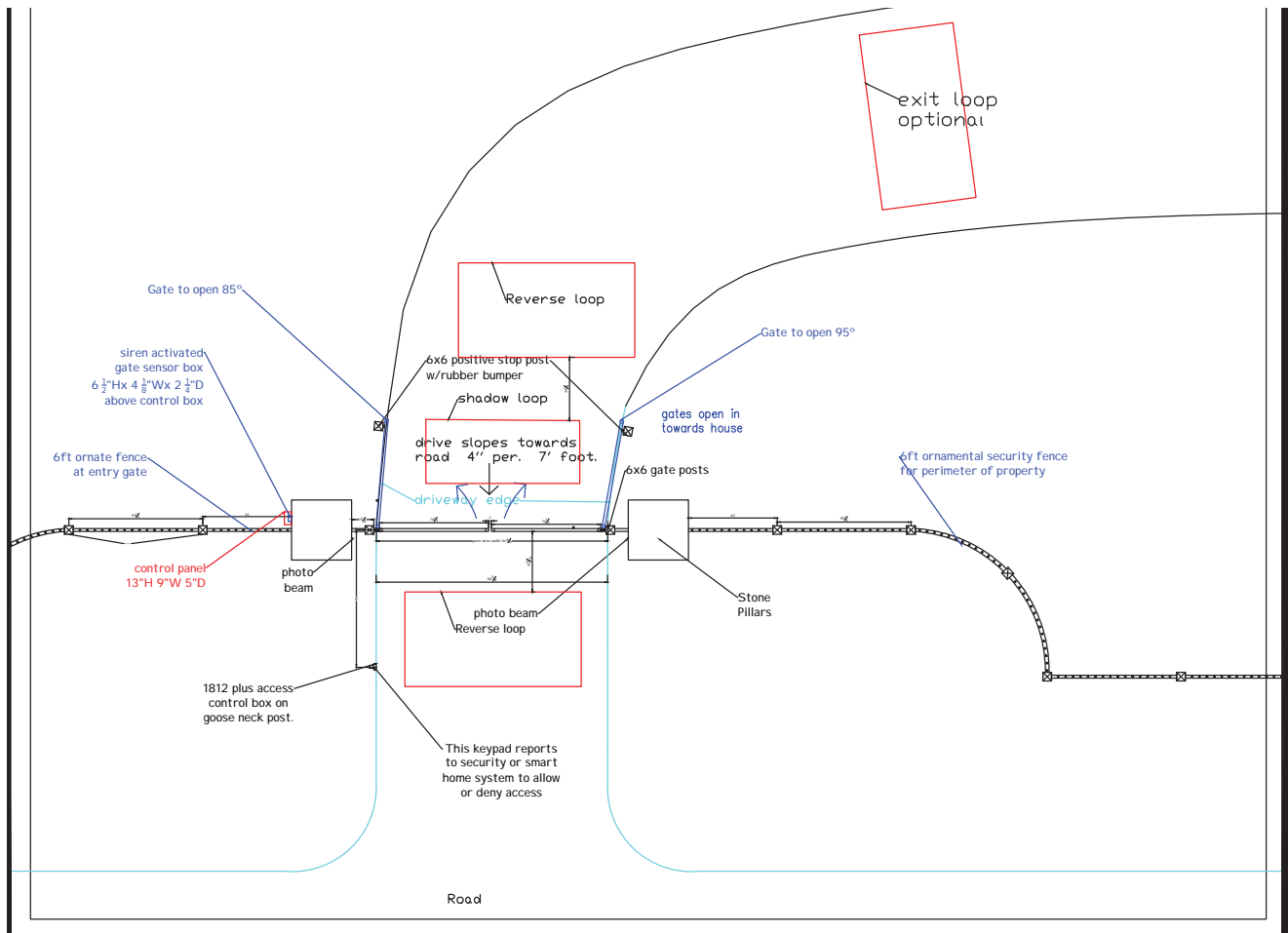
The ideal sequence of installation is for gates to be completely fabricated and powder-coated before being transported to the site. Then they are set in place and aligned perfectly. Next a supporting steel structure is cemented into its proper location. This will then sit for 20-50 hours for the cement to harden before being taken off and set aside. After that the masonry is done around the steel structure. The masonry and steel are tied together for maximum rigidity and longevity. Next the actuator technician follows to finalize the details of having a controlled and secure entryway. Then the gates are rehung and ensured to fit. With proper communication, installation is very straightforward. If the steel support structures are made to be perfectly plumb without the gates, small deviations from the handcrafted nature of the gate could cause imperfect alignment in the center. Therefore, though the steel structures are hidden in the masonry, they must be installed to fit the gate, to ensure symmetry and alignment.



# GATE CODE COMPLIANCE



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Typical plan view for automation install

For many, many years, driveway gates were attached to the center of big, square masonry pillars. When the gates opened back towards the pillar, this created a potential area of entrapment for children that were in that vicinity to get pinned between gate and pillar.

In the past decade, with lawsuits stemming from children getting injured in these entrapment areas, UL325 has declared those situations in violation of their safety standards.

The new safety standard requires either (A) that the gate hinge center is no more that 4" from edge of pillar or (B) there is 16" between pillar and gate when in the open position.

The downside with option A is that the gate is no longer centered on large masonry pillars and is no longer symmetrical visually.

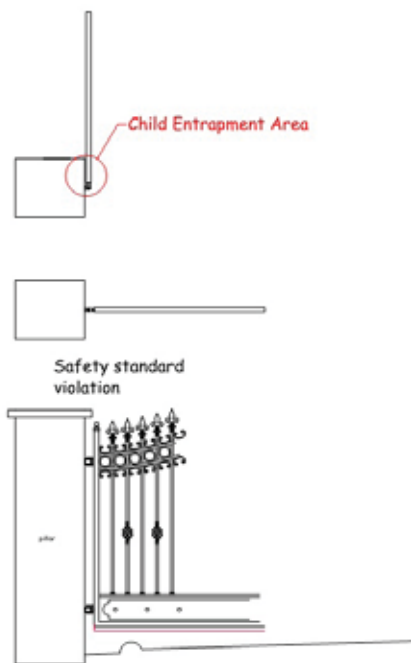
Option B can be done very creatively with either large decorative metal posts that pull from the same beautiful design elements as the gates, or short fence sections called "wings" that accentuate the gate design. Another added aspect of option B is that it provides a beautiful transition from masonry pillar to hinge post. Either way your beautiful driveway gate with automatic gate openers can fulfill UL325 codes fantastically and not be a safety hazard or menace to your friends and family.



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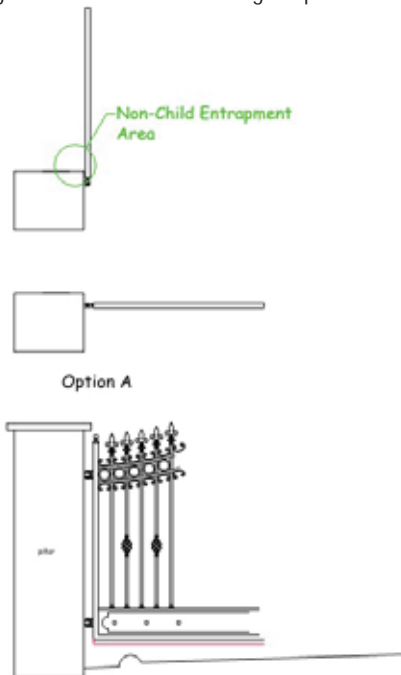


## INCORRECT GATE PLACEMENT



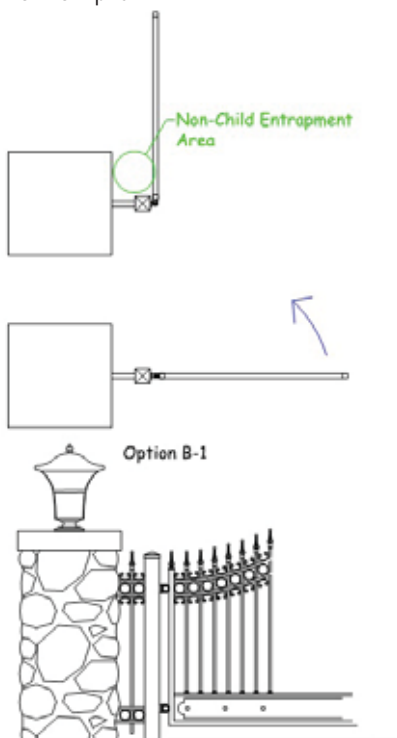
## OPTION A

Hinge center is 4" from back edge of pillar



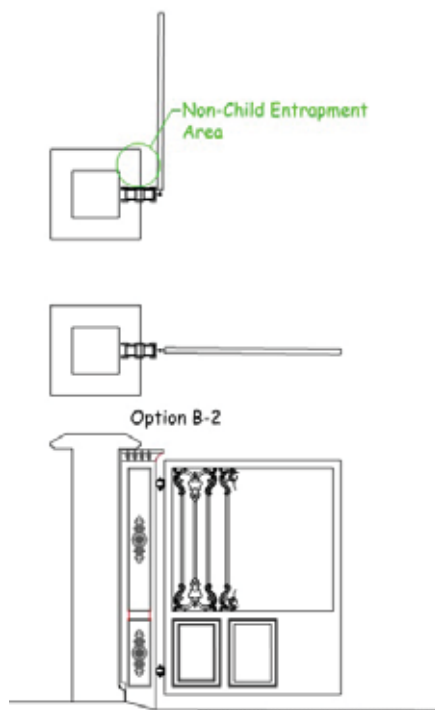
## OPTION B-1

Gates in the open position need to be 16" from pillar



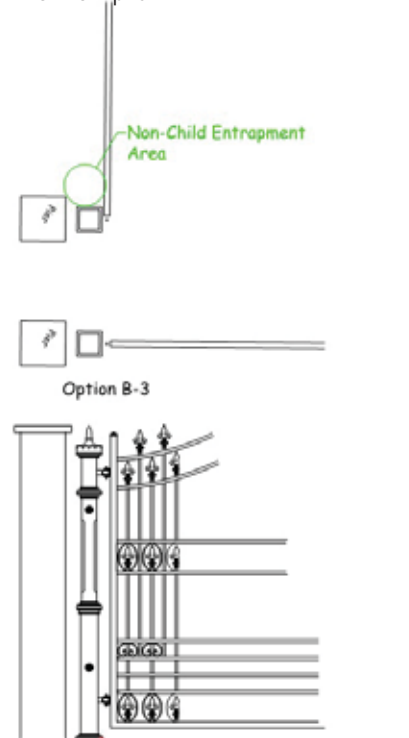
## OPTION B-2

Gates in the open position need to be 16" from pillar



## OPTION B-3

Gates in the open position need to be 16" from pillar



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# POSITIVE STOP



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Another exclusive feature from Compass is the mechanical positive stop built into every underground operator. Most driveway gate openers do not have a mechanical positive stop built in the unit. This creates a problem as gates can be partly closed, partly ajar, misaligned in the closed position which could create a security breach. Most gate fabricators addressed this void by mounting an adjustable stop unto the hinge post. This created an issue for 2 reasons:

#1 – It was unsightly, potential to get hit with a vehicle, made for maintenance hassle

#2 – Wrong location put undue strain and stress, which led to breaking the hinges, hinge post operator arm or gate frame, creating more maintenance hassle and downtime

The craftsmen here at Compass did some brainstorming and came up with a very effective and innovative solution, designing it within the confines of the operator box... It is very clean and aesthetic, hidden under the lid. And it is directly at the source of strain and stress, in the box itself. So, there are zero amounts of undue torque exerted unto hinges, hinge post, operator arm or gate frame. This is the ultimate in zero hassle for mechanical positive stops for driveway gate openers.

Note the concealed bar in the bottom right which has same color scheme. We take the attachment to the ultimate level by taking the time to recess the opener arm into the gate frame. This makes for a nice clean visual. This is standard procedure for all gates that are built by Compass.



Left: Positive Stop In Ground

Right: Positive Stop Operator Box Clean Install



## Positive Stop

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Hidden gate arm inside post

Concealed Hinge and Concealed Arm to open and close gate. Driveway gate opener is unobtrusive and set into cobblestone driveway.



Hidden gate arm for automation

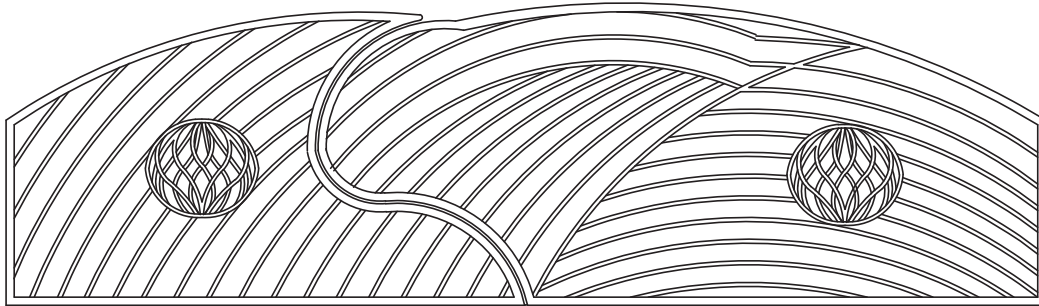
Note the concealed bar in the bottom right which has same color scheme. We take the attachment to the ultimate level by taking the time to recess the opener arm into the gate frame. This makes for a nice clean visual. This is standard procedure for all gates that are built by Compass.

# CONCEPTUAL DRAWINGS

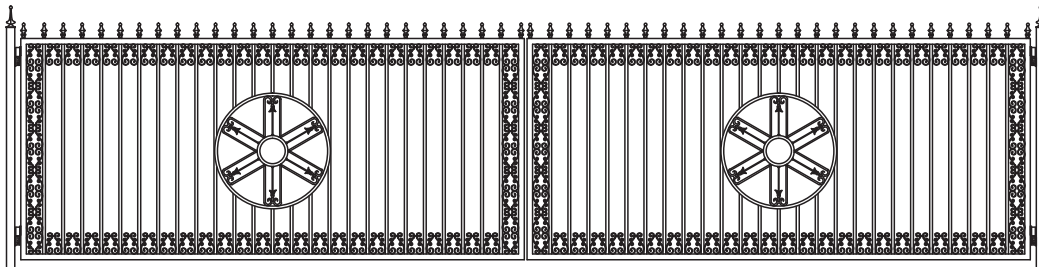


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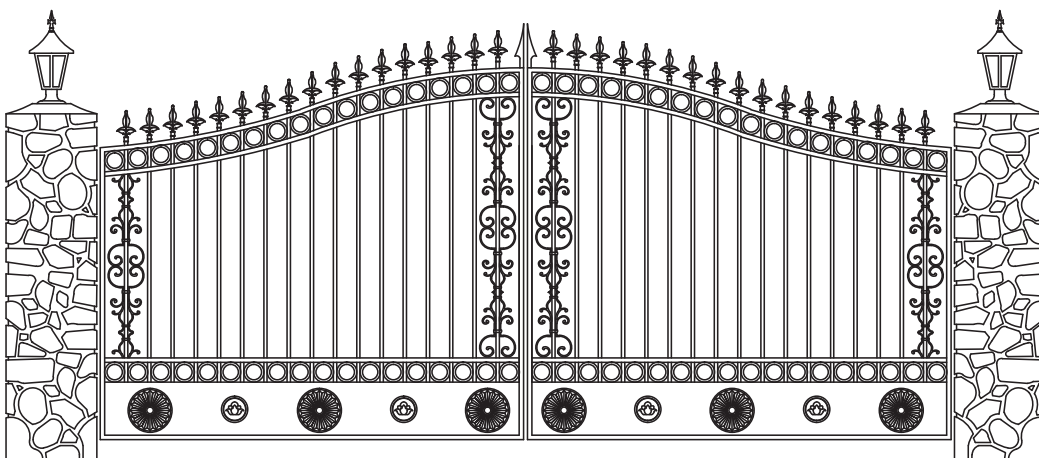
These concepts are intended to get your creative juices flowing. We can build gates exactly like these, or you can mix up any design elements to suit your taste—for instance, the Alpine style gate can have the Avalon center and the Belmar bottom panel. Design elements can also be customized to express your own personality.



Alpine

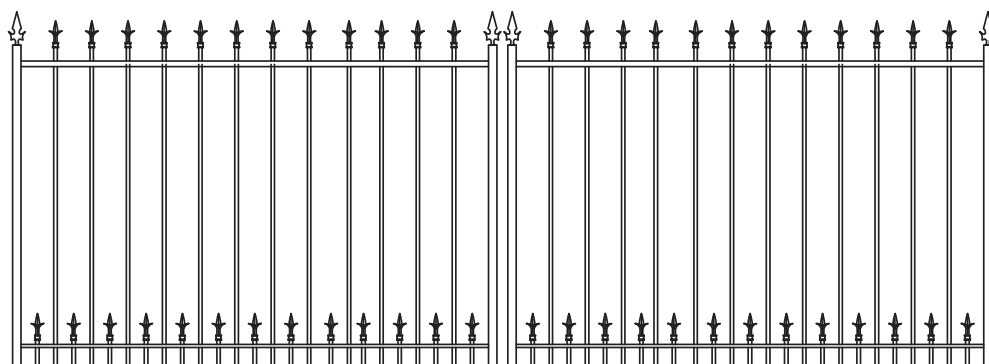


Avalon

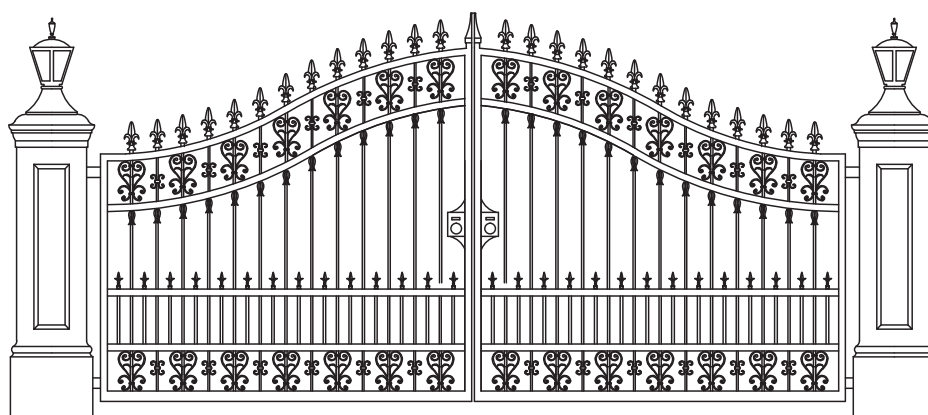


Bellmar

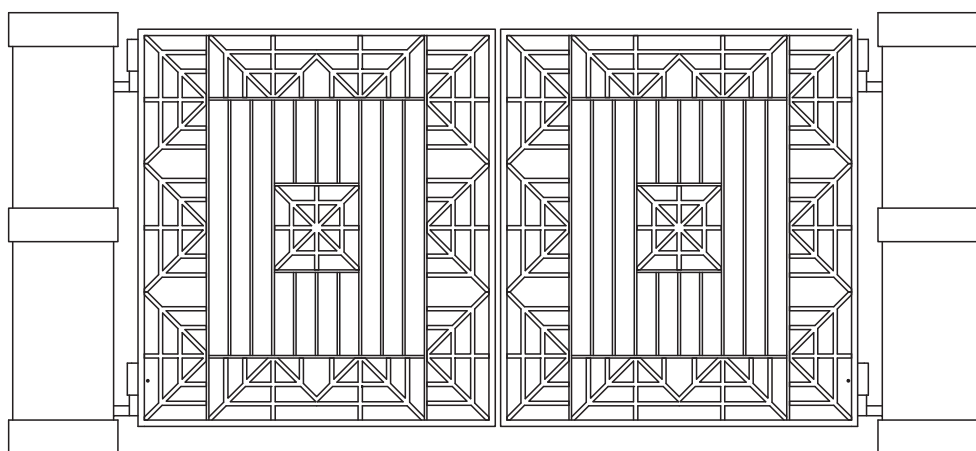




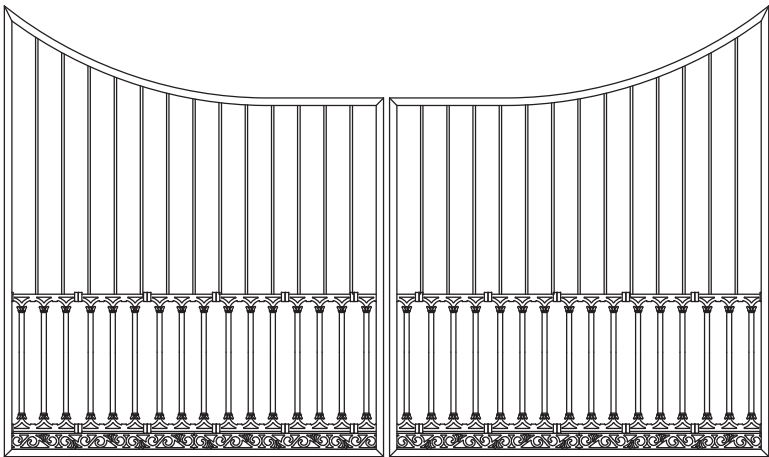
Caldwell



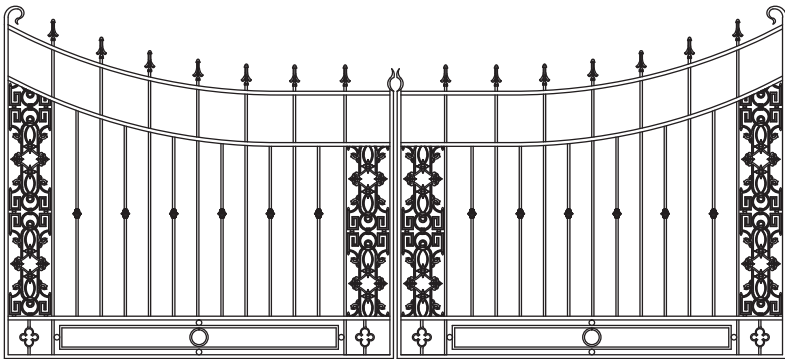
Chatham



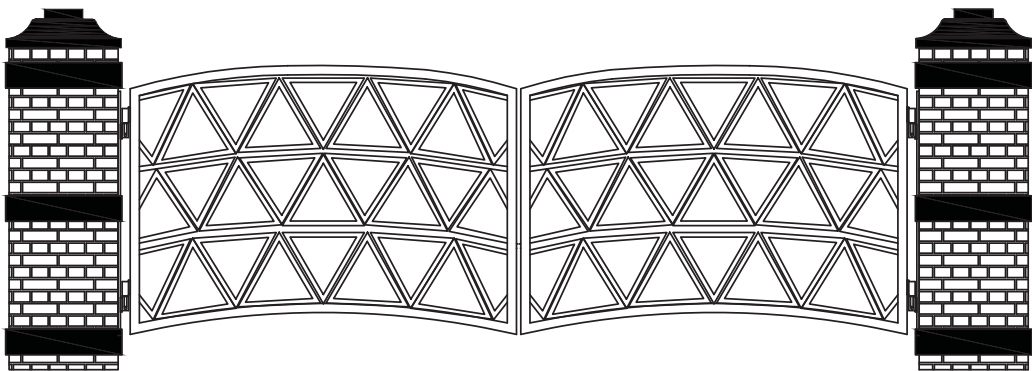
Colt's Neck



Deal

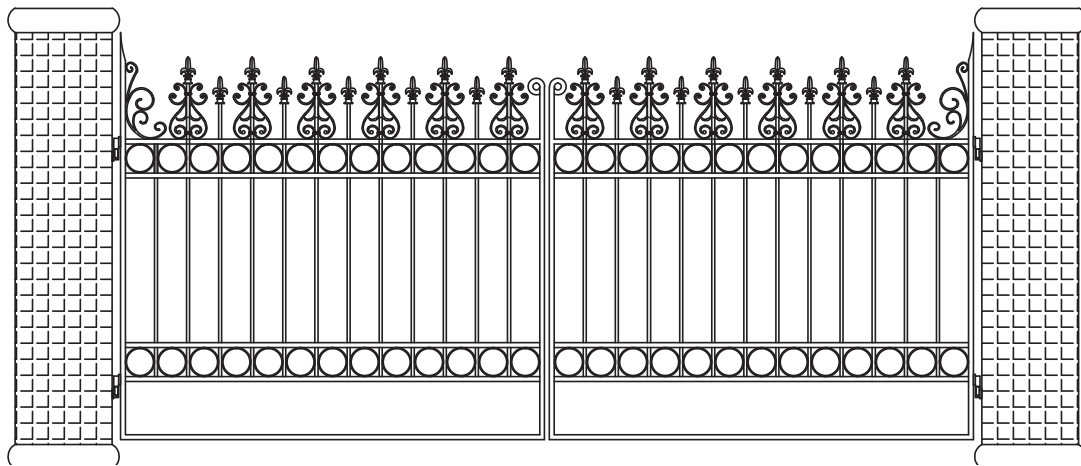


Englewood

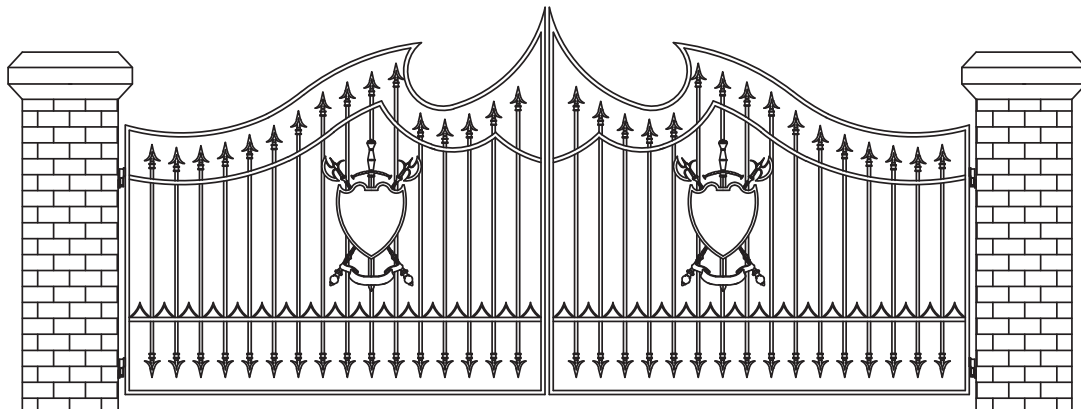


Far Hills

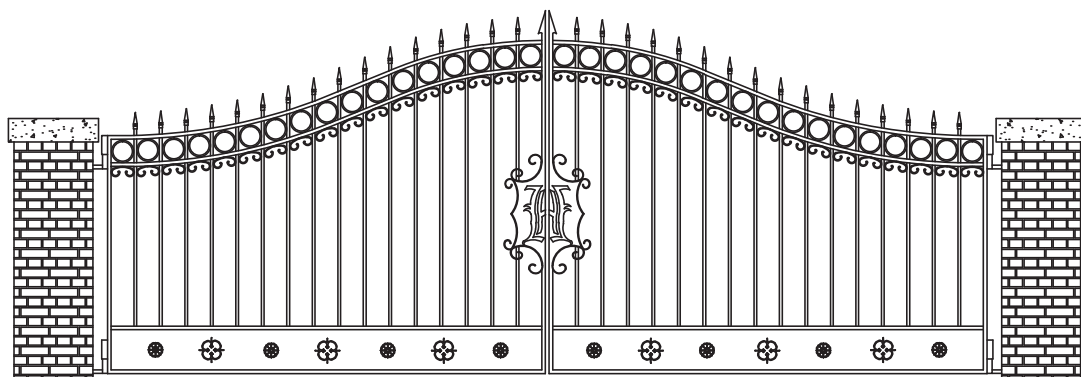




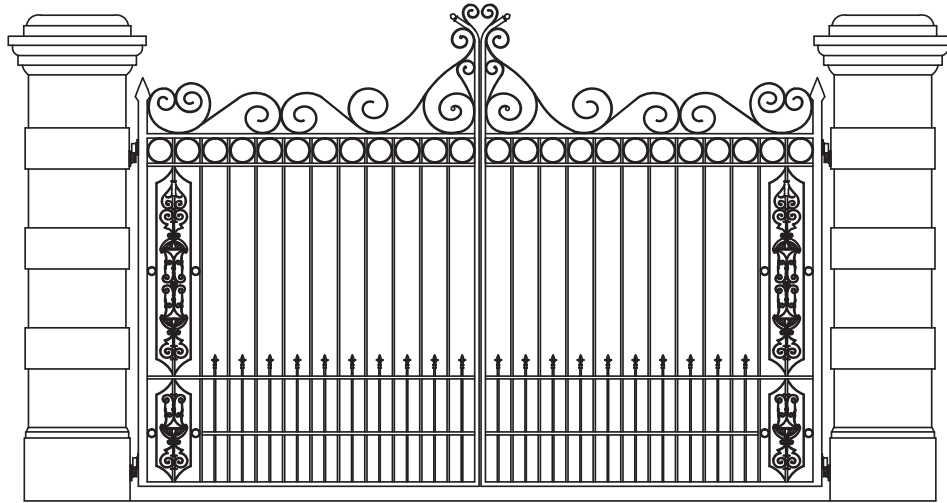
Franklin Lakes



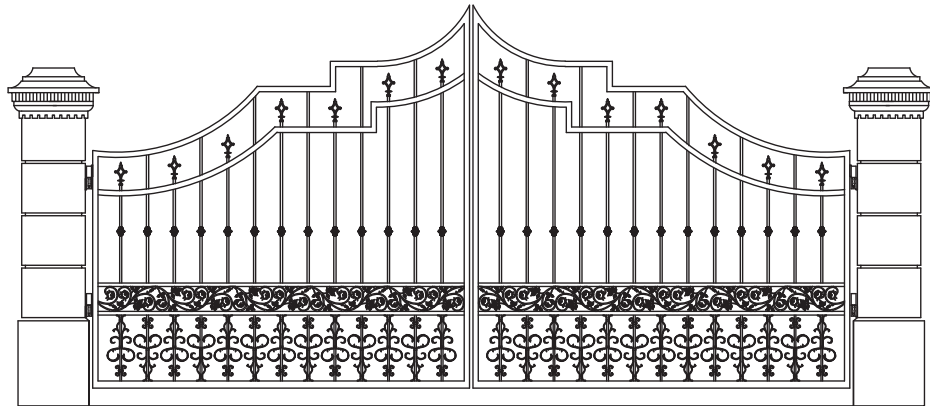
Ho-Ho-Kus



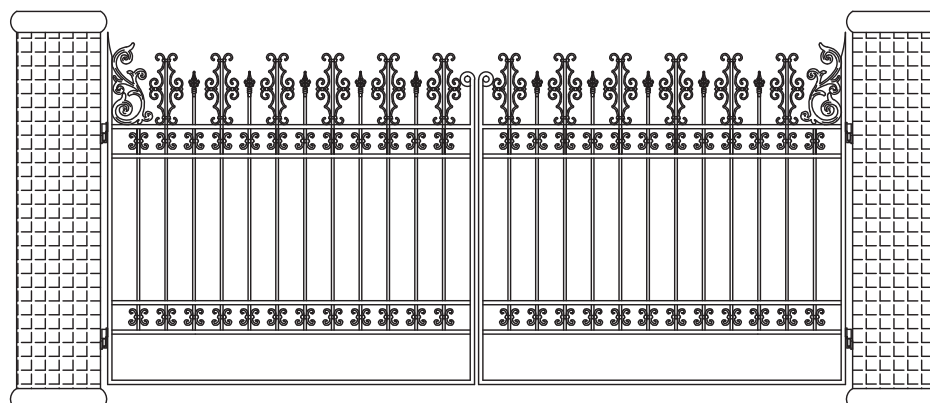
Holmdel



Little Silver

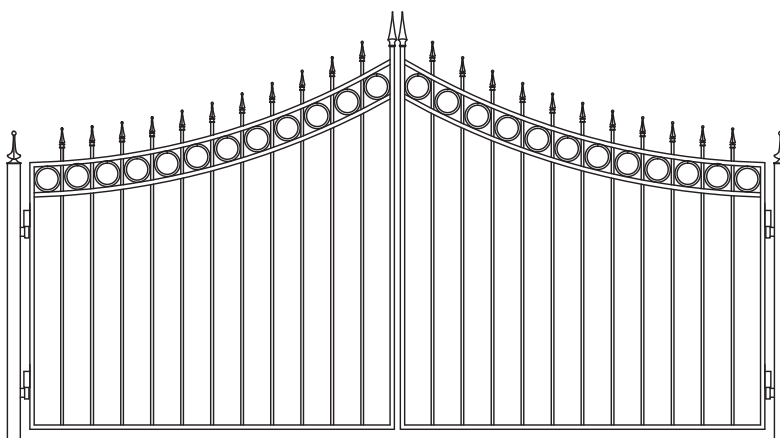


Livingston

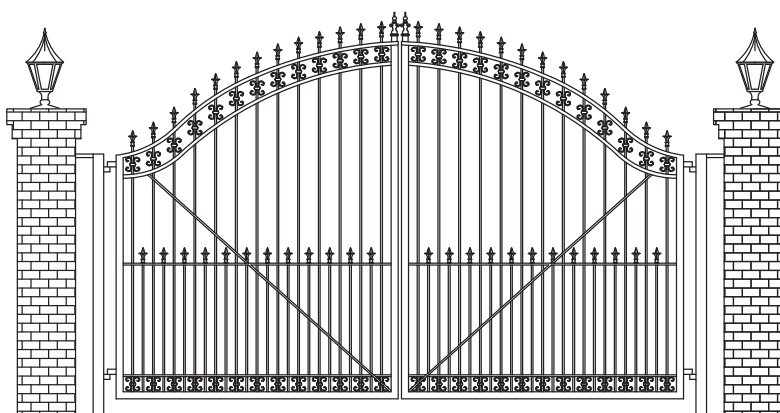


Millburn

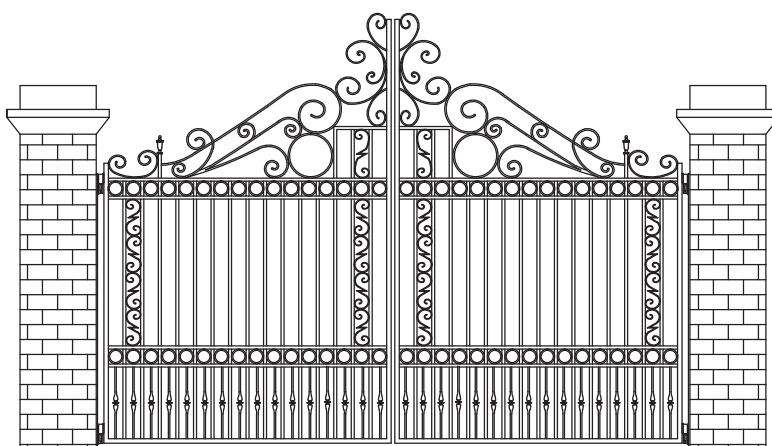




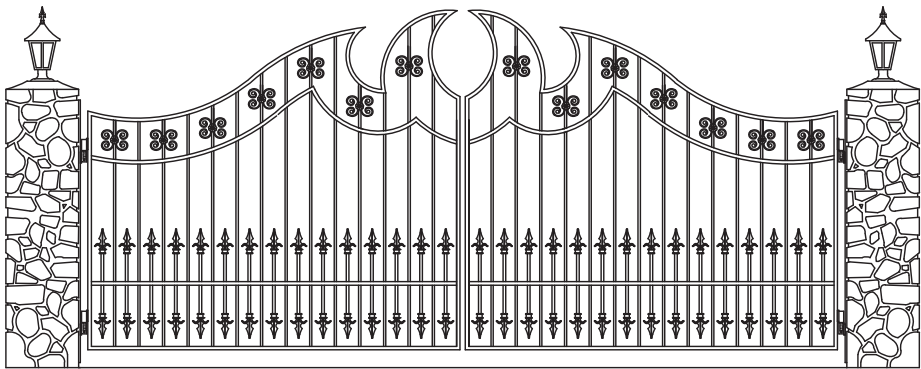
Montclair



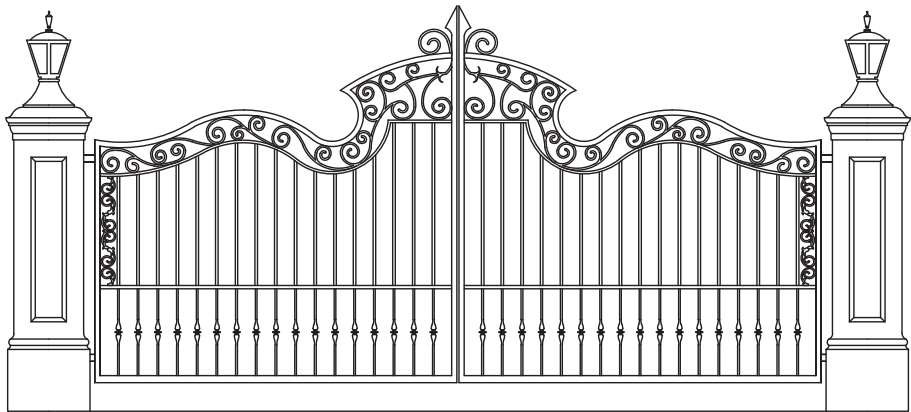
Moorestown



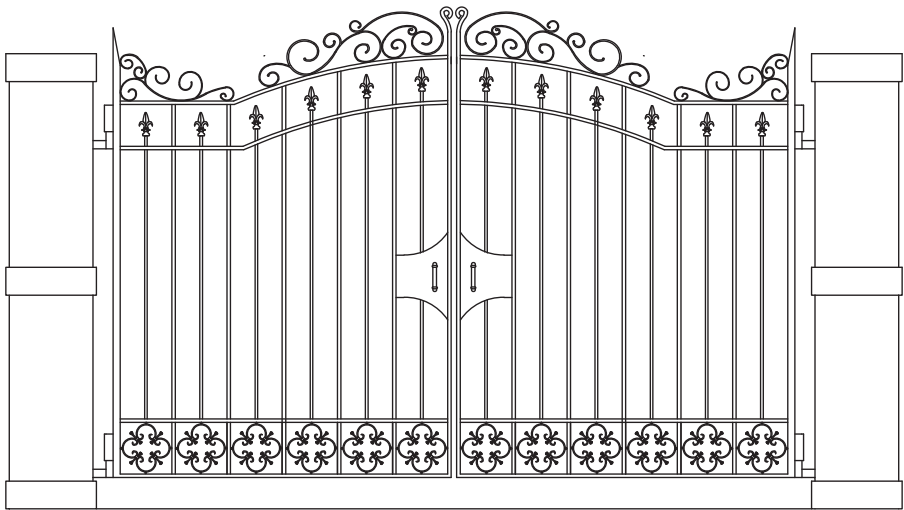
Navesink



Ocean

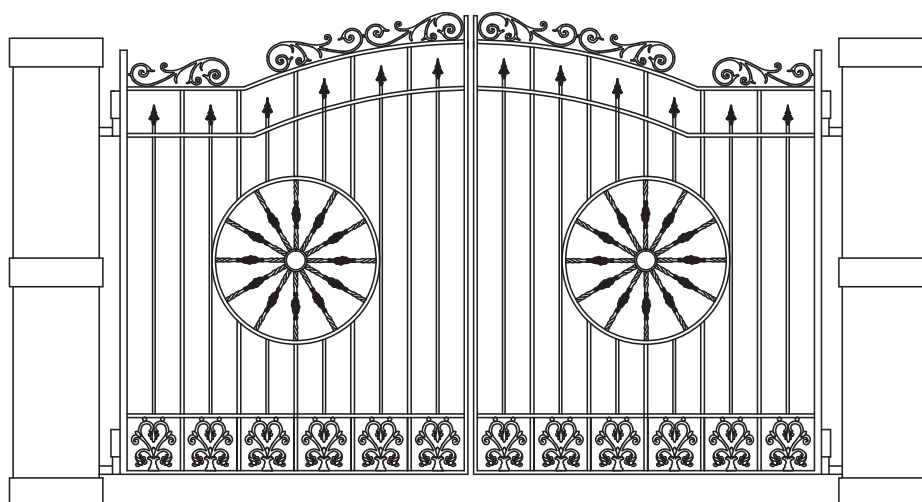


Red Bank

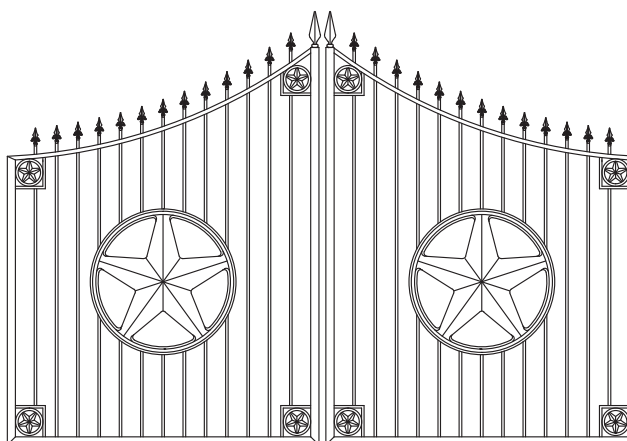


Saddle River

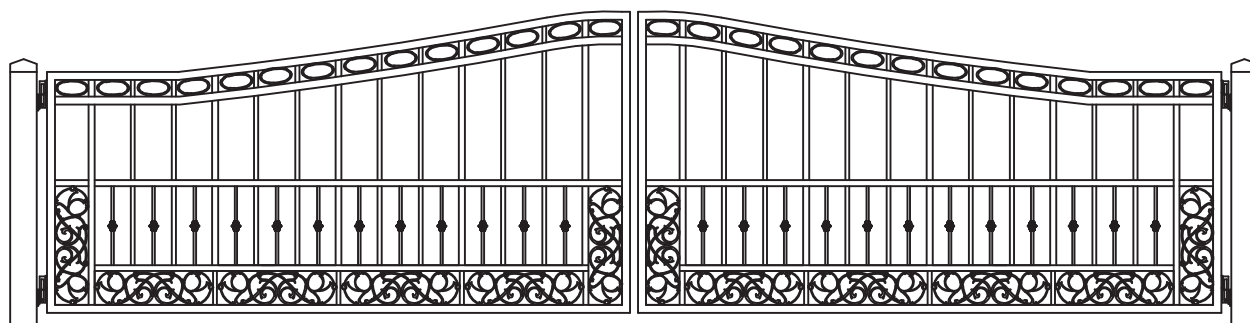




Short Hills



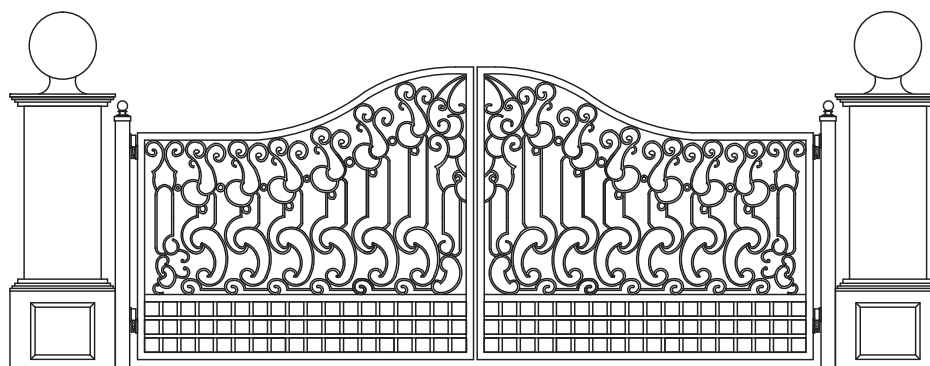
Summit



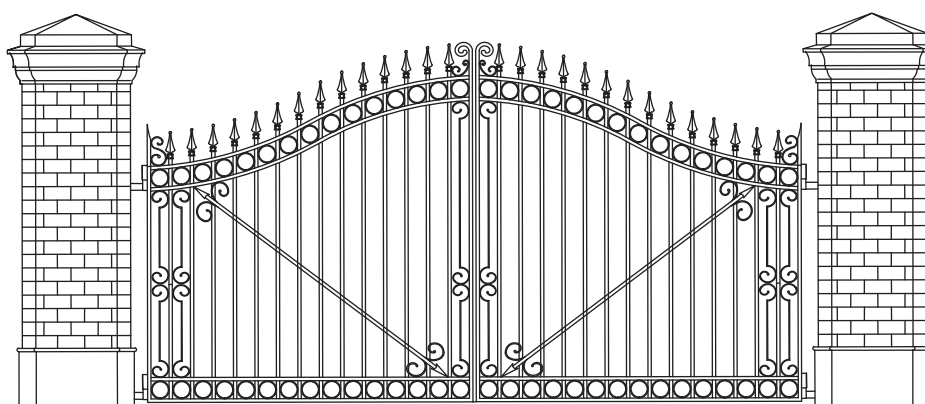
Tenaflly



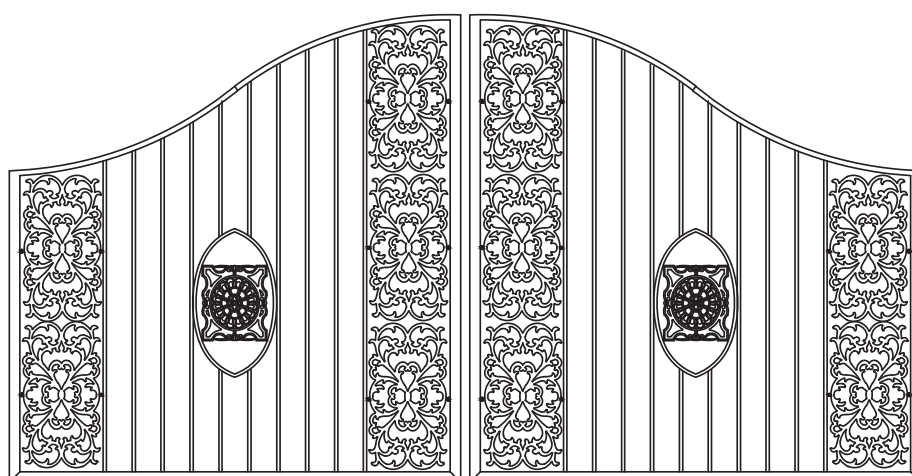
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Teterboro



Wayne



Wyckoff





# COMPASS

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## RAILING DESIGN GUIDE





# RAILING DESIGN GUIDE



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Elegance and Integrity

At Compass Ironworks, we carry into the 21st century the Amish traditions that forged our artistic sensibilities: honesty, integrity, and dedication to family, community, and craft. We do no mass production here; every installation reflects your unique needs. We are master craftsmen who work with both traditional and 21st century tools. At the end of the day, we close the doors and leave our tools at the shop, not to be touched until the next workday begins.

For more information about Compass Ironworks, please contact us Monday through Friday at (717) 442-4500.



Over the centuries, wrought iron has been an important expressive material that reflects refined taste and character. The beauty of wrought iron is that despite its inherent rigidity and strength, it can be molded into graceful and elegant shapes. Iron possesses beauty that never dies; it is as charming today as it was a hundred years ago. And will remain so a century into the future.

The possibilities for expression in iron are unlimited. Iron can be turned and twisted into innumerable designs and textures to achieve the artist's and client's desired result. By working closely with designers, architects, and clients, unique expressions can be incorporated into the final design for the very essence of bespoke craftsmanship.

Using iron also makes a "green" statement. All the solid iron and aluminum bar stock we use is 97-100% post consumer recycled material. As stewards of our planet, we need to protect our earth's resources. By recycling old appliances, cars, and buildings, we re-purpose existing materials into new and exciting ornamental iron products that will maintain their beauty and value for decades.

## Enduring Finish

The integrity of the protective coating (or "finish") makes it possible to admire the work of past masters today. We treat our products with the most durable and resilient powder-coating so your iron masterpiece may be admired for ages to come.

The process starts with the materials. We use top-quality solid bars—not the thin wall hollow tubing pickets used for mass-produced fences. After the material is forged, welded, and fabricated to our client's specifications, the all-important finishing process begins...

First, the entire project is sandblasted to remove all mill scale, dirt, and residue. This step also performs another important function: physically opening up microscopic pores in the metal in preparation for the powder-coat. The next step is a hot phosphate bath followed by two clean water rinses. Next, we apply the actual finish, starting with a zinc-rich epoxy primer. Then, the entire project is heated, melting and partially curing the primer onto the metal surface. While things are still hot, the first top coat is applied followed by a second and final finish coat. This last coat is treated to a long, slow pass through a curing oven to bake the powder to a specified hardness.

The entire spraying process is more than 99% efficient, and all leftover spray is reclaimed and reused. Our facility exceeds EPA and DEP requirements.



### Dedicated Craftsmen

Our master craftsmen are all natives of the Pennsylvania Dutch heritage found in Lancaster County, Pennsylvania—an area known internationally for its impeccable craftsmanship and superb work ethic. Our craftsmen work as a team to design, measure, create, powder-coat, deliver, and install your project in an effort to make your entire Ironworks experience surpass your expectations.

We take pains to ensure that the overall design fits your taste and harmonizes with its surroundings. Another chief concern is meeting installation deadlines. As craftsmen of integrity, we do everything possible to make sure your promised installation is carried out on or ahead of schedule. Accurate measurements are taken onsite and, if needed, templates are made to ensure a perfect fit for the final installation.

Then, back at the shop we kick off the forging and fabricating. Detailed cleanup of the project requires scraping, grinding, sanding, and polishing to ensure visual cleanliness. The project is then pretreated and powder-coated right here in our facility for best quality control and ease of scheduling. For delivery, your iron is carefully wrapped for scuff-free transit to the site.

As we work, we keep in mind that our craftsmanship will be seen and evaluated for generations to come. We care about our clients' complete satisfaction. There is no excuse for anything less.



# RAILING OPTIONS



Fairweather

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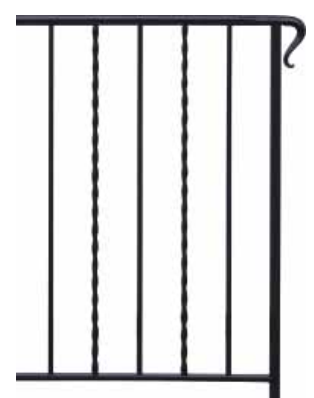
Cheshire Belly



Cheshire Belly (side view)



Cheshire Straight



Gladwyne





## Railing Options

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Hampshire Belly



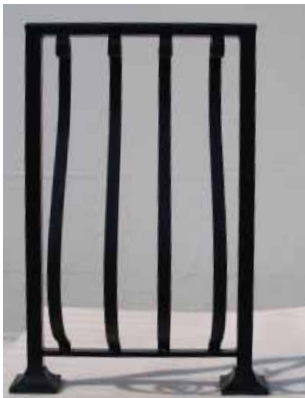
Hampshire Belly (side view)



Hampshire Straight



Hammered Basket



Huntingdon Belly



Huntingdon Belly  
(side view)



Manchester Belly



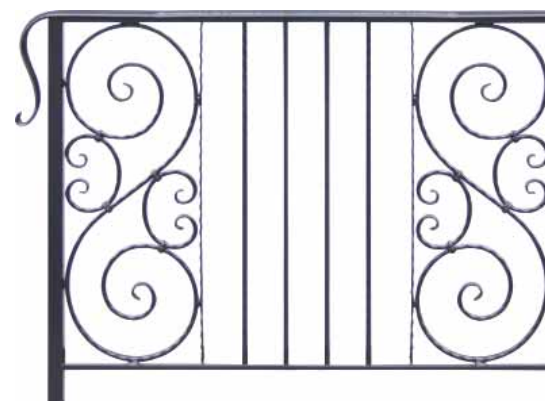
Manchester Straight



Standard 3-Rail



Standard 4-rail



Sussex

## Railing Options

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Tewksbury Straight



Tewksbury Belly



Tewksbury Belly  
(side view)



Detail of cover shoe  
to add aesthetics and  
protection to base of post

## Caprail Transition Choices



Lamb's Tongue



Volute



Petite Lamb's Tongue



# STANDARD RAILINGS



Roanoke

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Mainline



Roanoke (Railing has rivets through handrail)

# INTERIOR POSTS



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Hilton Style Volute in 1/2" Round Bar



Ornate Foot Bracket



Hilton Style Volute in  
5/8" Square Bar



Faux Marble Column



Custom Oak Column





Knightson Post



Iron Panel and  
Knightson Post



Wood Newel



Acanthus Termination



Custom Marbleized Column



Custom Turned  
Bronze Newel

# MAIN FOYER RAILINGS

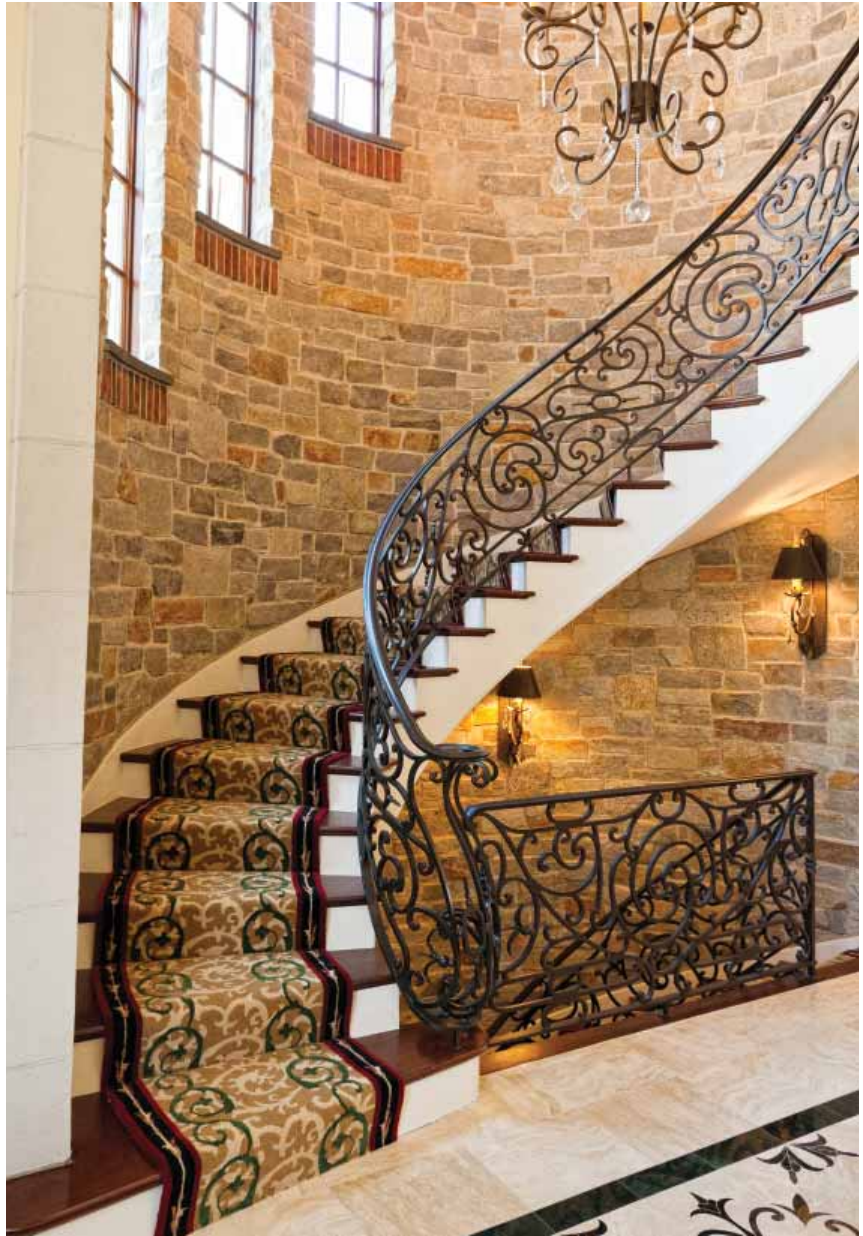


An exquisite iron railing in a main foyer setting makes a statement of bespoke taste. Iron has the rigidity and composition to withstand decades—even centuries—of use and still possess grace and elegance when admired generations later.

There are many exquisite and famous homes, such as The Breakers and The Nemours mansion, that wonderfully showcase the dramatic effect of a fine iron railing. The end result takes an ordinary space and transforms it into a masterpiece.

Today's architects, designers, and homeowners have more choices than ever before. While there are wooden and iron pickets that you can "stick and glue" for a cookie-cutter railing, the same space can be dramatized by incorporating a custom-forged piece of iron art—a piece of beauty to cherish forever.

But a word of caution... ironwork can be overdone. Well-designed railings are subtle, eye-pleasing structures that harmonize completely with their setting and surroundings. The result is an expression of your own design and taste that transcends time and will be admired for generations.



Exquisitely expressive hand-forged interior railing

All Rights Reserved Compass Ironworks



# INTERIOR RAILING DESIGN IDEAS



Mainline Style railing creates a visual impact

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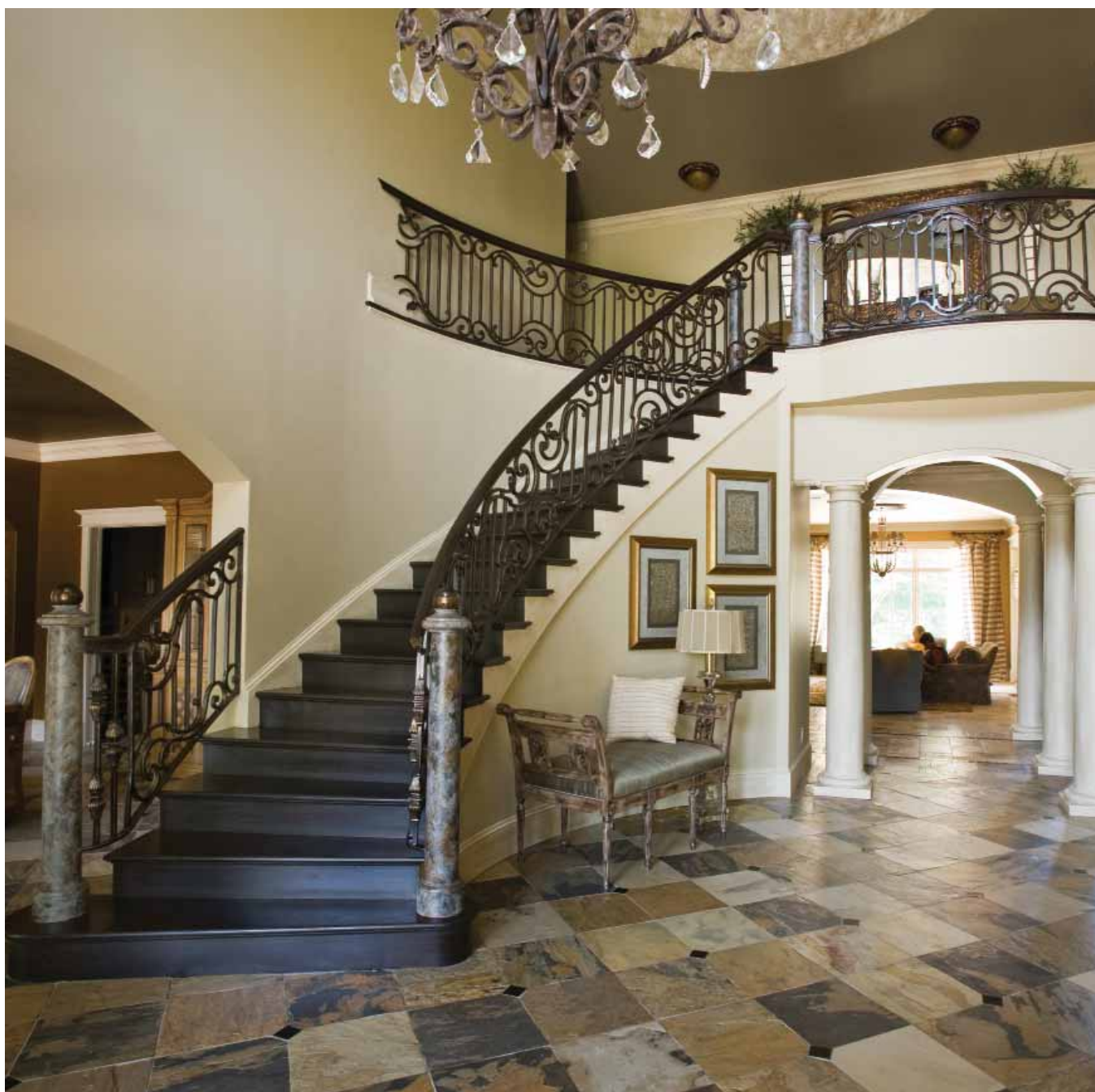
Iron railings for family room overlook



Close-up of iron with wood handrail contrast



Ornate foot bracket supports the entire railing system



Grand Staircase railing in Moorestown, NJ





Close-up of scroll detail



Note the luxurious effect of gold highlight on the edge

## Interior Railing Design Ideas

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Iron railing for  
kitchen stairs



Iron railing leads  
to the third floor





Custom interior iron railing in Mount Laurel, NJ

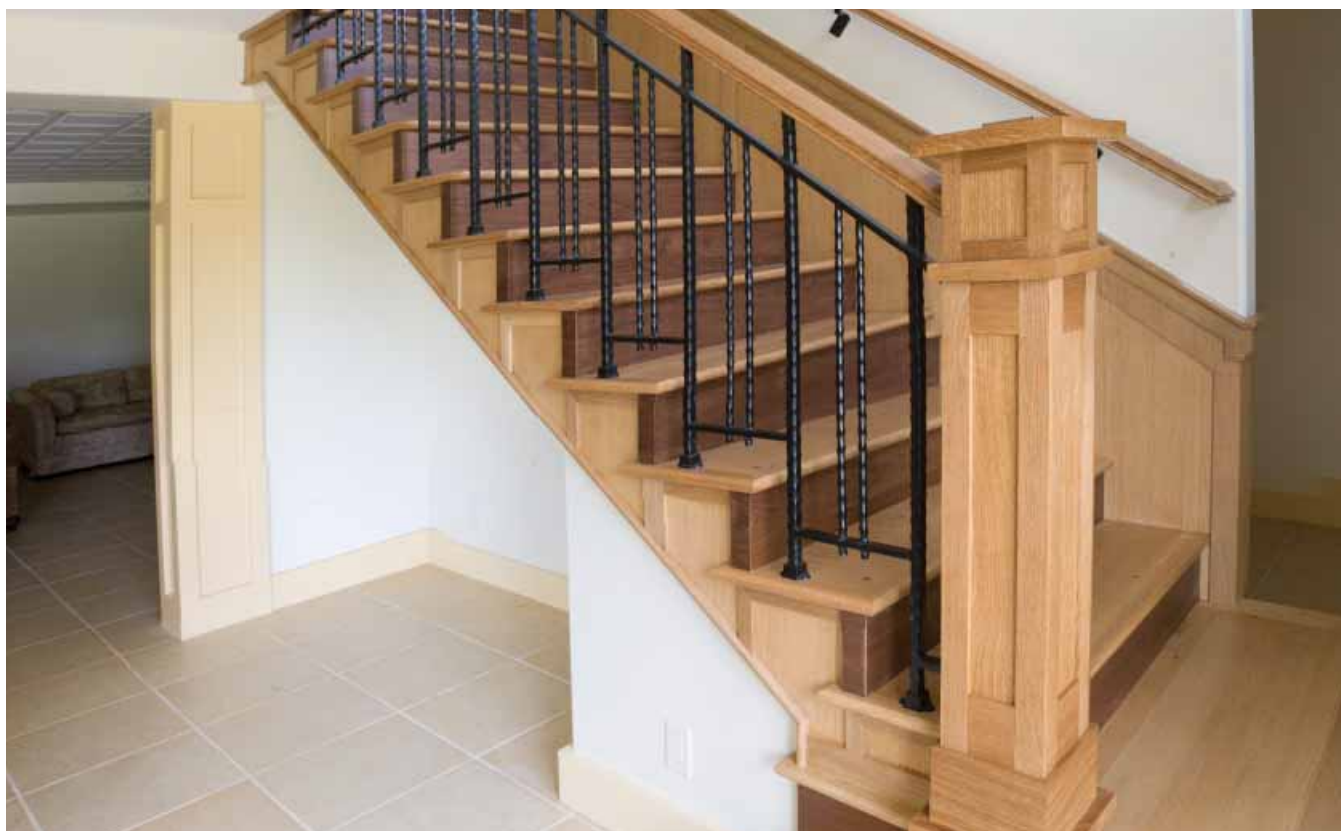
Oval design meets all codes but adds insightful yet subtle design flair.





Custom stairs and hallway in 1840s barn, refurbished into a house





Arts & Crafts Style railing in Maryland



Detail of iron scrolls



Forged iron railing with Mahogany handrail



Hand-forged designs in 1/2" rail create a subtle statement



Forged panels add elegance to the foyer



Detail of hand-forged quad scrolls with gold highlight





Contemporary iron railing in Ventnor, NJ



Solid welded construction



Custom iron railing adds permanence to this beautiful foyer

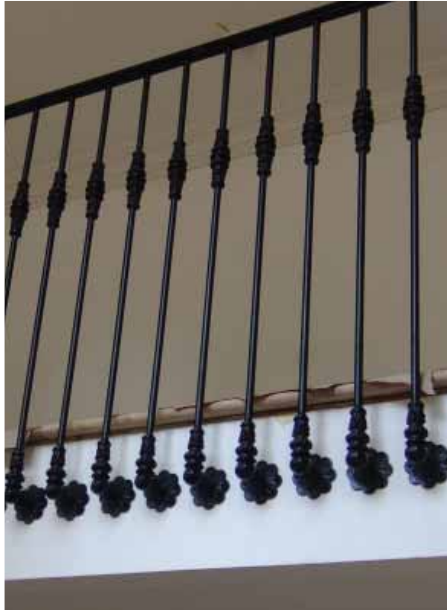


Detail of hand-forged scrolls

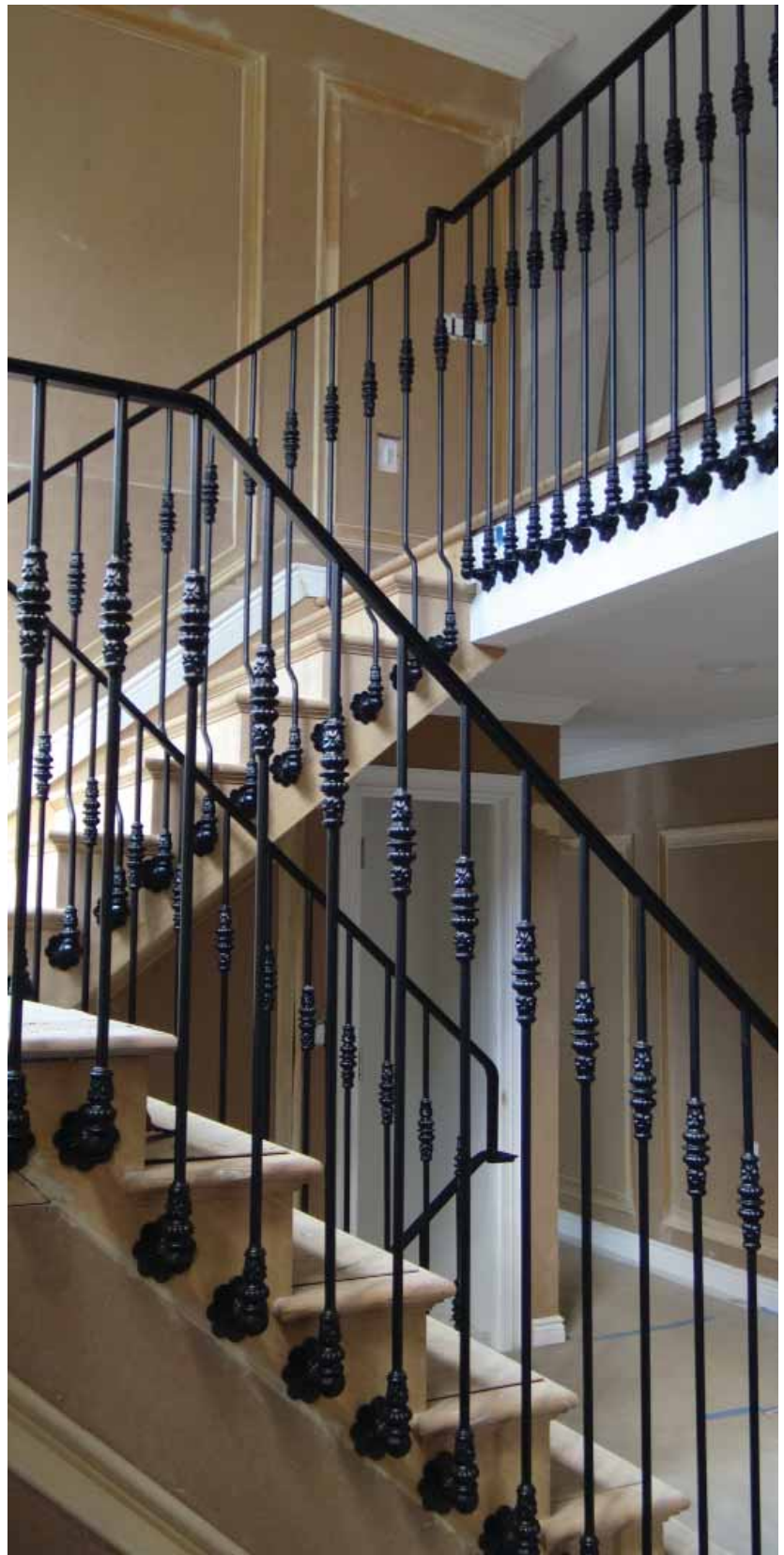


Close-up of Hilton volute





Level rail with custom forged balusters



Side mount stair railing



Wrought iron European design elements accentuate this private residence

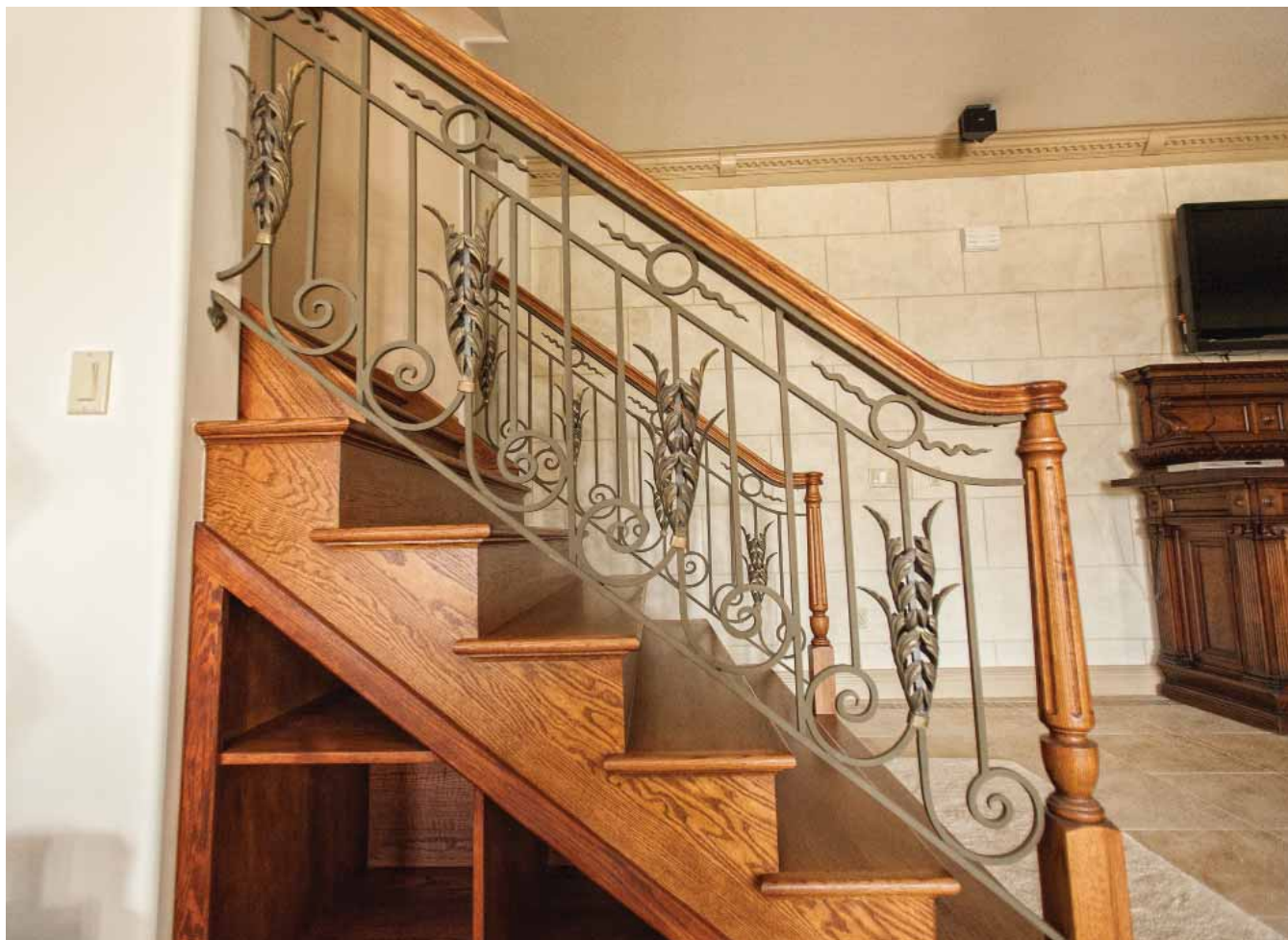


Scrolls and rings compliment the European decor



Bronze highlight on the coat of arms





Custom scrollwork and Acanthus leaf combination

Detail of double  
Acanthus leaf





Custom forged crest accentuates beautiful forged railing



Close up of forged scroll detail for house railing



Traditional forged railing design for an awesome wow factor





Custom forged crest  
accentuates beautiful  
forged railing



Basketball engraving detail

Simple, classic and forged stair case railing



Modern stainless railing for staircase



The contrast of flat bar and round bar in stainless for a contemporary look





Overview of interior iron railing



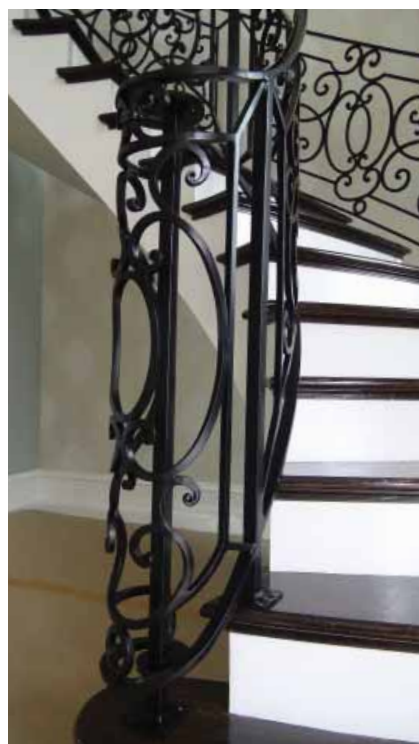
Custom forged iron volute for stair handrail with antique tarnish



Forged iron stair handrail



Powder-coated black iron stair railing

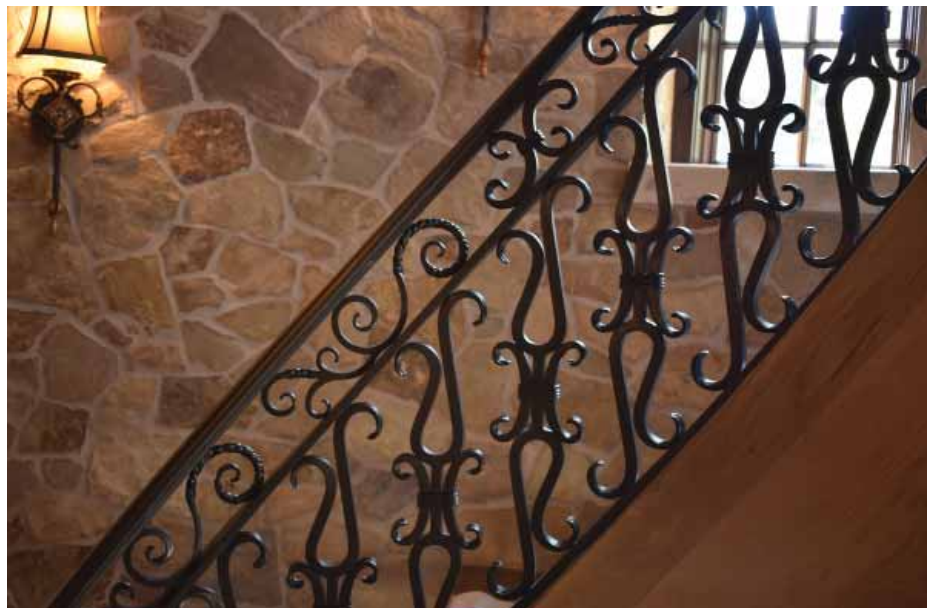


Forged volute for wrought iron railing





Understated but elegant balcony railing and stairs



Radial stair silhouette  
hand crafted



Dimensional railing contemporary design, photo courtesy of Toby Kahn Interiors



Contemporary iron railing with wood caprail, photo courtesy of Toby Kahn Interiors



Depth detail of contemporary iron interior railing, photo courtesy of Toby Kahn Interiors





Hand forged iron stair handrail



Curved turret staircase railing and hallway railing



Beautiful collaboration of metal, wood, and marble



Forged transcending lateral scroll



# BLACKENED RAIL CASE STUDY



Beautiful staircase with wood cap-rail and iron railing

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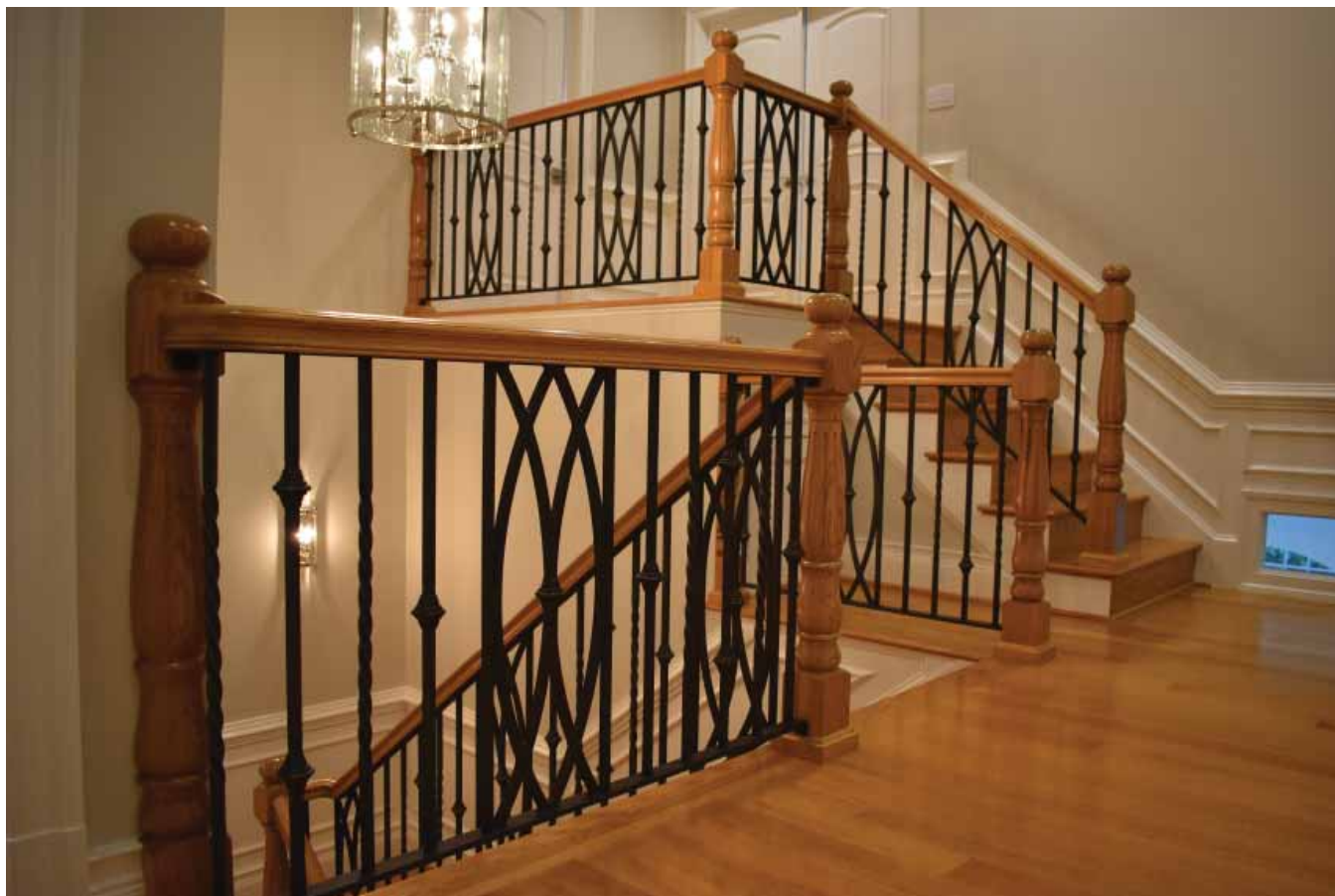
Achieving the blackened interior railing began with blasting the iron down to white metal. Immersed in a tank of chemical oxidizer, it became deep black. To stop the reaction and nullify residual oxidizing in the pores of the metal, the piece was put in another tank of neutralizing solution. The entire project was blown dry. Using an oven to dry speeds up the chemical reaction, but can cause rust. A penetrating oil was hand rubbed into the railing. Next, it was scotch-brited down through the blackening, so the silvery metal could show through as contrast. The piece was then put into the oven and brought to 300 degrees. When cooled, Renaissance Micro-Crystalline wax was rubbed by hand onto the surface. The result was stunning. A new railing finished with traditional blacksmith methods, complete with the irregularity of metal texture. It suited the client's level of contrast and fit perfectly into the design.



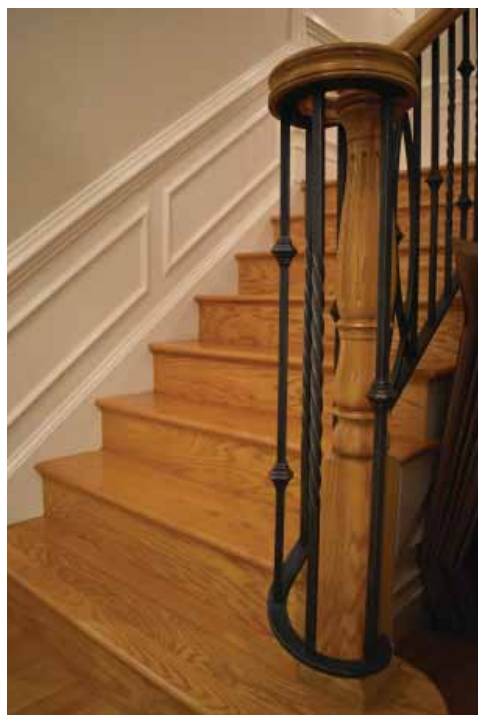
Close up of the antique blackening finalized piece.



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Multiple levels of iron railing



Left: Custom turned oak newel with fluted design

Right: Close up of antique tarnish and renaissance wax finish



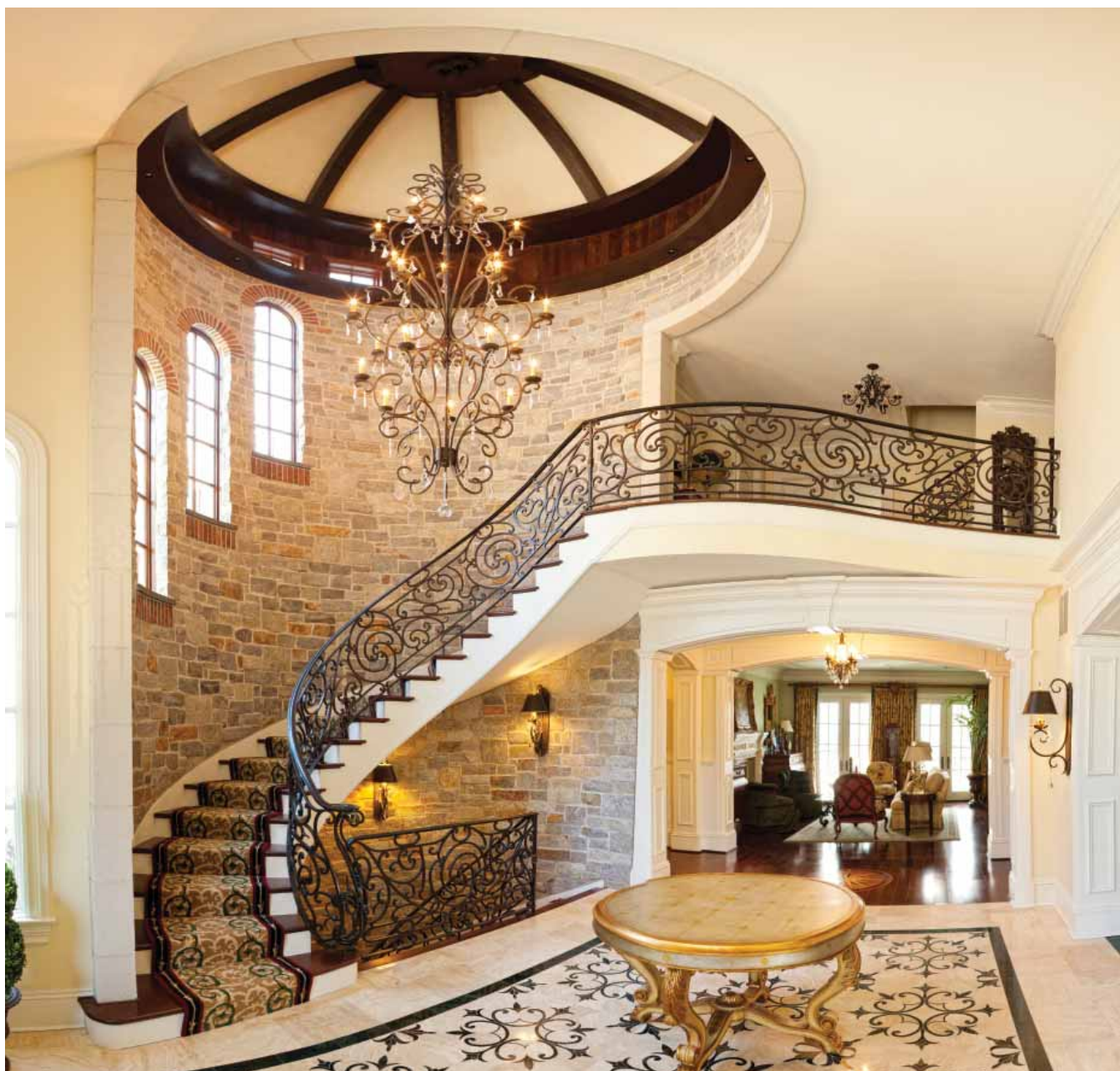




Transitional design utilizing the contrast of iron and wood



Modern railing design installed into tread and floor



Hand-forged iron railing creates a statement that will transcend time





Bronze handrails add authentic safety to a refurbished 1934 pool house.



Solid bronze handrail with antique tarnish.

# HISTORIC RAILING CASE STUDY

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Top: Bronze handrail and newel with iron twisted pickets make for an exquisite railing.

Bottom: A new custom iron railing perfectly matches 1934 work



A homeowner, contractor and architect team were renovating and adding to an original 1934 house. The original stair had this beautiful Iron railing with a golden tint, custom bronze newels and bronze handrail, complete with all bronze mounting plates. The intention was to perfectly match the original Ironwork and details.

The first step was to research the original material and methods. The original picket material had flattened corners to give it more contrast when the pickets were twisted. The picket collars had been forged from half-round bar. A bigger challenge lay in the custom bronze newel that they had used. Accurate dimensions were taken and the newel was photographed, then printed full size to show ever radius and detail so the copy lathe operator could exactly follow the 1934 handiwork.

A concern was that this newel would not meet today's code requirements for strength and rigidity. Some testing was done and some small innovations were made to the interior structure that wouldn't jeopardize visual harmony but amplify the structural integrity. This was then tested again and met the requirements satisfactorily

The real challenge was in the correct finish. First, the bar was tumbled to accentuate the scale, then corners were hammered, and it was pretreated then scotch-brited by hand to have some shine come through. The residue was blown off using compressed air, then a custom gold leaf mix was sprayed onto the entire picket and finally a clear sealer was applied. This was very close, but not quite a match. The next revision was to add a chemical oxidation process to slightly corrode the surface before the application of the gold leaf. We compared to the original work and it was an absolutely perfect match!

The bronze handrail and newel were also given an antique tarnish and clear coat, all of the brackets and mounting plates underwent the same processes to ensure a perfect match.



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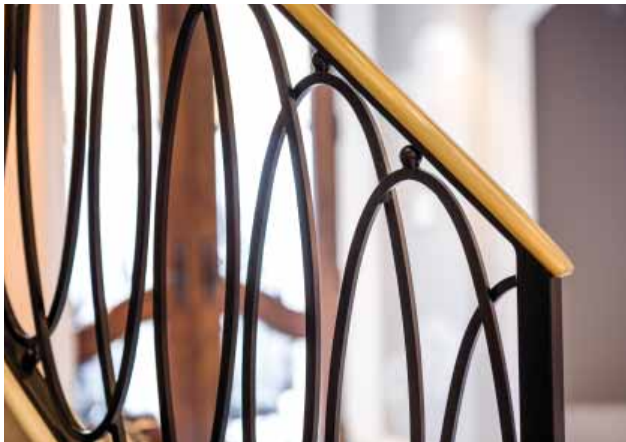
Ironwork perfectly suits the décor for these homeowners with a love of antiques and fine craftsmanship.



Hand-forged scrolls and hand brushed highlights express love of detail and quality.



Transitional stair railing design with bronze caprail



The beautiful contrast of bronze caprail on iron railing



The complex challenges of multiple radices and angles create a phenomenal visual when executed correctly

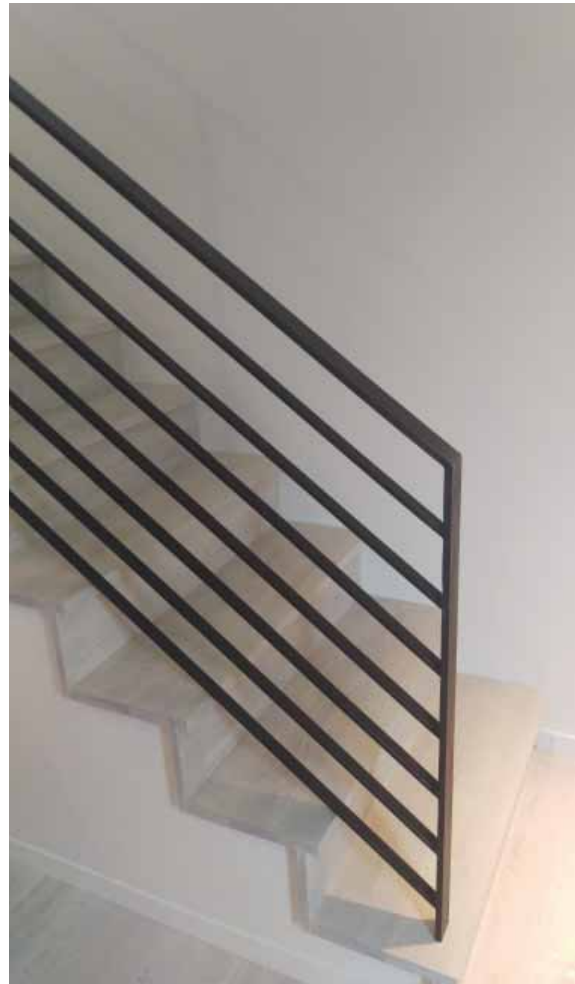


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Authentic iron texture detail



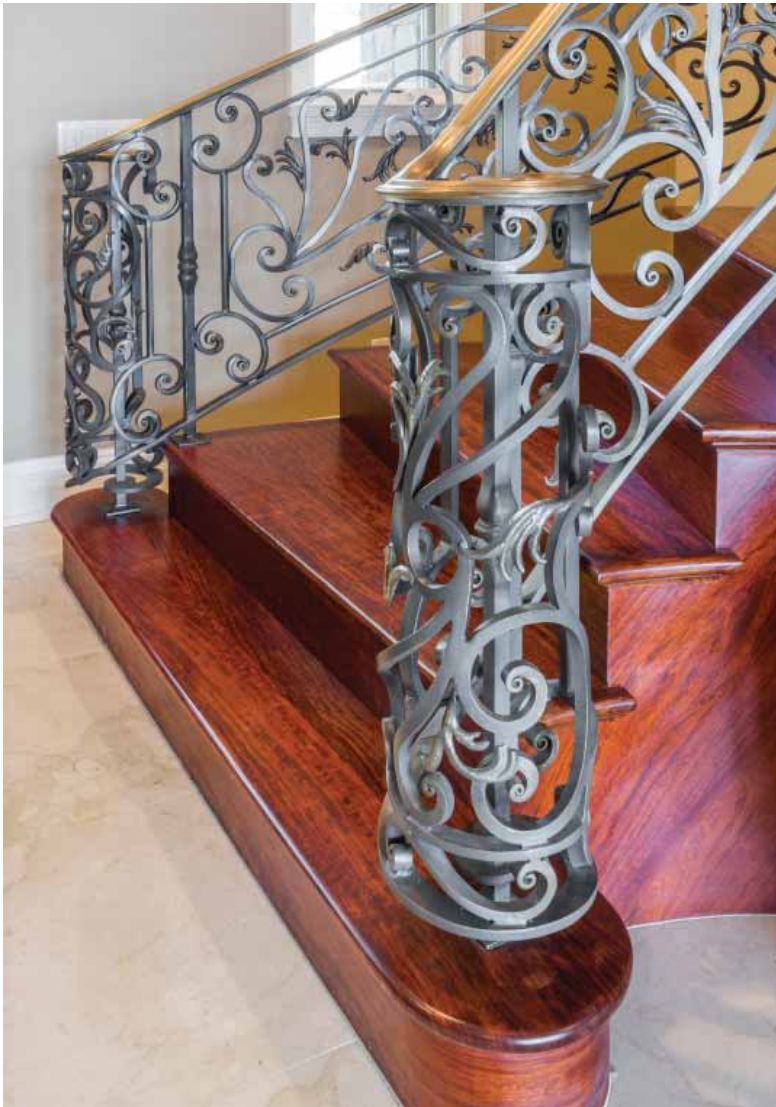
Modern horizontal railing in classic material and finish



Contemporary railing with traditional iron material and traditional blackened finish

## Interior Railing Design Ideas

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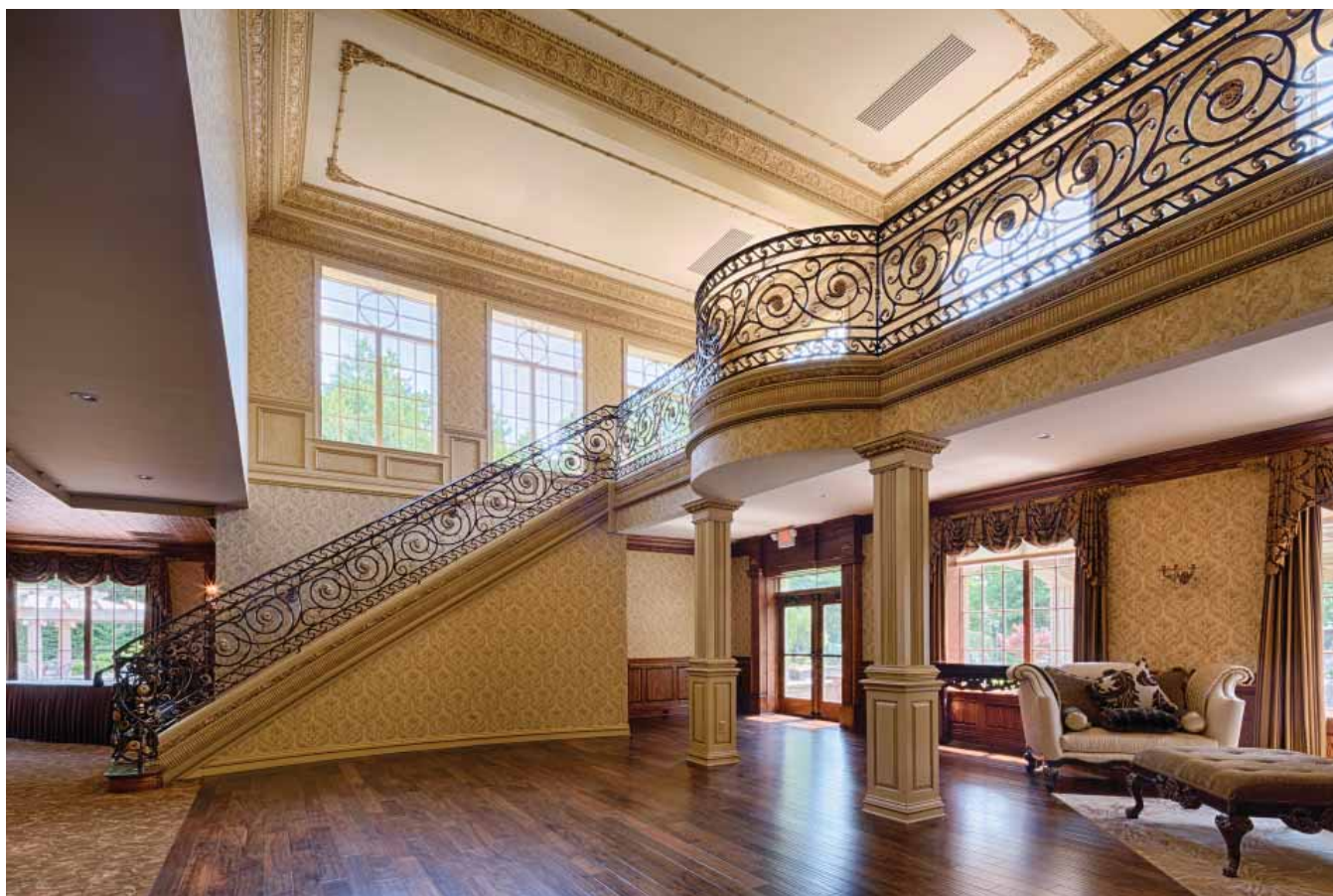


Elegant scrollwork creates a pair of beautiful terminations.

Bronze volutes create timeless appeal.







Forged iron railing sets the tone for an awesome experience in this space.



Above: Beautiful radius creates an awesome balcony effect.

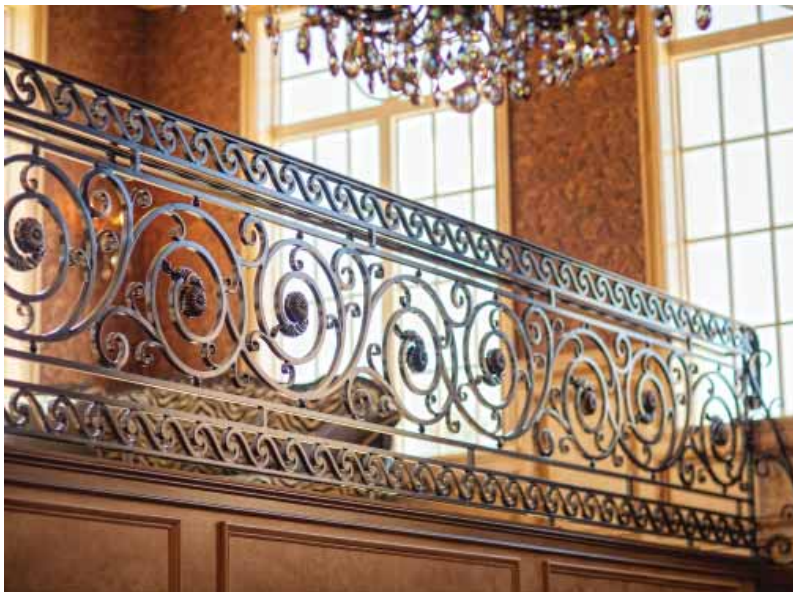
Right: Gold gilded leaves and rosette's make for a stunning volute.





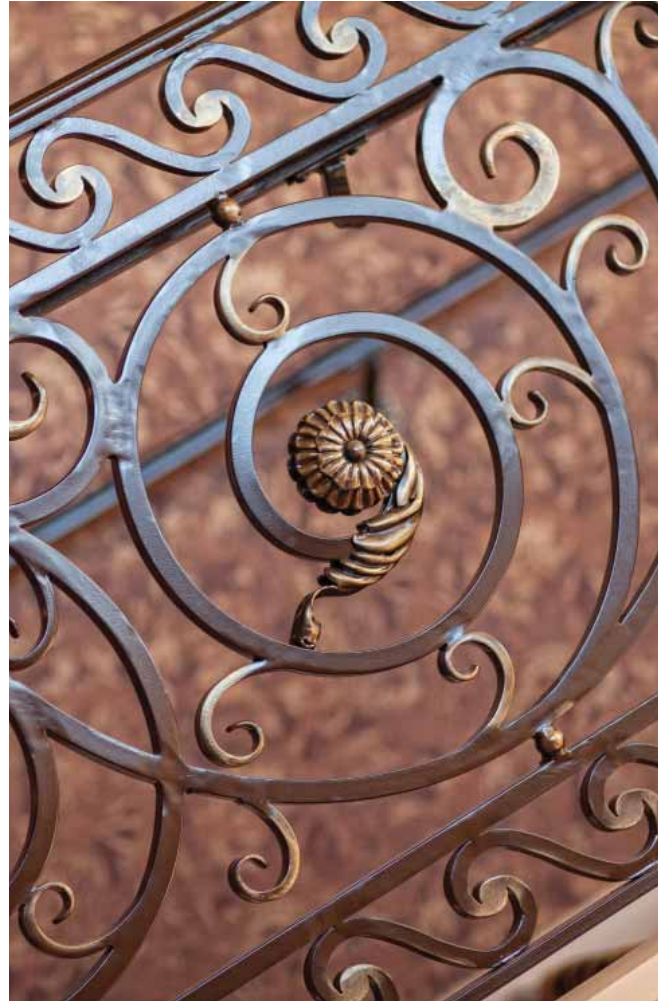


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A banquet hall in New Jersey wanted to appeal to a more sophisticated client base. To achieve the goal, they went through a design process and evaluated the current trends. After their research, they determined a hand-forged iron railing would add elegance and beauty for each bride's special wedding or each client's important event.





The main stairway was renovated with the new iron railing. The ambiance of the space is a perfect setting for a couple's special wedding event and a perfect photo backdrop. A gold highlight was added to the forged flower and acanthus leaves to highlight these details and as an additional benefit, the whole railing project was created with minimal environmental impact.

# TERRACE POSTS



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5" Hampton Post



Raphael Post



8" Linden Post



Custom  
Roman Post



6" Hampton  
Post



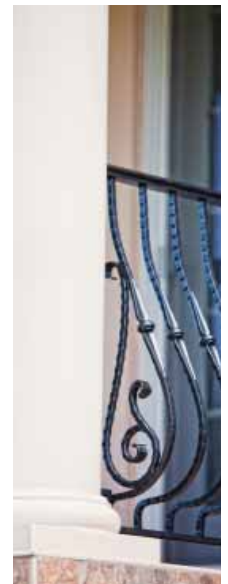
Cassabella Post



Knightson Post



Teaneck Post

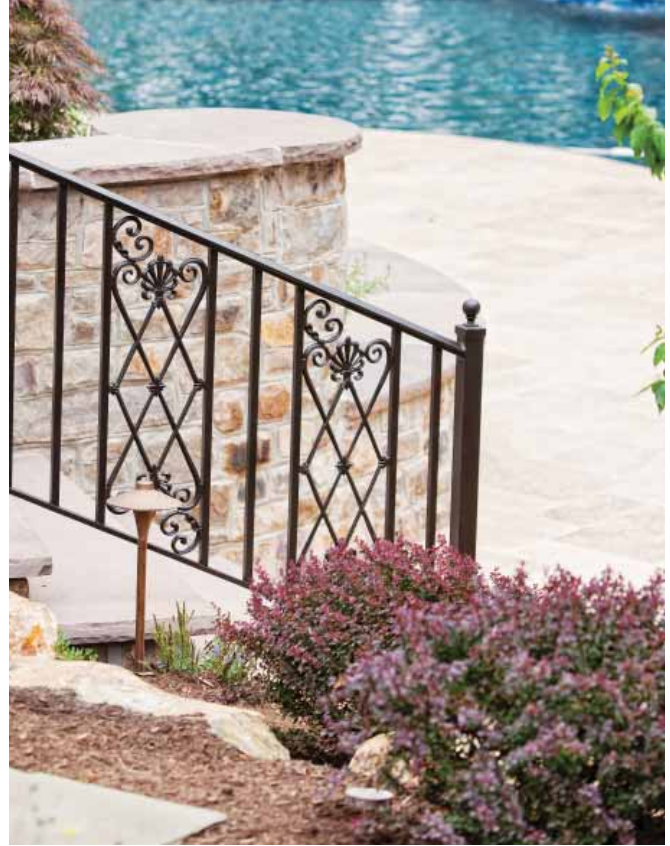


Close-up of  
scroll for code  
compliance





# TERRACE CASE STUDY



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A property owner in Bucks County, Pennsylvania, was building a custom swimming pool, cabana, and lounge area in his backyard. The swimming pool company overseeing the project contacted us to help with certain special needs. The railing design and color needed to match an existing railing, previously installed on the deck. There were difficult radii to match around stone columns and down curved steps, a raised and curved seating area, and additional railings on the back of the cabana. To complicate matters further, the client had planned an event that dictated when the project needed to be complete. Fortunately, we were contacted in time to meet the deadline. We researched the existing design and made custom parts that exactly matched the property. Accurate measuring and the use of templates resulted in a perfect fit on the challenging radii. The entire project was finished in a bronze baked-on powder-coating that had a stunning visual impact and matched the existing railing color.



**COMPASS**  
IRONWORKS

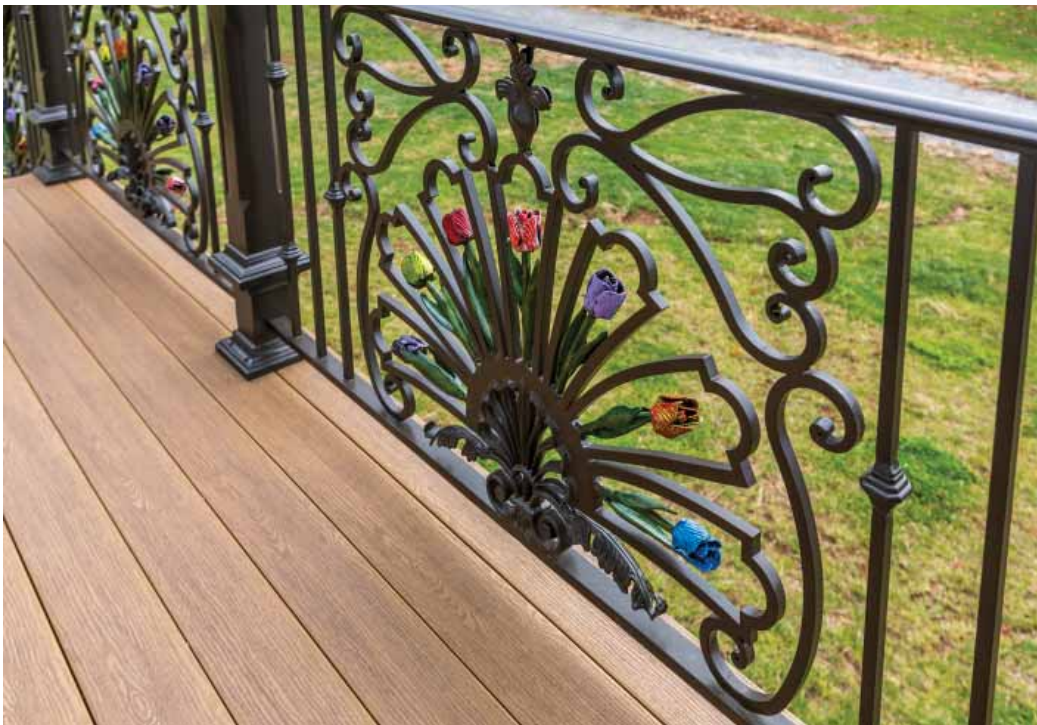


# EXTERIOR RAILING DESIGN IDEAS



Greek Athenaeum center with French Crest and hand-forged tulips and scrolls create a distinctive flair.

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Hand gilded tulips allude to a woman's love of flowers.





3 Levels of forged aluminum railing indistinguishable from wrought iron



Forged aluminum tulips in a bouquet





Both sides of entry railing provide symmetry for front stairs



Metal railings for stairs  
in modern aluminum





Custom castings were created for the angle of these stair railings

Traditional aluminum railing design







This sublime pool space is transformed by the spectacular railing design.



Left: Terrace railing overlooking the pool.



Right: Custom forged railing provides beautiful radius to accentuate marble steps





Iron railings and balconies complement the architecture of this home



Authentic terrace railing enhances this 100 year old estate



Iron design inspired by original balcony from 1901





Marine grade railing offer beauty for this family's shore retreat



Terrace railings and posts have a cohesive effect for this shore home



Solid aluminum railing creates spectacular contrast for this custom log home.



The craftsmanship of this log home terrace is accentuated by the iron railing.



## Exterior Railing Design Ideas

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Hampshire belly railing in Medium Bronze elevates the visual appeal of this terrace.



Solid aluminum Manchester railing provides grace and beauty while meeting building codes.



Wrought material railing on front entry steps



Authentic forged railing compliments the classic architecture





Solid aircraft grade aluminum terrace railing

Round hot  
pierced bars  
used for  
balcony railing







Wrought iron railing specially created with todays materials for an authentic look



Close up of Iron railing that has an antique iron paint process to look like it was built decades ago



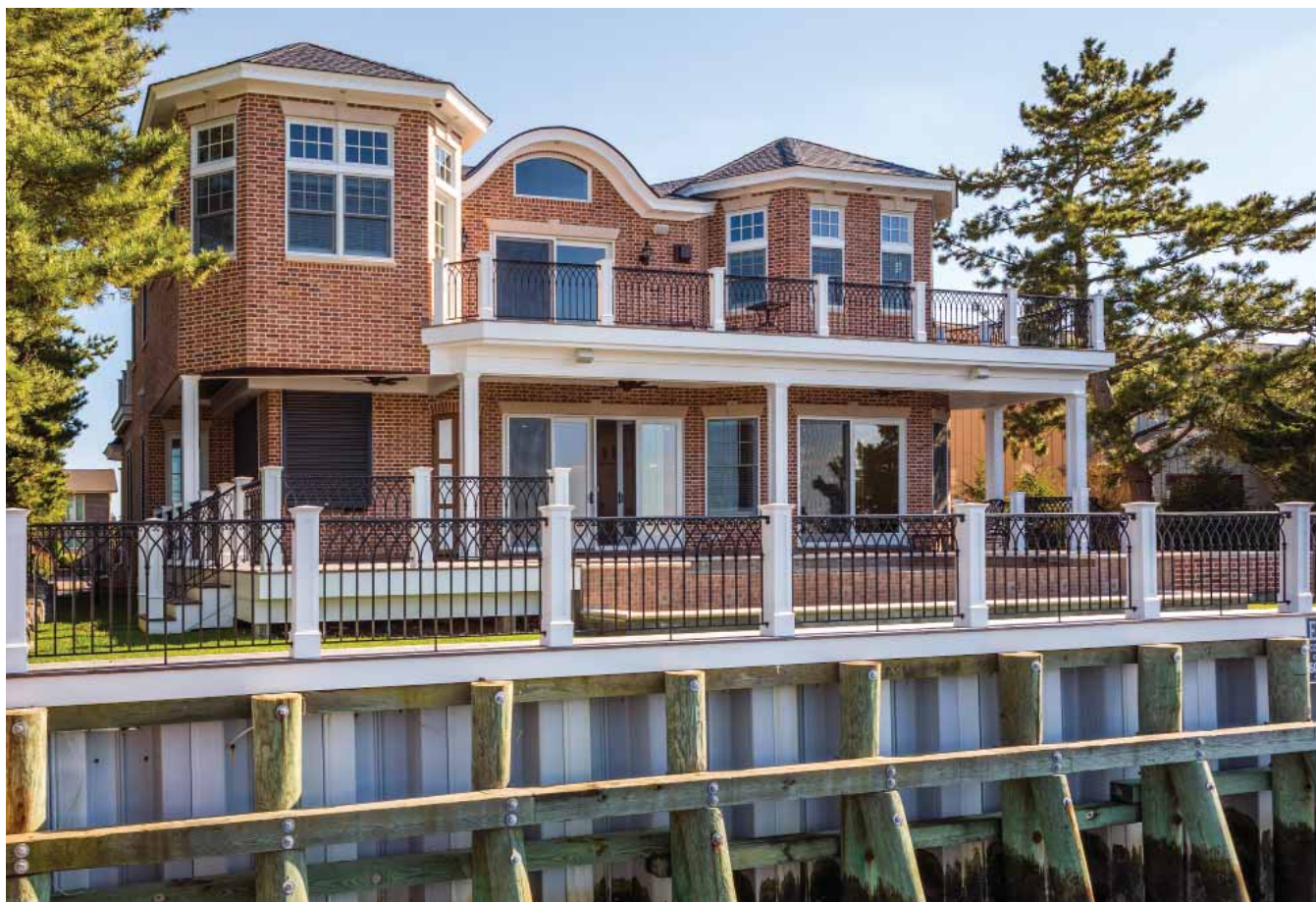


Metal handrail for stairs and safety railing

Design element and  
finish detail of a  
wrought iron railing  
replication







Ornamental railings on a bay front home



Flared stair railing for front steps





Exterior balcony railing forged from aircraft grade aluminum, indistinguishable from wrought iron

Close up of wrought iron railing design





Modern exterior railing design for front staircase



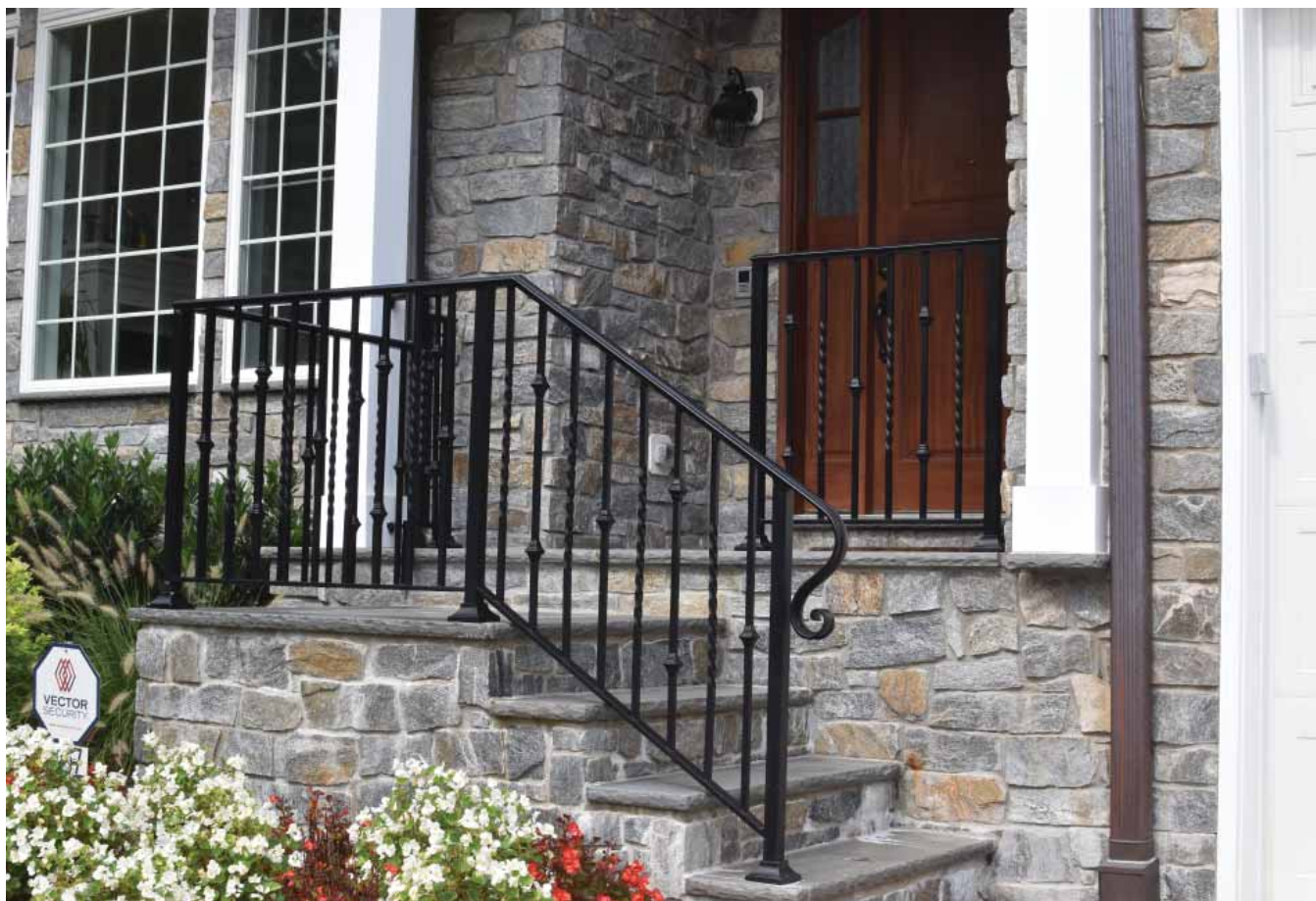
Modern deck railing for bay front property



Wrought iron railing  
replicated with  
contemporary materials



Porch railing for  
a centuries old  
house staying  
true to the period



Upscale front entry railing

Contemporary  
house balcony  
railing design





## Exterior Railing Design Ideas

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Custom terrace railing for triathlete lover



Terrace railing attachment to masonry





House railing in contemporary materials



Contemporary  
terrace railing





2 levels of porch railings provide elegance and safety

Custom forged  
terrace railing



## Exterior Railing Design Ideas

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Multiple levels of modern terrace railing design



Buck terrace railing modern design for a water front home





Marine grade aluminum railing for a pool on a water front property

Aircraft grade aluminum railing adds excellent contrast to this modern shore home



**COMPASS**  
IRONWORKS





Restored Samuel Yellin balcony



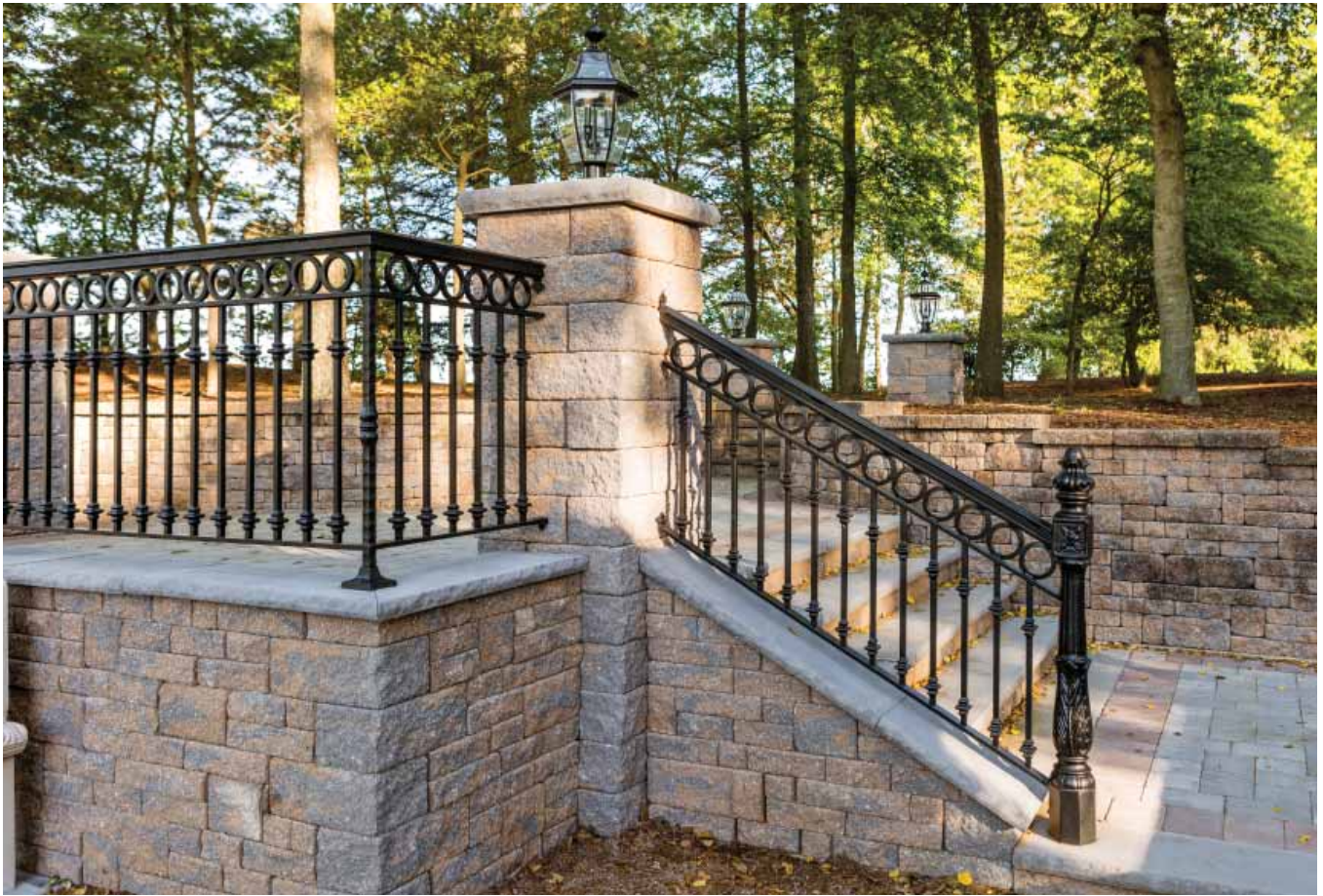
Left: Beautiful scroll work for bracing the Samuel Yellin

Right: The amazing detail in restored wrought iron railing

Below: The authentic Samuel Yellin stamp on wrought iron







Classic design stair railing



Exterior railings  
in contemporary  
design





The panorama of beautiful sweeping forged aluminum railings

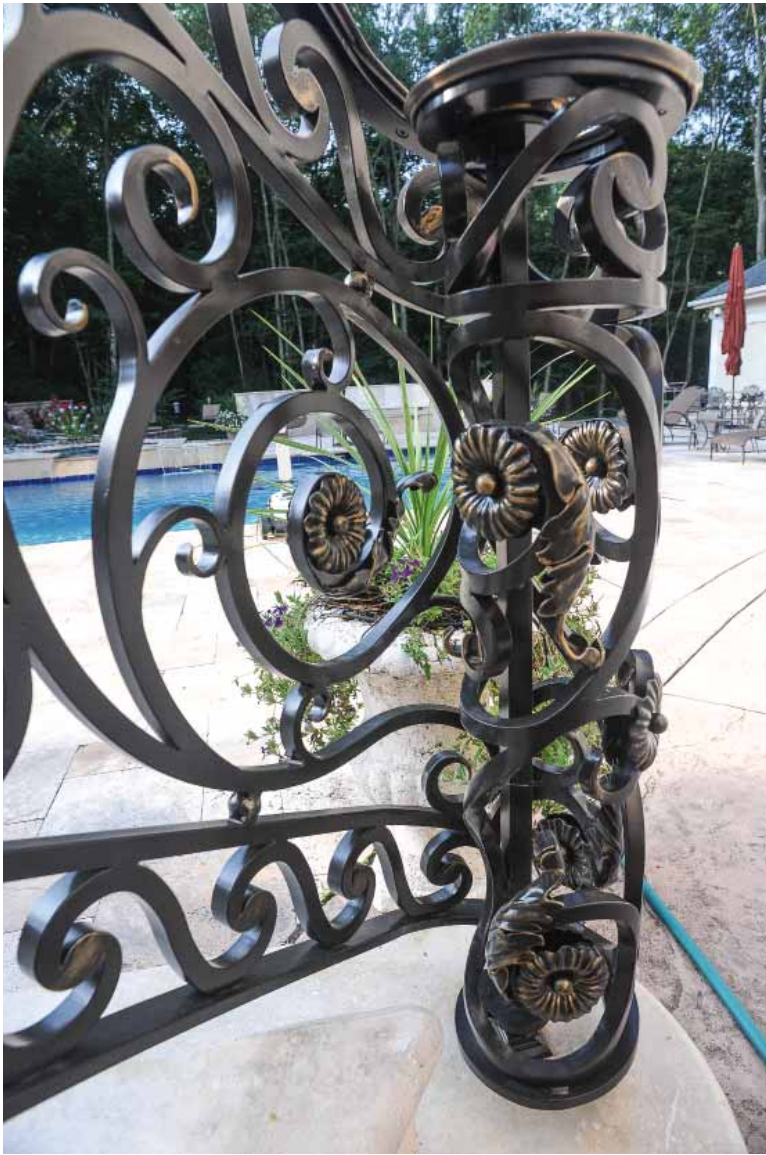
Forged scroll  
details for  
exterior railings





## Exterior Railing Design Ideas

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Forged lateral volute for  
staircase railing

Detail of forged  
rosette and leaf  
for stair railing



# TERRACE RAILING DESIGN IDEAS



Terrace railings in Longport, NJ

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Custom iron railing  
between columns





Terrace with French balcony railing above

Hampshire Belly railing  
on radiused terrace





Widow's Walk railing in Moorestown, NJ



Custom iron railing  
with IPE handrail in  
West Chester, PA



## Terrace Railing Design Ideas

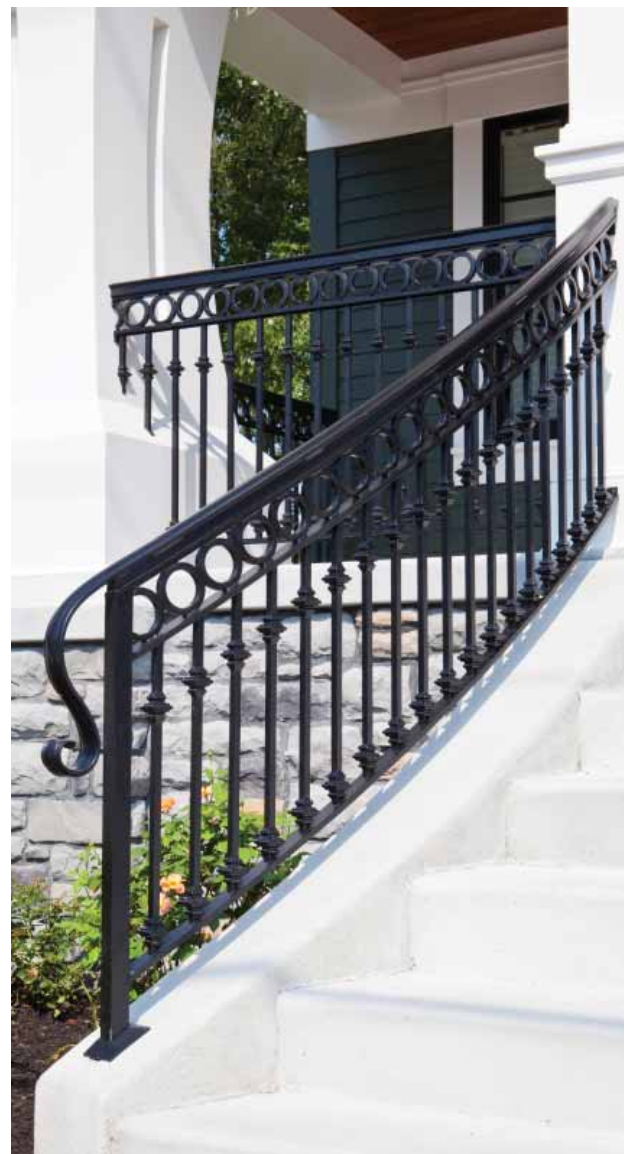
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Custom terrace railing in Ocean City, NJ



Custom railings in Longport, NJ



Radiused entry railing in Ocean City, NJ

Roman posts on  
custom entry railing in  
Moorestown, NJ



Terrace step  
railings in  
Moorestown, NJ



## Terrace Railing Design Ideas

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Iron rosette detail



Iron stair railings in  
Moorestown, NJ

## Terrace Railing Design Ideas

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Tewksbury stair railings in Margate, NJ



Hammered Basket railing in Longport, NJ



Contemporary railing on terrace in Media, PA





Fairweather railing overlooking dock in Longport, NJ



Fairweather railing detail





Hammered Basket railing creates safety and adds classic appeal without obstructing ocean views



Tewksbury railing in Margate, NJ

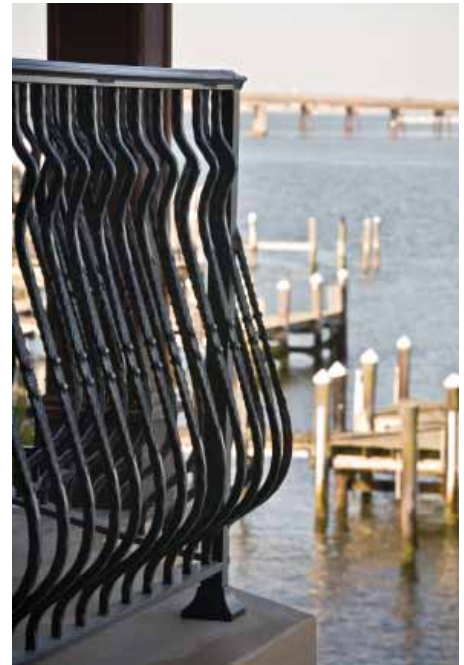


## Terrace Railing Design Ideas

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Patio railing with custom bronze powder-coat



Manchester railing overlooking boat slips



Hammered Basket railings in Chester Springs, PA



Custom iron design in West Chester, PA





Mainline style railing in Bryn Mawr, PA



Custom entry railing in Bryn Mawr, PA



Solid aluminum Hammered Basket railing

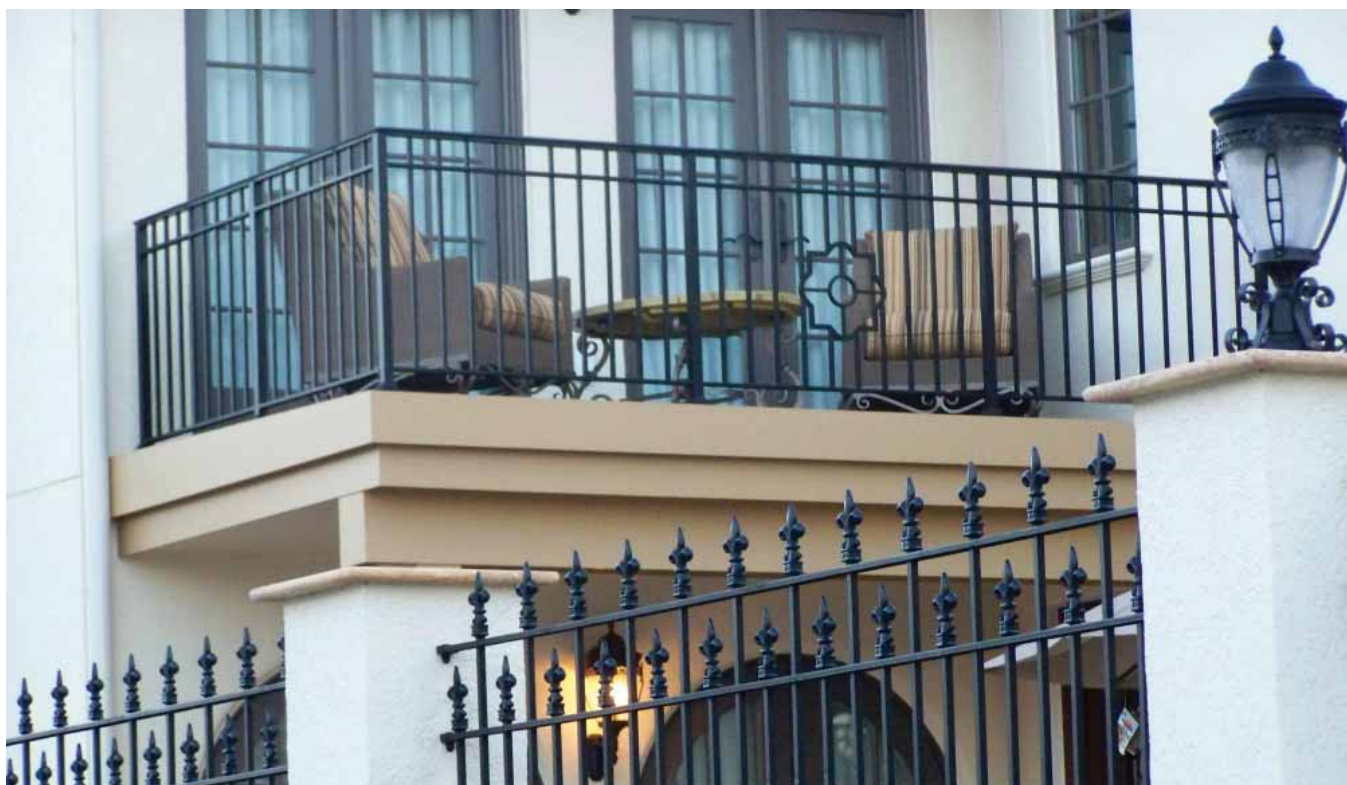




Custom terrace railings and gates in Newtown, PA







Terrace railing on Rumson Ave.



Sussex railing in Bellmar, NJ





Custom "Bouquet" railing in Princeton, NJ

"Bouquet" railing detail





## Terrace Railing Design Ideas

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Terrace railings overlooking Bucks County countryside



Iron filigree to enhance an entryway

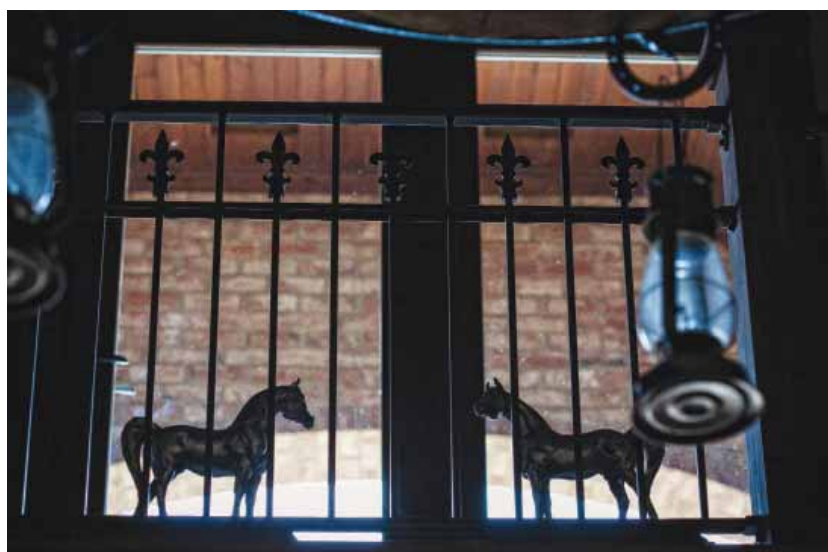


Iron railing with forged iron frieze





Iron railing accentuates the Western theme in this horse barn



Riding trophies are silhouetted through the iron railing



Close-up of antique rust finish



Mainline terrace railing



Arts and crafts style railing in solid aluminum displays a taste of progressive design.





Hampshire Belly railing in Lebanon, PA

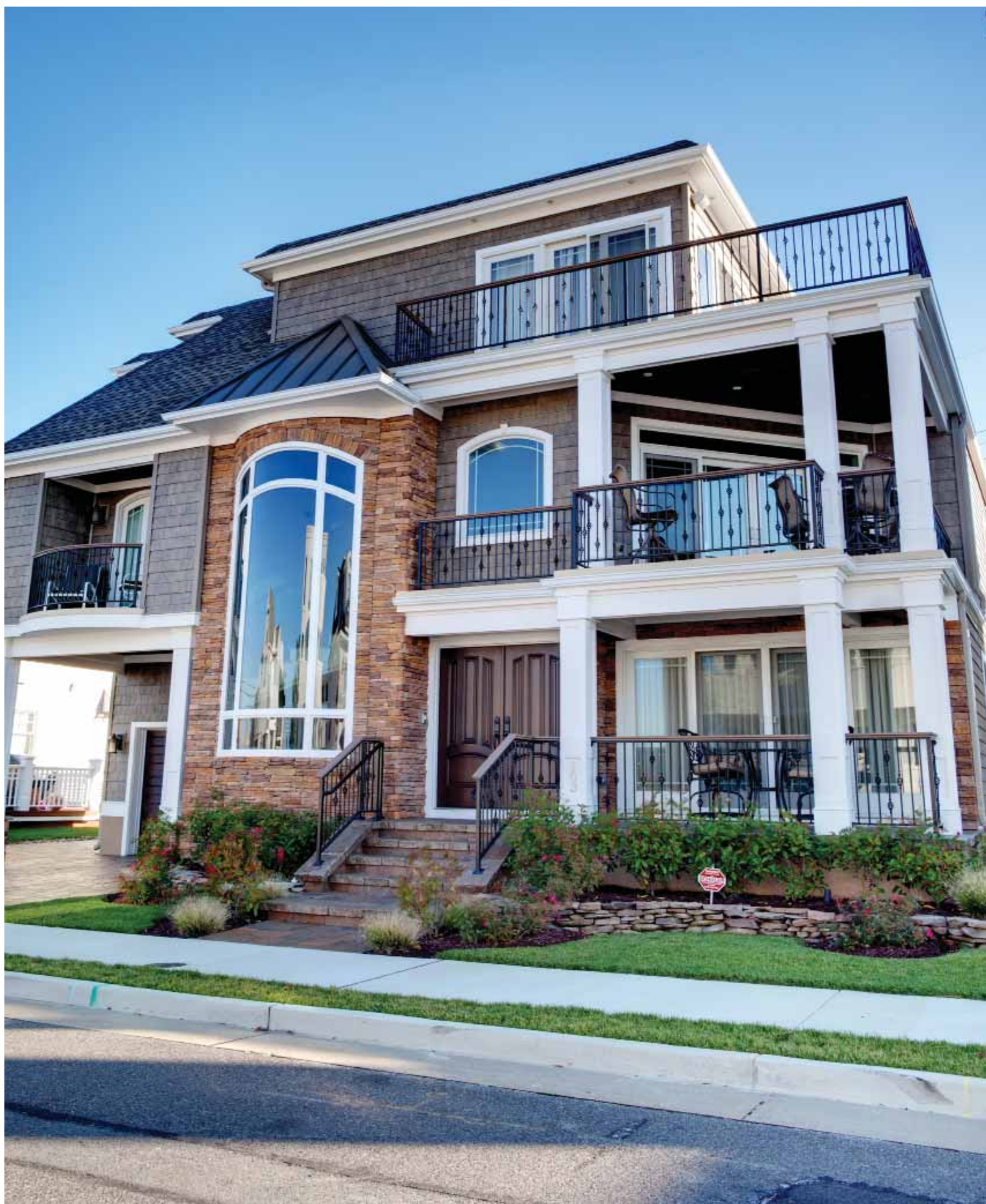


Terrace railing overlooking beautiful valley



Iron Hampshire Belly railing between the stone columns



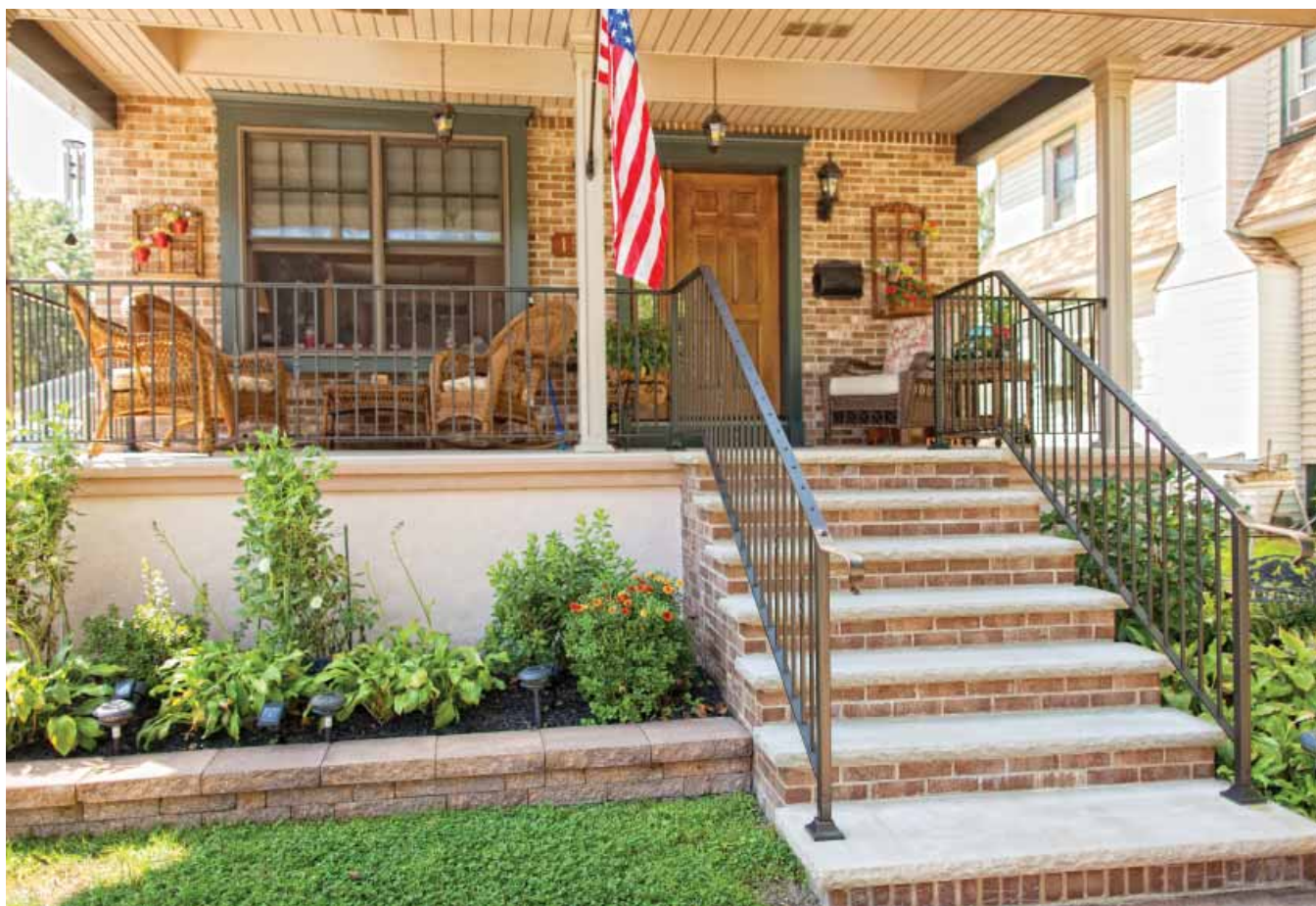


Three stories of solid aluminum Hammered Basket railings



## Terrace Railing Design Ideas

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Roanoke railing is a solid match for this brick home



Hampshire Belly railing  
on bedroom terrace



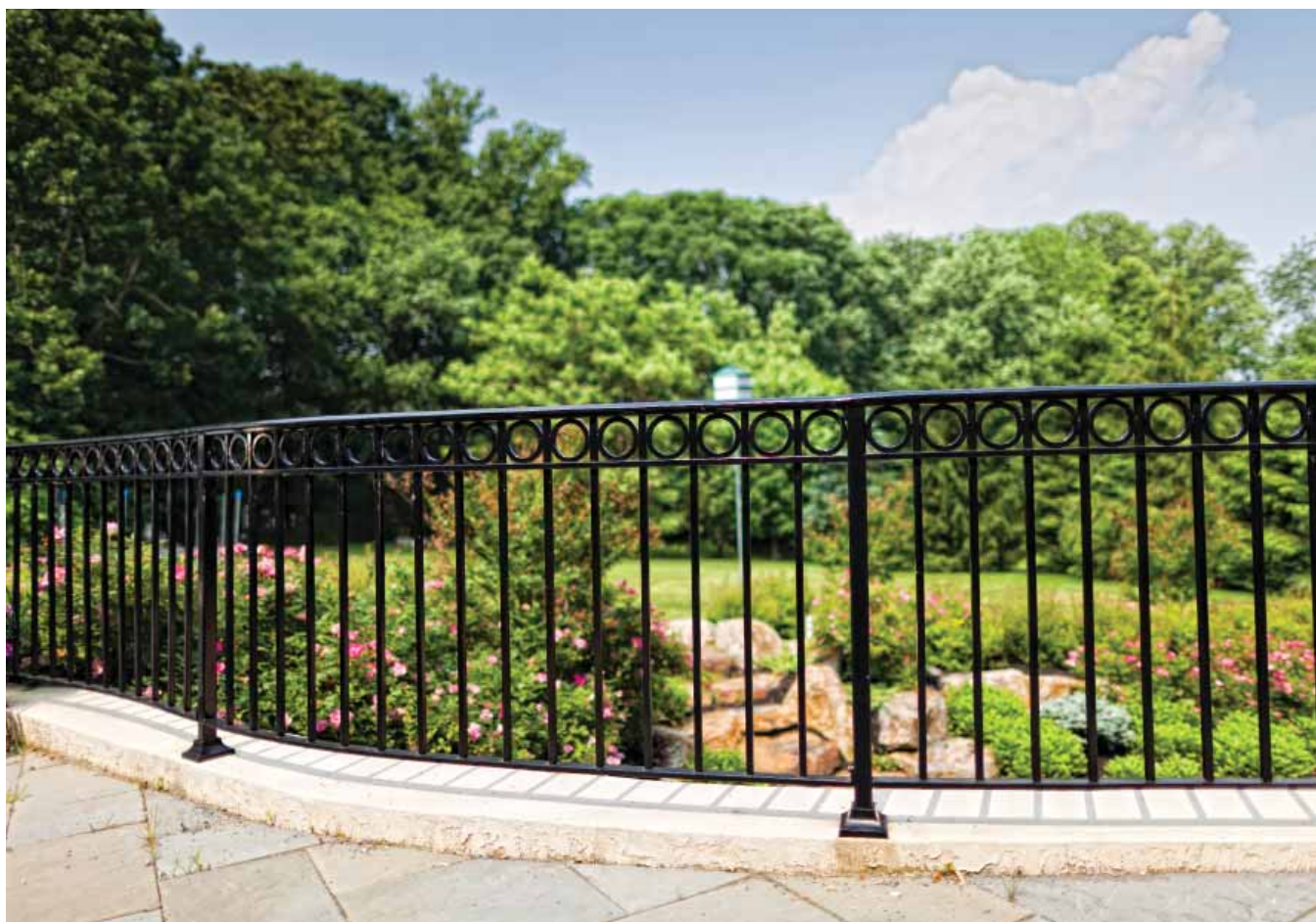


Solid aluminum Mainline Style railing in Bucks County, PA



Mainline railing in  
statuary bronze





Custom railing to match radius wall



Mainline railing on  
a radiused terrace





Statuary bronze adds a nice tone to the hewn beam setting



Custom railing to match the decor of a log home in Washington, NJ



Dual hammered texture gives this Mainline railing a rustic appeal



## Terrace Railing Design Ideas

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Custom railing for a beautiful entry on a back terrace



Various levels of terrace railings in Voorhees, NJ

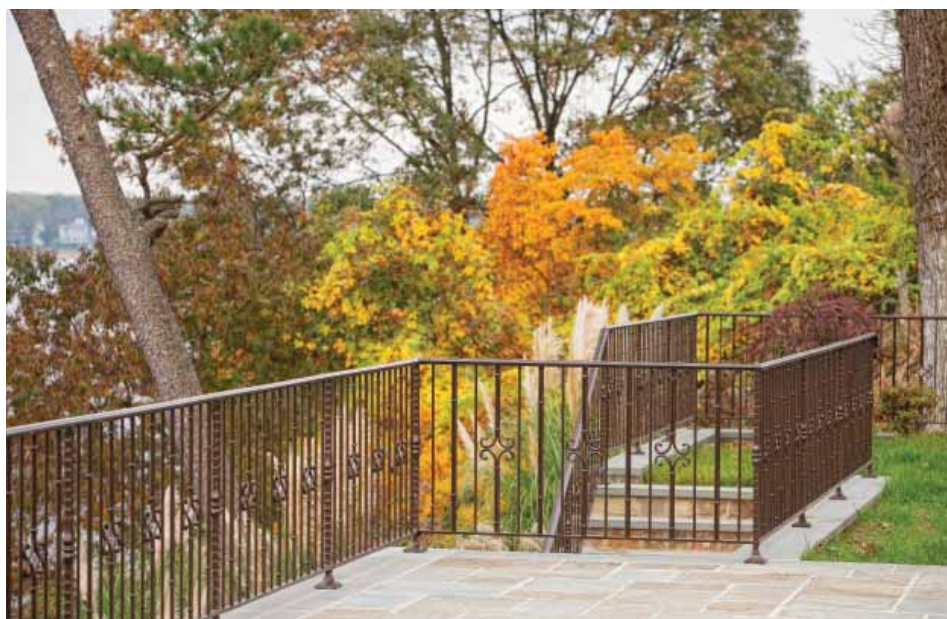


Forged scrollwork for elegance and panoramic views





Hand-forged aluminum railing on a bay front property



Terrace railings provide safety and aesthetics





Custom aluminum railing withstood Hurricane Sandy



Custom spiral stair matches terrace railing



Close-up of custom forged Belly railing



Solid aluminum railing with 6" Hampton posts

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Balconies have been the salt and pepper of architecture for centuries. Just as a chef uses spices to enhance the flavor of a dish, architects use balconies to enhance their work. Balconies are a reminder of relaxing and stress-free times, and they have inspired intimate conversation since Romeo and Juliet!

Balconies can still accommodate modern-day Romeos and Juliets—or the head of the house in search of a relaxing spot to unwind. They remain as relevant in today's architecture as they have ever been.

Current architectural vernacular uses "French" and "Juliet" balconies interchangeably, so we will attempt to explain the differences.

A French balcony is a railing mounted on an upper-story wall, usually in front of a window. The railing extends two to ten inches from the wall and has no floor to step onto. A French balcony simply gives the illusion of a small balcony as an extra architectural feature.

A Juliet balcony is a complete balcony attached to a structure. It has a floor and railing in a single package. Very careful consideration must go into engineering and mounting one of these because they are load-bearing structures. There are two main types of flooring available for these: an expanded metal "mesh" flooring, and a more old-world slatted floor.

A Romeo is a type of balcony that is naturally part of the main structure. It has the addition of a wrought iron railing along its outside edges—both to prevent falls and to aesthetically complete the architecture.



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# BALCONY CASE STUDY



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At the initial design meeting, the client desired a balcony railing that was more “feminine” in profile than standard balcony railings. She selected this design and we incorporated and executed the client’s vision. However, there were some serious code issues and metallurgy hurdles to overcome. Notice that the panels on the corners had to have the “feminine” profile vertically and be radiused horizontally to be fluid with the rest of the design. While one of our craftsmen grew his first grey hairs working on the project, the final product was revealed to our client’s thrilled surprise.



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Crafted in the USA

RAILING - 103

## Balcony Railing Design Ideas

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Porte-cochere balcony portrays transcending taste and style.



Forged aluminum balcony is indistinguishable





Mainline style French balcony in Villanova, PA



Solid aluminum railing on Juliet balcony in Chester County, PA



Custom railing with Roman Posts in  
Moorestown, NJ

Juliet balcony with Olde World  
Style floor in statuary bronze  
has timeless appeal



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Hampshire Belly railing on Romeo balcony in the Main Line Area



Terrace railing attachment to masonry



Custom iron railing for Romeo balcony in Wilmington, DE

Solid aluminum railing  
on Romeo balcony,  
Rumson Ave.





## Balcony Railing Design Ideas

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Close-up of hand-forged scrolls and rivets



Shoulder detail on Romeo railing in Paoli, PA



Custom style railing from an old wrought iron bridge in Philadelphia, PA





Tewksbury railing with rosette on Juliet balcony in Downingtown, PA

Custom iron mounting scroll





## Balcony Railing Design Ideas

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Manchester railing on Romeo balcony in Longport, NJ



Manchester railing creating a French balcony, Longport, NJ



Mesh Style Floor



Olde World Style Floor





Custom Romeo balcony railing matches window design



Initial "B" adds a personal touch to this Romeo balcony railing



## Balcony Railing Design Ideas

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Juliet balcony  
in Delaware

Solid aluminum Juliet  
balcony in Ocean City, NJ





Master bedroom terrace accentuated by forged aluminum railing.



Belly pickets provide visual dimension.

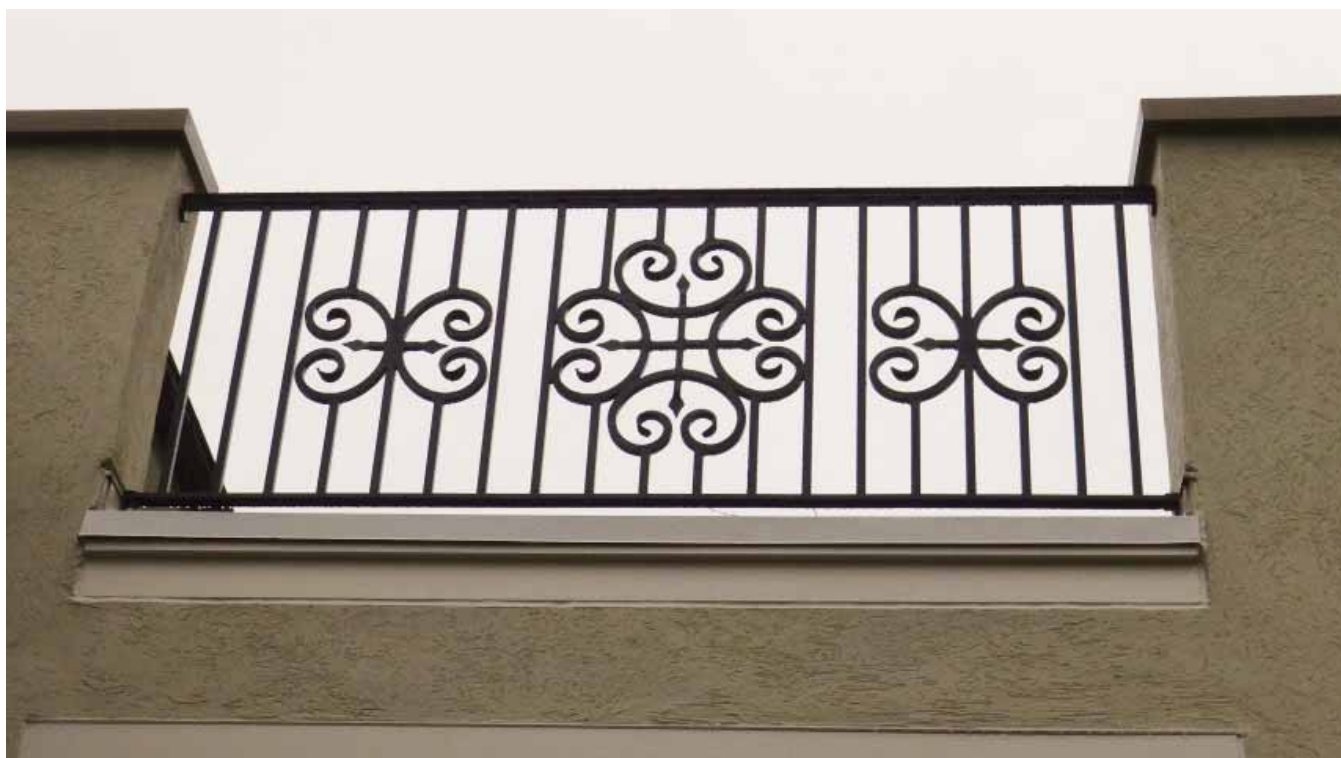




1901 Balcony was refurbished to share beauty for the next hundred years.



Refurbished railing intricacies show awesome attention to detail



Solid aluminum railing for terrace



Forged aluminum balcony railing design





Custom aluminum balcony



Brace detail for balcony and railing



Balcony railing in aircraft grade aluminum



French balcony railing with wide forged picket



# COMMERCIAL RAILINGS



ADA compliant railing in anodized aluminum

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Quality service and creativity is not limited to the high-end residential market. For the commercial or institutional project that insists on quality, Compass Ironworks can deliver. Be it a restaurant that needs a custom theme built into its railings, a conference center that needs custom gates for crowd control, or a golf course that wants golf balls at the top of each picket, Compass Ironworks will make your project flow as smoothly as possible. We also count schools, churches, and shopping malls among our delighted clientele.



Custom railing in the King of Prussia Mall



Mesh railing provides safety and ease of navigating stairs



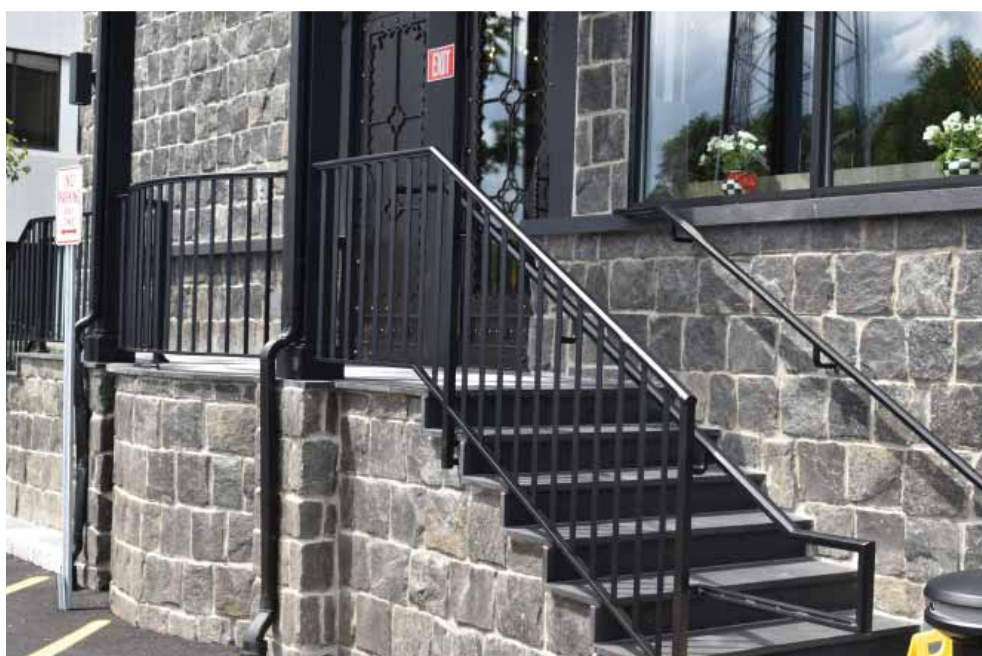
Left: Craftsmen fabricated a beautiful railing to last for decades.

Right: Fire tower railing that is contemporary and beautiful



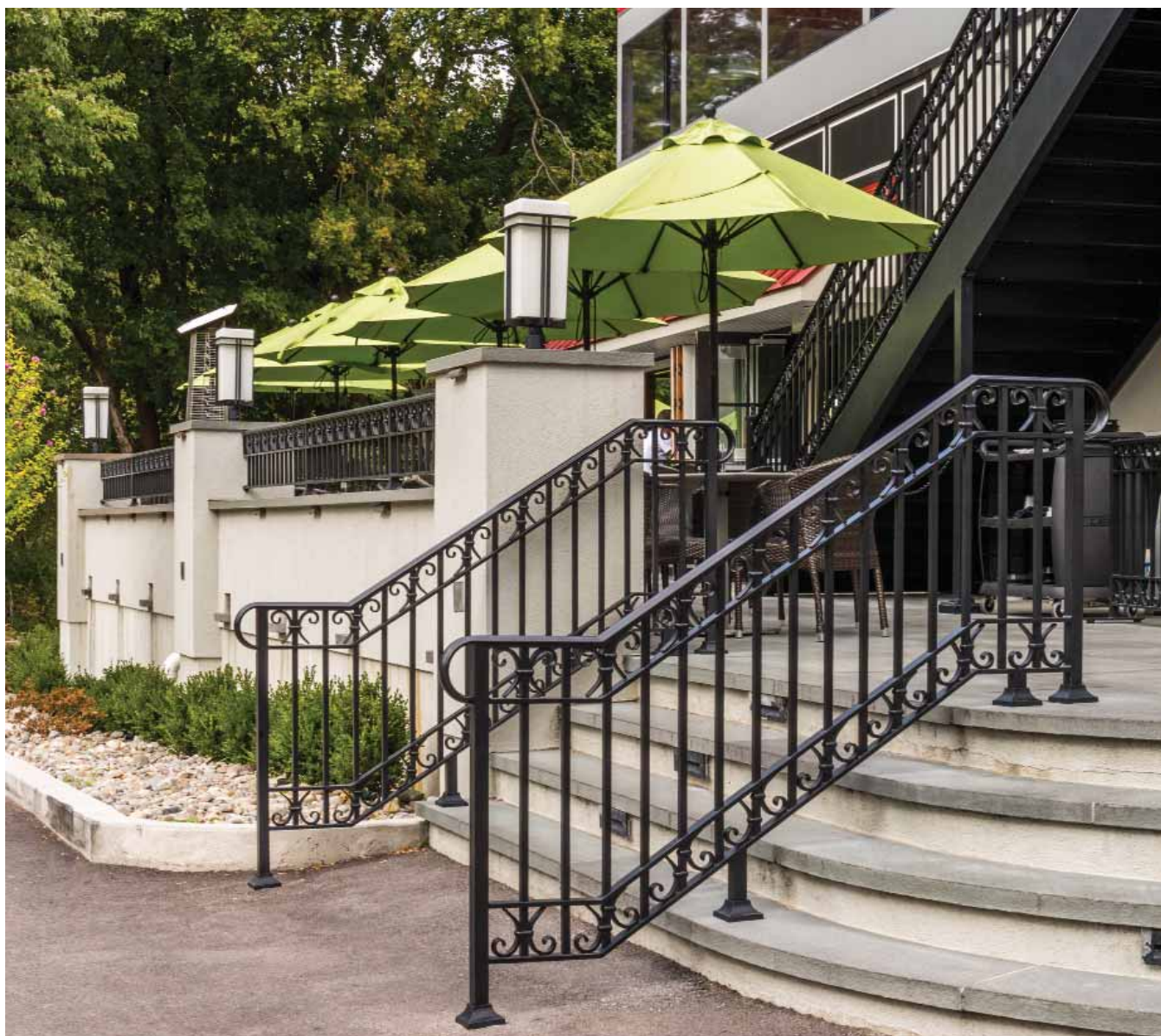


Beautiful classic railing design meets ADA compliance on this handicap ramp



Traditionally crafted stair railing meet commercial code and accentuate this beautiful diner





Top: Forged aluminum railing creates safety and ambiance for patrons of this upscale restaurant

Left: Rigid railing surrounds the stage of this lively bistro.





Multiple levels of forged railing create an intriguing backdrop



Fire pit railing provides safety and beauty



Contemporary railing with a privacy aspect





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## SECURITY DESIGN GUIDE





# SECURITY DESIGN GUIDE



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Elegance and Integrity

At Compass Ironworks, we carry into the 21st century the Amish traditions that forged our artistic sensibilities: honesty, integrity, and dedication to family, community, and craft. We do no mass production here; every installation reflects your unique needs. We are master craftsmen who work with both traditional and 21st century tools. At the end of the day, we close the doors and leave our tools at the shop, not to be touched until the next workday begins.

For more information about Compass Ironworks, please contact us Monday through Friday at (717) 442-4500.



*IN RECOGNITION of completion of all prescribed requirements  
and meeting the eligibility criteria as established by the  
Institute of Door Dealer Education and Accreditation Board of Directors:*

*Amos Glick*  
*Compass Iron Security*

*is hereby designated as an  
IDEA Certified Automated Gate Systems Designer,  
and is granted all privileges associated thereof.*

*Deborah Nagels*

Deborah Nagels, President  
on Behalf of the Board of Directors

*July 31, 2021*

Valid through above Date

## Certification

Not only does Compass Provide beautiful gates and ornamental security fence, they are also certified as CAGSD (Certified Automated Gate Systems Designer) and as such are uniquely qualified to produce gate systems compliant with MUTCD, ASTM F2200 and UL 325 standards.

This level of knowledge and expertise provides a higher level of safety and detail into multiple area of an automated gate system. There are many driveway gate installers that provide quick, cheap and easy automation systems, these can turn around to actually become a liability. Not only to the property owner, but also any designer or architect that may have been involved. If any injury or fatality occurs, a lawsuit is initiated, sometimes in the hundreds of millions of dollars! So, it is extremely important that latest safety standards are being followed.

These safety protocols affect specifying the correct operator, knowing safe opening/closing speed, and pressure setting. Plus correct sensors such as safety loops, photo eyes, even emergency response sensors, to name a few. Again, there are many aspects of automation that safety standards pertain to. Utilizing certified personnel is an excellent way to assure you have a safe gate operator system to protect you, your family and loved ones.



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The security segment of Compass Ironworks was created after seeing a few areas lacking in the marketplace servicing the affluent residential market. After working with a few high net worth properties, we noticed a few areas lacking where we felt we could provide product and services to fill the vacancy.

- Heavy duty driveway gate hinges were almost non-existent in the market place.
- The install of driveway gate openers and automation was often by a 3rd party, resulting in more demands from the client/builder to coordinate the various aspects of the 2 pieces together. Also, the opener installer usually welded, grinded, sanded unto the gate and post to mount his bracketry, damaging the otherwise great finish. This invited corrosion to start in those areas.
- The coordination/collaboration from gate craftsman/automation technician with clients/builder/security personnel was almost non-existent. This resulted in unhappy clients as there was constant dialogue after the install to trouble shoot to get the systems to sync together.
- Security fence it self was primarily available only as a pre-manufactured product with hollow pickets and minimum rigidity fence panels. This type of fence did little to meet the desires of discerning clientele that wanted something special to match the caliber of their specific property.



About 10 years ago we designed our first heavy duty gate hinge. With 50% more bearing capacity, twice that yoke thickness and onsite micro adjustment, we had our own centennial or 100 years hinge.

We attached these test gates to air cylinders and had them opening and closing constantly, 24/7, rain or shine, hot or cold to test out their durability in real time. We then tested gate hinges, simulating 1,000 lb., 10 ft swing.

We tested an industry standard hinge, our 100-year hinge, and an industry recommended phenolic bearing hinge.

- Phenolic hinge went – 108,000 cycles
- Industry Standard went – 150,000 cycles
- Our 100-year hinge went – 452,000

So, our custom-built hinge went 4 times over the industry recommended and 3 times over industry standard hinge.

But we weren't satisfied. We had gained some insights and we put them to use. We did some special machining to keep out water, debris and other elements. We then put these million-dollar hinge back to the test to see if we could achieve one million cycles! We were able to do 815,349 cycles, 5 times the industry standard gained more insights and are currently reviewing those to make even more improvements.





Ornate driveway gate design with gate openers

We became certified to design and install driveway gate openers which allowed us to design and build driveway gate opener brackets directly to the post and gate, which eliminated any onsite fabrication and kept the powder coat finish integrity intact. This also reduced hassle and coordination issues as they no longer had to relax information between 2 parties.

And we took it even further, pro-actively communicating with landscape architect, builder, landscape contractor, electrician, security company and client to make sure pre-install that all aspects were covered and the automation would interface seamlessly with security contacts, reporting platforms and smart home systems.

Our goal is to provide aesthetically pleasing, physical, perimeter security that is an attribute to the property's location, architecture and landscape and afford better peace of mind for the client, their family. This service can also benefit insurance companies knowing that burglars and safe crackers have formidable barrier to obstruct their evil intentions.

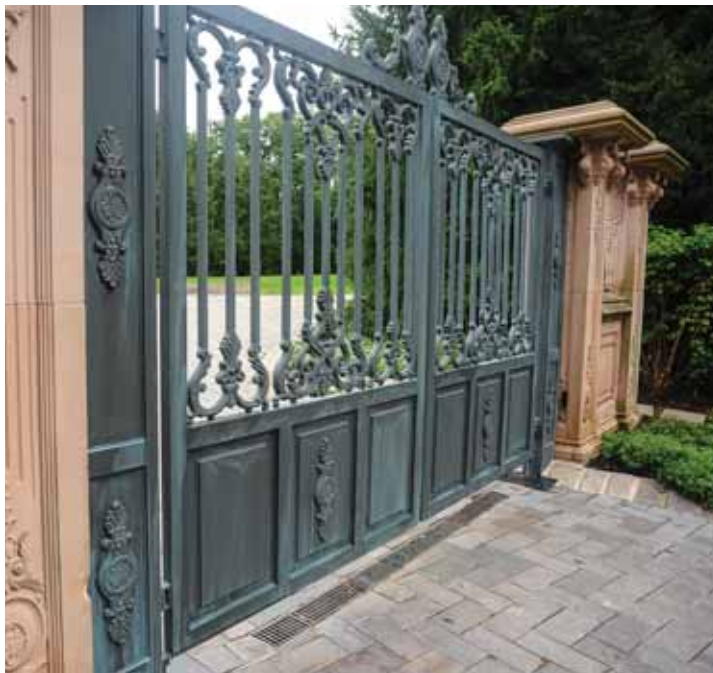
With our level of communication, coordination and collaboration the daunting task of picturesquely enclosing a property and have all access points integrate seamlessly into digital monitoring can be a lot less frightening and nightmarish.





Beautiful aged bronze finished gates

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Aluminum material with bronze-effect driveway gates and gate openers



Entrance leading to the estate with security gates closed



Emblem with gold detail





Forged fence atop a masonry wall creates a visual, but elegant, barrier for the front of the house



Initialized driveway gates





Beautiful front fence creates a private haven at a shore home



Custom property fence encloses a families shore retreat





Secure pool fencing



Wrought iron fence adds security to a pool area





Beautiful gate with gold highlights



Gold detail on baskets





Wrought iron fence and masonry wall provide aesthetic security



Pool security fence at the lake



Very elegant looking but rigid estate gate



Intricately designed but very rigid security gates





Beautiful gate with hidden automation

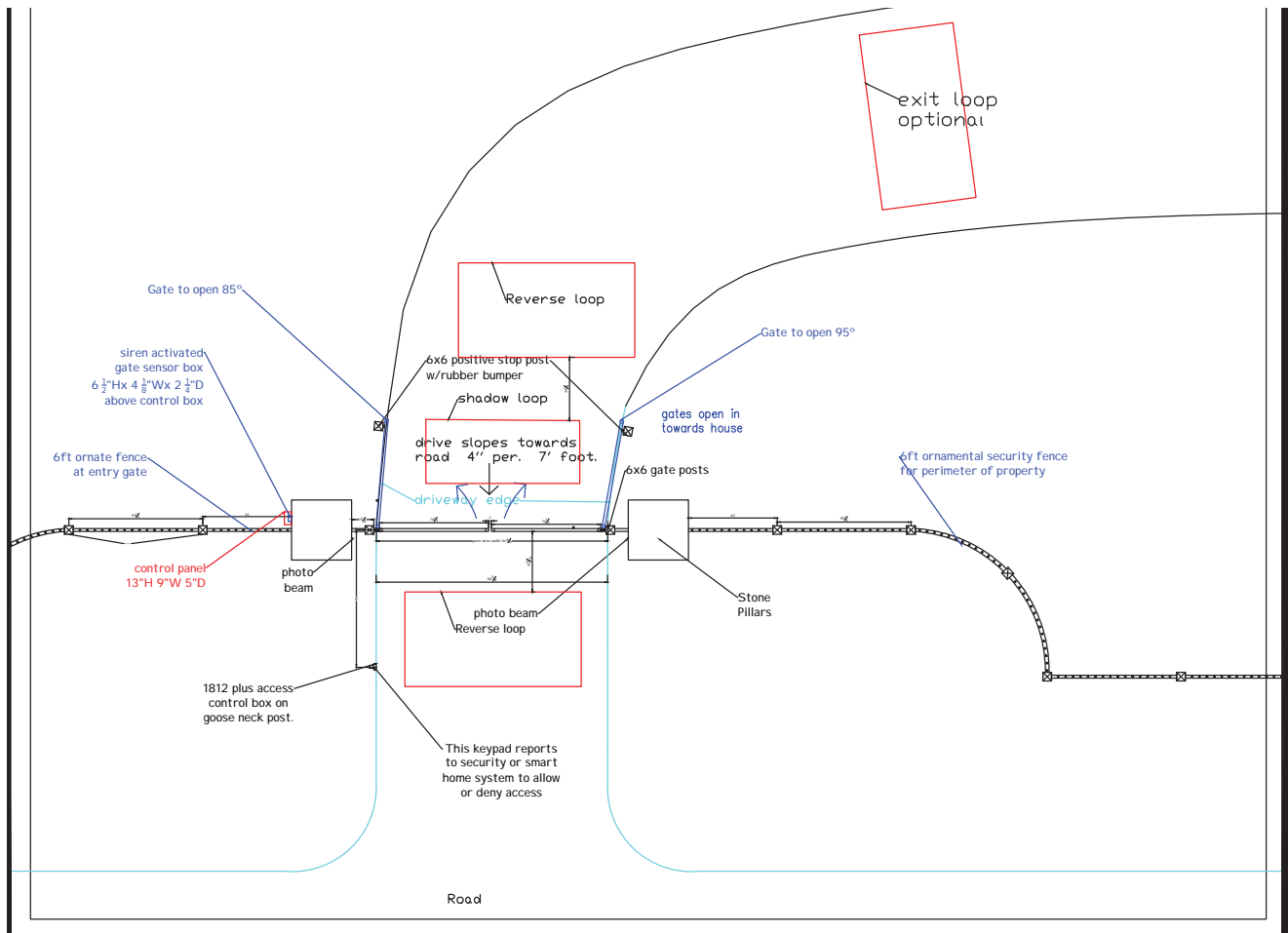


Detail rich  
pedestrian gate

# GATE CODE COMPLIANCE



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Typical plan view for automation install

For many, many years, driveway gates were attached to the center of big, square masonry pillars. When the gates opened back towards the pillar, this created a potential area of entrapment for children that were in that vicinity to get pinned between gate and pillar.

In the past decade, with lawsuits stemming from children getting injured in these entrapment areas, UL325 has declared those situations in violation of their safety standards.

The new safety standard requires either (A) that the gate hinge center is no more that 4" from edge of pillar or (B) there is 16" between pillar and gate when in the open position.

The downside with option A is that the gate is no longer centered on large masonry pillars and is no longer symmetrical visually.

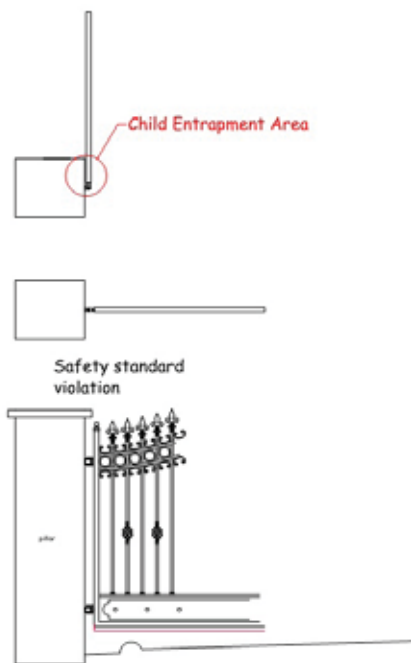
Option B can be done very creatively with either large decorative metal posts that pull from the same beautiful design elements as the gates, or short fence sections called "wings" that accentuate the gate design. Another added aspect of option B is that it provides a beautiful transition from masonry pillar to hinge post. Either way your beautiful driveway gate with automatic gate openers can fulfill UL325 codes fantastically and not be a safety hazard or menace to your friends and family.



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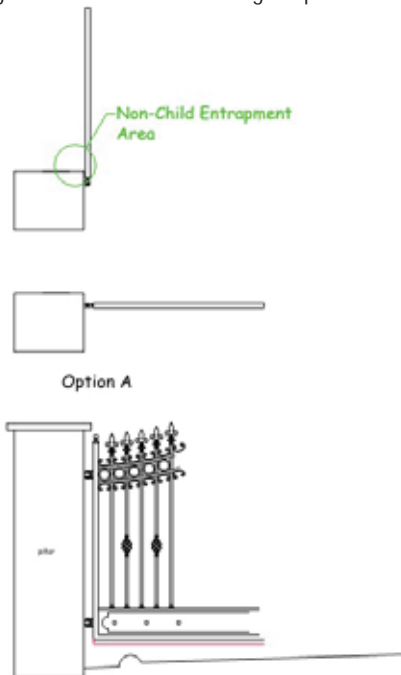


## INCORRECT GATE PLACEMENT



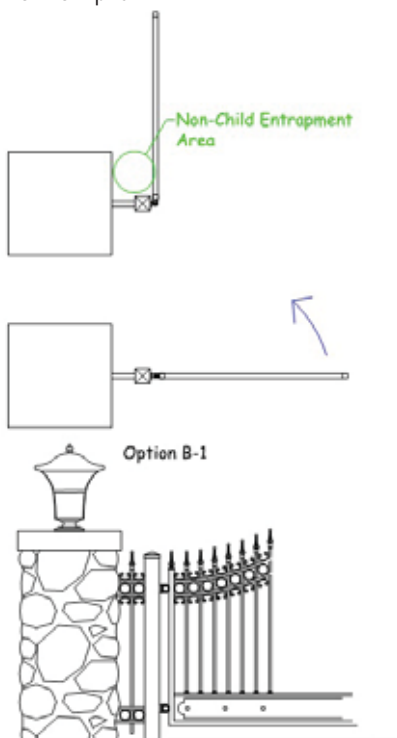
## OPTION A

Hinge center is 4" from back edge of pillar



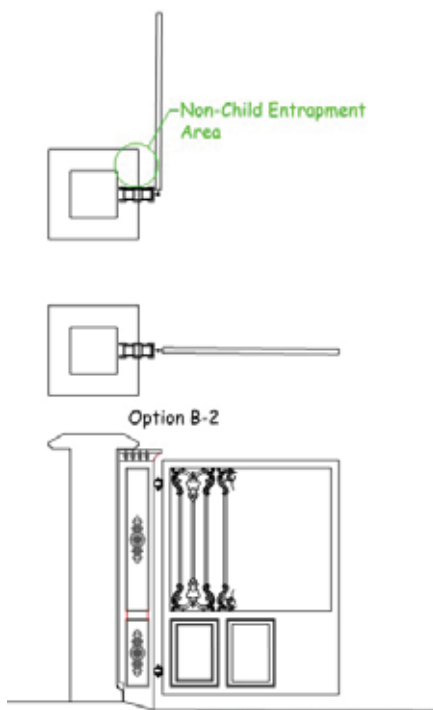
## OPTION B-1

Gates in the open position need to be 16" from pillar



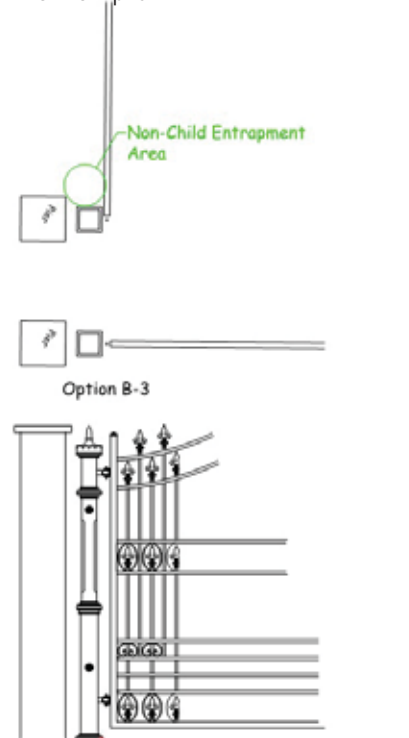
## OPTION B-2

Gates in the open position need to be 16" from pillar



## OPTION B-3

Gates in the open position need to be 16" from pillar



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# POSITIVE STOP



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Another exclusive feature from Compass is the mechanical positive stop built into every underground operator. Most driveway gate openers do not have a mechanical positive stop built in the unit. This creates a problem as gates can be partly closed, partly ajar, misaligned in the closed position which could create a security breach. Most gate fabricators addressed this void by mounting an adjustable stop unto the hinge post. This created an issue for 2 reasons:

#1 – It was unsightly, potential to get hit with a vehicle, made for maintenance hassle

#2 – Wrong location put undue strain and stress, which led to breaking the hinges, hinge post operator arm or gate frame, creating more maintenance hassle and downtime

The craftsmen here at Compass did some brainstorming and came up with a very effective and innovative solution, designing it within the confines of the operator box... It is very clean and aesthetic, hidden under the lid. And it is directly at the source of strain and stress, in the box itself. So, there are zero amounts of undue torque exerted unto hinges, hinge post, operator arm or gate frame. This is the ultimate in zero hassle for mechanical positive stops for driveway gate openers.

Note the concealed bar in the bottom right which has same color scheme. We take the attachment to the ultimate level by taking the time to recess the opener arm into the gate frame. This makes for a nice clean visual. This is standard procedure for all gates that are built by Compass.



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## Positive Stop

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Hidden gate arm inside post

Concealed Hinge and Concealed Arm to open and close gate. Driveway gate opener is unobtrusive and set into cobblestone driveway.



Hidden gate arm for automation

Note the concealed bar in the bottom right which has same color scheme. We take the attachment to the ultimate level by taking the time to recess the opener arm into the gate frame. This makes for a nice clean visual. This is standard procedure for all gates that are built by Compass.



Arched driveway gates compliment the rural setting of this private estate

Forged points  
on solid  
pickets deter  
climbability







Top: Beautiful oval design in front security fence

Bottom Left: forged aluminum scrollwork at bottom of beautiful security fence

Bottom Right: Custom created security fence





This rigid and resolute property fence perfectly follows the curve and the terrain of the property perimeter

8 Ft. High forged aluminum fence  
deters burglars and prowlers







Solid aluminum forged fence provide safety, security, privacy and beauty to this family's estate

The beauty of classic fence design accentuates the natural landscape beauty







Beautifully designed gate with custom flares



Camera at the call box reporting to the smart home system inside the home





Beautiful transition from stone to fence



Chamfer top  
of picket on  
security fence



Custom forged iron gates combine security and beauty



Tesla gate opener





Wifi predator keypad on left relays to cellular device anywhere in the world



Gate opener on phone



Safety and security are provided by this authentic wrought iron fence design

Keyless personnel  
access gate







Electronic strike on personnel gate allows clients to open small gates remotely, yet have the confidence of stopping intruders



Iron estate gates  
provide privacy  
safety and security



The construction of an estate gate install



Vehicle pulling  
into the gate  
call button





Refurbishing authentic wrought iron gates brings original character to this estate renovation







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## SHORE DESIGN GUIDE





# SHORE DESIGN GUIDE



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# OCEANFRONT CASE STUDY



Close-up detail of custom belly picket



Custom aluminum Nantucket post

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A client was building a shore home on Absecon Island. The couple and the designer agreed on the same railing design, however, the homeowner wanted a belly railing for added visual dimension. The designer felt that the standard 8" belly style clashed with the overall aesthetics of the house; he wanted to use straight pickets. The solution we provided was a subtle 3" belly that added the elegance the client desired, yet did not break the harmony in design.

We created the picket, starting with a plain square bar, giving it the hammered texture, custom machining the collars, and then slipping them over the picket. After that process, custom forging dies and belly dies were made. The entire picket was then put into the forge and heated to forging temperature. First the pickets were forged out and then the belly design was created.

The architect specified a Nantucket style post, but the client and the designer did not want wood or vinyl. We used raw aluminum extrusions to create the desired post structure and then capped it with a custom marine-grade casting.

The final challenge was to get a powder-coat that withstood the elements and was in alignment with the color scheme. Standard colors were either too dark or too light. We provided the solution of custom blending powder to match the client's color preference.





## Oceanfront Case Study

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Belly railing and Nantucket posts overlook the beach



Custom spiral stair matches terrace railing

# BEACH HOUSE CASE STUDY



The request was for a distinctive railing and fence that provided class and elegance without obstructing views of the ocean. The ocean held another challenge of salt spray; the project had to withstand the elements of the waterfront. The fence had to meet all building codes and provide security. The designer wanted a custom design incorporated into the gates, fences and railings. And the entire project was on a tight time line in order to get a CO and allow the client to host a special event.

All code requirements were evaluated so that the special design did not violate any requirements. The custom design was then approved by the designer for fabrication. Solid aluminum was used throughout and custom pieces were designed and fabricated. The lab tested, super-durable powder-coat finish was applied. The tight deadline was further strained when an onsite miscommunication was discovered at installation, requiring additional fabrication. But the entire Compass Ironworks team pulled together and made things happen. The project was completed in time for the CO for the client's scheduled event.



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## “Breakthrough” in metal finish technology shrugs off harsh salt spray conditions on waterfront homes....



The top piece was finished with the Compass Ironworks method, the bottom piece was coated using an industry standard method. See the difference?! Note that on the top piece the powder-coat was even cut to the substrate before the piece was put into the salt-spray chamber and there is still no delamination of the finish.

Waterfront homes are for enjoyment and relaxation, right? But ask anybody who owns one: the upkeep and maintenance can be anything but relaxing. The harsh salt spray environment corrodes and deteriorates everything that remains exposed. Over the years, builders have struggled and experimented with various aspects of this problem. Many solutions have been promoted, like using vinyl products, and other man-made materials that resist the weathering process. But homeowners who wanted wrought iron on their homes faced a dismal future of constant painting and maintenance to combat rust and corrosion.

Waterfront homeowners wanted the home enhancement and timeless classic appeal provided by wrought iron. But the investment was not sound if they had to constantly maintain it while trying to relax on vacation. It became the accepted norm that wrought iron and waterfront homes don't mix.

All this was very frustrating to us folks at Compass Ironworks, so we set out to find a solid solution.

First we took a hard look at all the solutions tried so far. We also interviewed industry experts to find out why they didn't work.

Along the way we even went to the extra expense of finishing 13 “test” pieces of aluminum and steel, each with a different finish/method or combination of finishes/methods and sent them to a lab where they were subjected to a brutal environmental test known as ASTM B-117 (a salt-fog chamber) for 2750 hours! According to the Architectural Products Manager at Tiger Drylac, this test is similar to 15 years of actual elements.

The results were an amazing eye-opener, giving us a first-hand look at what works best and how we can implement that in our finishing program.

The first change was to eliminate paint in exchange for a “baked on” epoxy powder-coat. This fixed the flaking and peeling problem of paint, but also presented its own problem: the application which is more difficult than paint.



Diagram of a Compass Ironworks Resilient Powder-Coat Finish cut to substrate that withstood 2750 hours in a Salt-Spray chamber test without delamination.



Then we switched metals from iron to aluminum. Since aluminum is rust free, that fixed the rust problem. But, as shown in our tests, aluminum will still corrode if it's not properly coated.

For quality control, we moved from outsourcing our coating process, to an in-house system where we can manage every detail.

Then we focused on surface preparation of the metal... All aluminum pieces are first sandblasted to remove all mill scale, dirt, grease and welding residue and then washed in a hot water chemical bath and double rinsed to make cleanliness an absolute certainty.

In addition, an etching and sealing chemical is then applied to promote adhesion of the surface coating.

Actual coating starts with a first coat of zinc-free primer, and a pass through the curing oven. Then, while the pieces are still hot, a second finish coat is applied. A super-durable powder-coat, specially formulated for coastal areas, is used. Spraying while hot is the "key" to total coverage of all corners, nooks and crannies with forged scrolls, etc.

Finally a third pass through the spray chamber for another finish coat and a long slow passage through the curing oven to cure and harden.

The result is a finished product that will provide decades of maintenance-free beauty.

The bottom line lesson here is that a step-by-step, no cutting corners policy, combined with modern technological advancements, is the breakthrough we were seeking. You can now buy with confidence, knowing that Compass Ironworks is the leader in finish integrity.

Don't just take our word for it. Our clients are our friends and they will be happy to tell you how much their Compass Ironworks creations mean to them. Call today to arrange a meeting for your project and see for yourself!







In the interest of continuous improvement so that we could be assured of providing our clients with the best value possible. We built this salt spray chamber to ASTM B-117 standards at 5% salinity, as compared to ocean water which is 3.5-3.9% salinity. We also added UV exposure and variable temperate to really test the pretreatment and finish.

Online sources equate 100 hours of salt spray to 1 year of beach life, we felt that is too lenient, so we have factored 200 hours to equate to 1 year of beach life. We currently have 8,000 hours of data, which is equivalent to 40 years at the beach!



Our results have reinforced what we had already known; sandblasting is absolutely crucial. Test pieces with no blast flaked off at 1091 hours vs. a comparable piece with blast is still holding up at 8228 hours. We also verified the importance of the robust 3 coat system that we utilize. A single coat of powder has microscopic pores throughout it, which allows moisture to seep through and compromise the finish. Having the second coat greatly reduces this as these microscopic holes align very rarely. However, adding a 3rd layer of powder completely eliminates that problem. In the tests, a single coat test piece failed at 1861 hours. We also confirmed the validity of using the more expensive marine grade castings. Industry standard aluminum castings are poured with a mixture of copper, zinc and aluminum, this mixture has a lower melting point

and is significantly more cost effective, however, when exposed to the ocean air, these metals have a galvanic reaction similar to a car battery terminal. By removing the copper and zinc and alloying the aluminum with magnesium, we achieve castings that are impervious to the salt air elements. Coincidentally this alloy is also used by the U.S. Navy. In the salt spray chamber, the industry standard piece failed at 2103 hours, versus the Marine Grade aluminum piece being pristine after 8228 hours. In addition to confirming our knowledge this test chamber has also given us insight into possible improvements that we can incorporate into our pretreatment and finish process.

| Hours:   | Hour        | 257 | 362 | 485 | 641 | 812 | 1232 | 1517 | 1776 | 2001 | 2259 | 2484 | 2730 | 2990 | 3236 | 3499 | 3816 | 4079 | 4379 | 4591 | 4830 | 5060 | 5301 | 5567 |
|--|-------------|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Name:  | Rate at hr: |     |     |     |     |     |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 1 Sandblast Primer 2 Top coats                     | 141         | 10  | 10  | 10  | 10  | 10  | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   |
| 2 Sandblast Wash Sealer Primer 2 top coats         | 141         | 10  | 10  | 10  | 10  | 10  | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   |
| 3 Sandblast Wash Prime 1 top coat                  | 141         | 10  | 10  | 10  | 10  | 10  | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   |
| 4 Pickle+channel Sandblast Wash Prime 2 coats      | 141         | 10  | 10  | 10  | 10  | 10  | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   |
| 5 Dugan Sandblast Prime 2 top coats                | 141         | 10  | 10  | 10  | 10  | 10  | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   |
| 6 Dugan Sandblast Wash Prime 2 top coats           | 141         | 10  | 10  | 10  | 10  | 10  | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   |
| 7 Uncoated Sandblast Wash Prime 2 top coats        | 141         | 10  | 10  | 10  | 10  | 10  | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   |
| 8 Sandblast Wash Prime 2 top coats                 | 141         | 10  | 10  | 10  | 10  | 10  | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   |
| 9 Sandblast Wash Prime 2 top coats                 | 141         | 10  | 10  | 10  | 10  | 10  | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   |
| 10 Sandblast Wash Prime 2 top coats no scotchbrite | 141         | 10  | 10  | 10  | 10  | 10  | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   |
| 11 Sandblast Wash Prime 2 top coats scotchbrite    | 141         | 10  | 10  | 10  | 10  | 10  | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   |
| 12 Line Dragon Sandblast Wash Prime 2 top coats    | 141         | 10  | 10  | 10  | 10  | 10  | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   |
| 13 Wash Primer 2 Top coats                         | 141         | 10  | 10  | 10  | 10  | 10  | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   |
| 14 Primer 2 top coats                              | 141         | 10  | 10  | 10  | 10  | 10  | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   |
| 15 Sandblast Wash 1 Top coat                       | 141         | 10  | 10  | 10  | 10  | 10  | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   |
| 16 Al Stevens Sandblast Wash Original Prime 2 coat | 141         | 10  | 10  | 10  | 10  | 10  | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   |
| 17 Al Stevens Sandblast Wash Prime 2 coat no notch | 141         | 10  | 10  | 10  | 10  | 10  | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   |



# AN INTRODUCTION



Please use this guide as a tool for selecting the design, style and finish that best suits your property, lifestyle and needs. Most of the work we do for our clients is custom. Should you have an idea that is not in this guide, we will work together to custom craft the appropriate design for your property. Things to consider prior to our next meeting: Design, finish, details and your ideas.

## The Craftsmen

The craftsmen at Compass Ironworks are experienced craftsmen from Lancaster County, dedicated to creating works of art out of metal elements. Every craftsman works directly with the client, architect or designer to make sure the client's vision is captured for the project. And at the end of the project, another person has become a satisfied client.

These craftsmen can provide guidance through the entire process. Starting at the inspiration stage, they can provide various examples of past work. If you need a custom design, they can provide design drawings for a small fee, then assist you in the design phase. The following stage would be a pre-fabrication meeting for the design stage, to evaluate all structural, anchoring and code requirements involved, making sure all bases are covered. Then comes the crucial step of actually crafting the project, which is commenced by many onsite measurements and sometimes even building templates. The actual forging, welding and fabrication is followed by extensive clean-up. Next is the in-house pretreatment and the baked-on powder-coat finish. Finally the entire delivery and installation is coordinated and managed by the craftsman that built the project, which makes for a smoother transaction.

## The Material

Classic wrought iron has been the choice material to express the taste and character of elegant homes for hundreds of years. Many beautiful homes reside on waterfront properties, though. These homes are exposed to harsh weather conditions, especially from the salty atmosphere, which causes the wrought iron element to corrode.

The ingenious craftsmen at Compass Ironworks have developed a solution to this challenge, keeping the classic beauty of the wrought iron look and feel intact. Using solid welded aluminum and special coatings, Compass Ironworks is able to craft one-of-a-kind, customized works of art for beautiful, maintenance-free, lasting impressions. The final product—whether gates, railings, fences or décor—handcrafted from solid aluminum, exude the same classic elegance of welded wrought iron, without the danger of rusting. The refinement of the material and design, coupled with the durability of the metal transcends time and creates stunning enhancements on today's exquisite homes.

# THE WATERFRONT HOMES



For centuries, waterfront living has provided access to breathtaking views of the sea with its white-capped waves and glistening surfaces. Waterfront properties, although beautiful, are often high maintenance. So how does a waterfront homeowner add to the beauty and functionality of their home without added upkeep? Compass Ironworks is committed to using the earth's elements to make these waterfront homes as beautiful as their natural surroundings.

And to keep them attractive and safe for decades to come, they craft their works of art out of aluminum that never rusts. Even when the salty mist from the ocean laps at your outdoor railings, gates, fences or aesthetic décor, you can be assured that their product will withstand the elements of the harsh sea air. Compass Ironworks wants their clients' homes to reach their full, stunning potential with beautiful, handcrafted décor that will withstand the test of time.



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# RAILING OPTIONS



Fairweather

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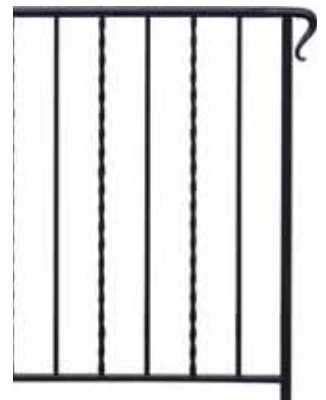
Cheshire Belly



Cheshire Belly (side view)



Cheshire Straight



Gladwyne

## Railing Options

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Hampshire Belly



Hampshire Belly (side view)



Hampshire Straight



Hammered Basket



Huntingdon Belly



Huntingdon Belly  
(side view)



Manchester Belly



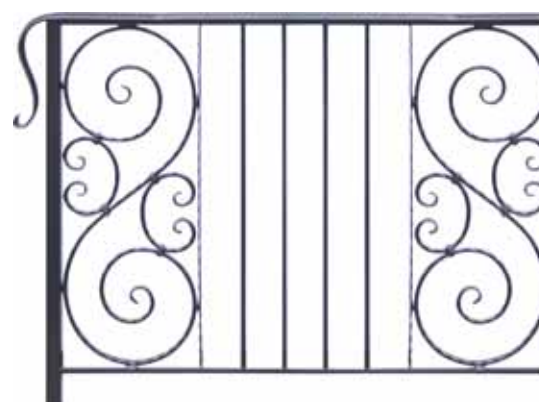
Manchester Straight



Standard 3-Rail



Standard 4-Rail



Sussex



## Railing Options

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Tewksbury Straight



Tewksbury Belly



Tewksbury Belly  
(side view)



Mainline

## Caprail Transition Choices



Lamb's Tongue



Volute



Petite Lamb's Tongue

# YARD FENCES



Custom swimming pool fence makes a subtle statement by blending into the environment

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Bryn Mawr



Mainline with Rigibar



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Stafford with knuckles



Stafford with Rings



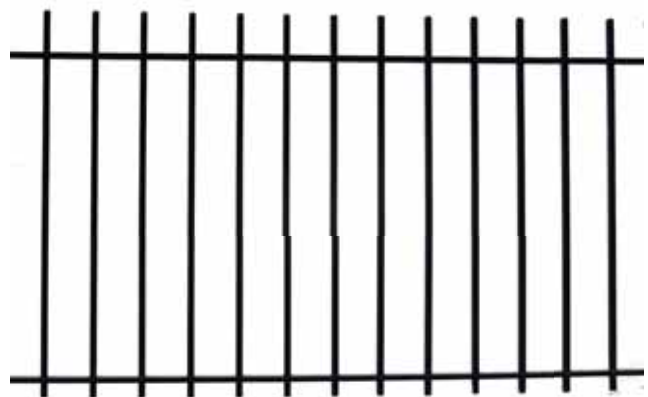
Devonshire



Saratoga 3 Rail with Rigibar



Saratoga with Rigibar



Saratoga with Classic Pickets

# SECURITY FENCES

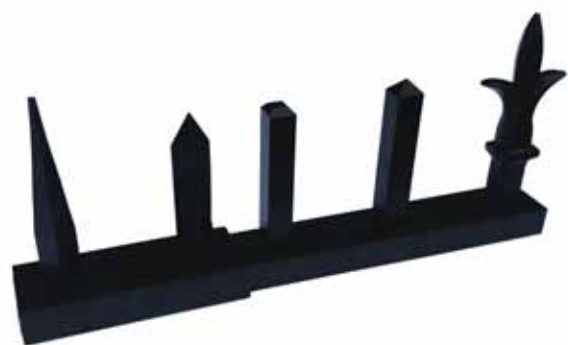


Villanova fence provides security for a private estate

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Detail of Privacy Fence Top (The top portion can be your choice of style to fit your taste)



Finials



## Security Fences

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These fences are swimming pool code compliant



Stafford with Rings in Solid Aluminum, 5/8" Pickets



Rumson in Solid Aluminum, 3/4" Pickets



Mainline in Solid Aluminum, 5/8" Pickets



Villanova 6 Ft high in Solid Aluminum, 1" Solid Pickets



Manhasset Privacy Fence



Close-up of time tested panel and post connection detail



Montauk

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Red Bank with Beverly Column



Palisades



## Estate Gates

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Mahwah



Allendale



Orange



Vail



Neshanic



Chester

## Estate Gates

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Buena



Rumson



Bayshore



Mainline



Pine Beach



Roselle Park



# GARDEN & POOL GATES



Canterbury

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Bryn Mawr



Villa



Bayside

# POSTS



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Beverly Column



10" Hampton Post  
with Base Detail



Linden Post



Hampton Post



Acanthus



# FINISHES AND TEXTURES



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By embracing the visual dimension of textures on Ironworks, you can really elevate the character and expression on your project. It gives you the ability to portray design sensitivities and take your project from ordinary to extraordinary.

For instance the Chiseled Center replicates blacksmith hand-hammering with a chisel, creating line in the picket for authenticity, and if you combine another texture as well, you really get the hand-hammered look.

To add even more visual character, if you add a twist to this picket you really transform a standard picket into a 3-dimensional visual experience.

Left: A great example of how twisting transforms the visual experience



#1 Chiseled Center

#2 Chiseled Center in Wood Grain

#3 Wood Grain

#4 Chiseled Center in Italiano

#5 Italiano





#6 Chisel Line  
with Surface  
Hammering

#7 Surface  
Hammered

#8 Chisel Line  
on Tuileres

#9 Tuileres with  
Italiano

#10 Tuileres



#12 Chisel Line  
on Cadiz

#13 Cadiz

#15 Cadiz and  
Italiano





#16 Chiseled  
Center on  
Chatsworth

#17 Chatsworth

#18 Chiseled  
Center on  
Chatsworth  
& Cadiz

#19 Chatsworth,  
Cadiz and  
Italiano

#20 Chiseled  
Center, Cadiz  
and Italiano



#21 Chiseled Center  
and Hammered  
Corners

#22 Hammered  
Corners

#23 Chiseled Center  
and Flat Corners

#24 Flat Corners



Hurricane resistant railings are the perfect fit for this well built shore property.

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Traditional blacksmithing techniques provided in aircraft grade aluminum.





Terrace railings and posts have a cohesive effect on this shore home.

Beautiful railing  
overlooks bay waters





Beautiful entry way with radiused railing for visual optimization.



Detail of forged medallions.



Solid aluminum provides classic rigidity without obstructing the views of the pool.





Entire house has beautiful belly style railings

Three floors of custom railing accentuate the architecture of this shore home



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Modern railing style provides safety for this dockside terrace.



Solid aluminum is indistinguishable from Iron, yet withstands the elements.





Panoramic view of 3 levels of curved terraces.



The Manchester style railing adds excellent design taste.



Center icon adds personality without violating building codes.



Aircraft Grade aluminum railing in statuary bronze.



Shore home gets phenomenal facelift with the inclusion of custom railing.





A shore home with pool code compliant security fence, plus beautiful balcony railings.



Hand forged railing provides beauty to this bayside stair.



Marine Grade castings are a great way to integrate post character without jeopardizing our planet's resources.





Panoramic view of a spectacular shore home.

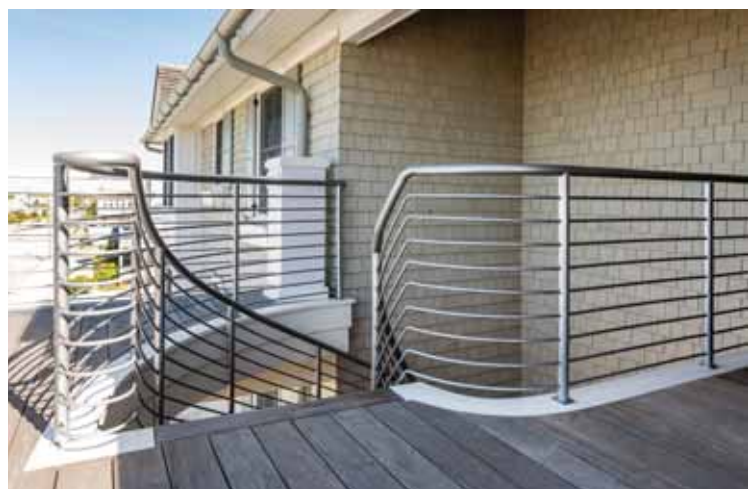
Ipe deck and  
Statuary Bronze  
railing have a  
tranquil and  
cohesive effect.





2 Levels of suspended radial stairs

Contemporary stair railing has graceful level to stair transition



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Contemporary railing design for front stairs on water front home



Contemporary solid aluminum railings

Bronze metal railing and terrace railing accentuate a beautiful pool area





Powder-coated solid aircraft grade aluminum pool fence

Bronze handrail and front wall grill design in a geometric layout







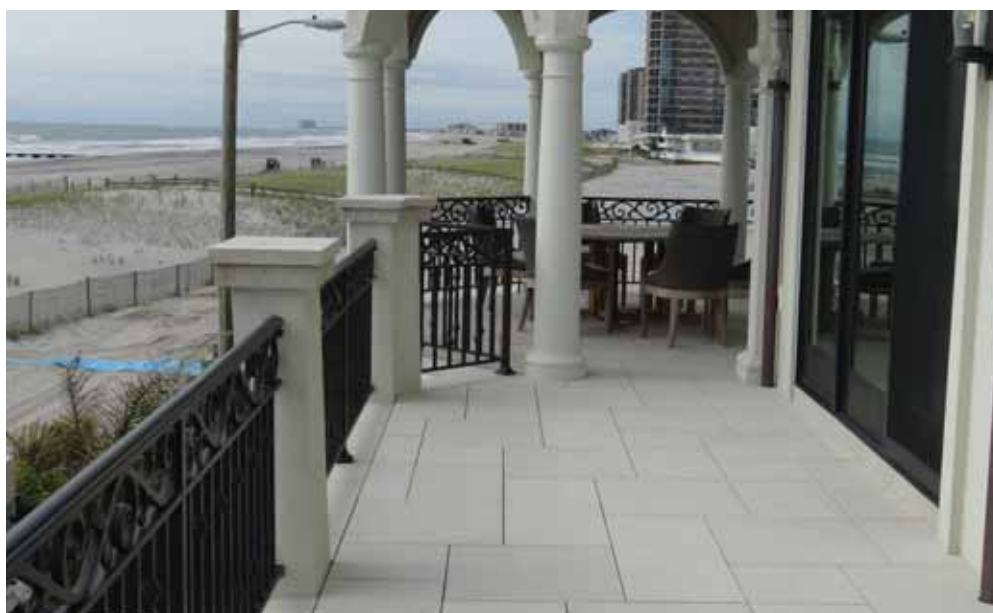
Beautiful solid bronze grills add beauty to the landscape



Solid bronze handrails meets code for stair railing



Flared stair railings add beauty to the surroundings of this exterior stair



Awesome terrace railing using special components for the shore environment





Forged aluminum  
pool gate

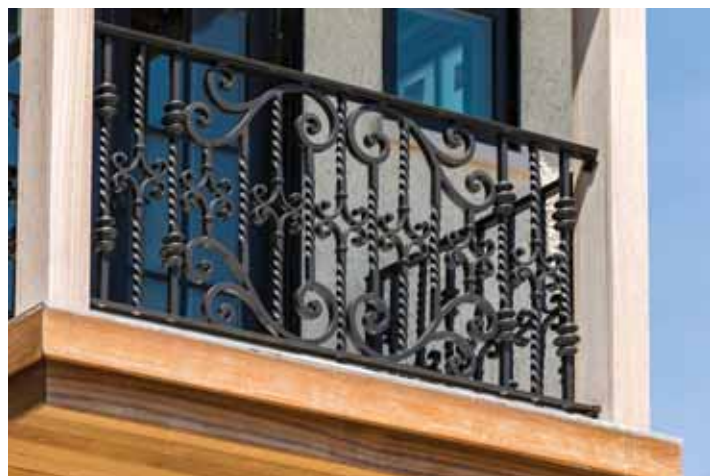


Forged exterior  
aluminum railing

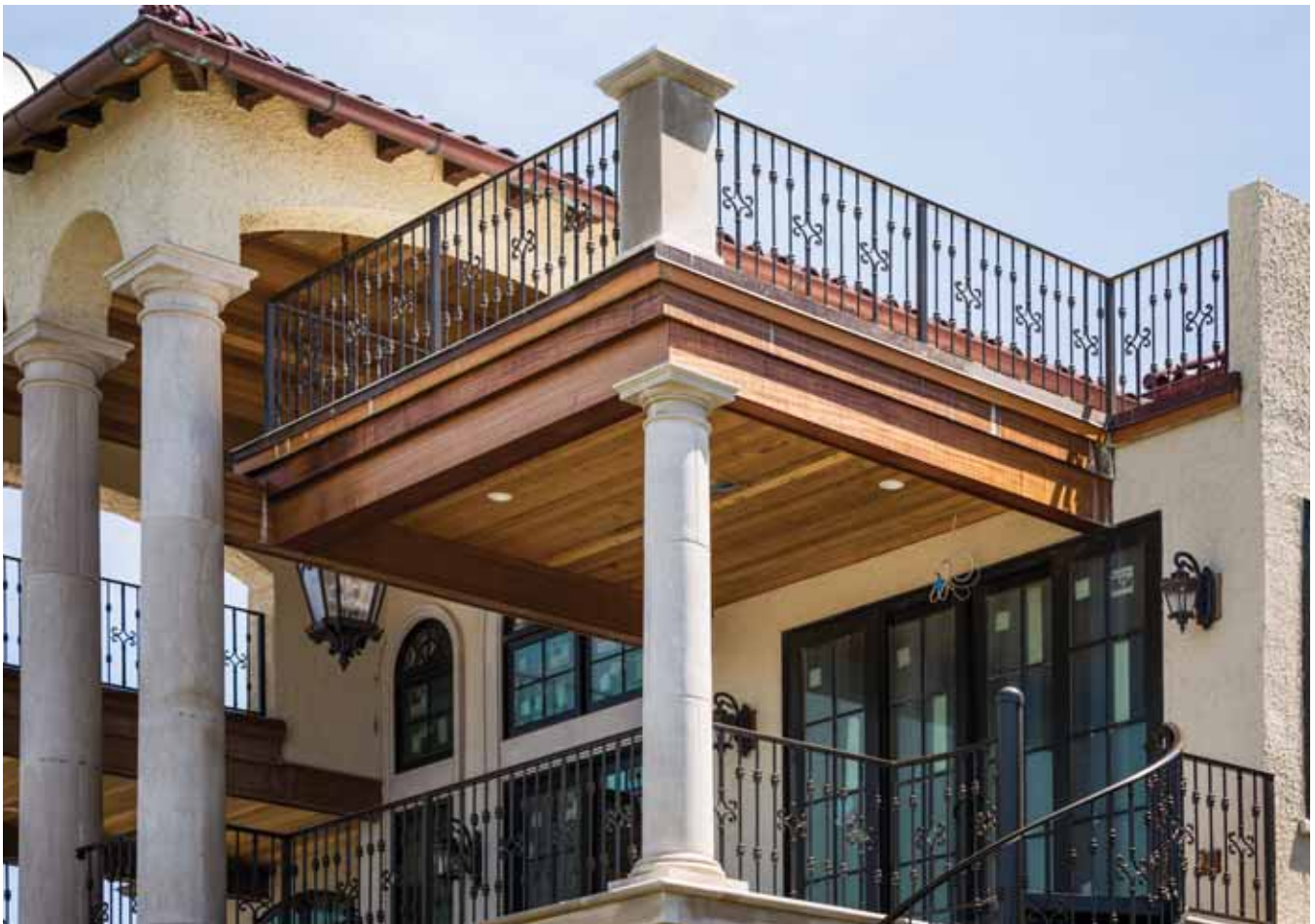


Sweeping exterior staircase railing on a shore home

Solid aircraft grade  
forged aluminum  
balcony railing







Multiple levels of terrace railings for panoramic views



Terrace railings overlooking the bay



Spiral stairs with custom railing to match all terraces



Custom railing anchored into brick will provide rigidity, safety, and beauty for years to come.





Transcending  
spiral stair on  
shore home



Uniquely designed  
treads add design  
interest and anti-  
slippage effect







# COMPASS

## IRONWORKS



## STAIR DESIGN GUIDE





# STAIR DESIGN GUIDE



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Elegance and Integrity

At Compass Ironworks, we carry into the 21st century the Amish traditions that forged our artistic sensibilities: honesty, integrity, and dedication to family, community, and craft. We do no mass production here; every installation reflects your unique needs. We are master craftsmen who work with both traditional and 21st century tools. At the end of the day, we close the doors and leave our tools at the shop, not to be touched until the next workday begins.

For more information about Compass Ironworks, please contact us Monday through Friday at (717) 442-4500.



In a home with multiple levels, stairs provide access to those multiple floors. They can be floating stairs, glass staircase, contemporary spiral staircase or traditional curved stairs, the options on endless.

However, there is a huge surge of interest in specifying structural steel stairs and utilizing a variety of materials to showcase the interior designer, architect or clients own sophisticated design statement. Masonry, bronze, reclaimed, glass, stainless, wood and Iron materials. These materials are being utilized in all aspects of the stairs, treads, risers railing and handrail.

What used to be a given, install a traditional stair, has now turned into a phenomenal design opportunity for designers, selecting their design forte of contemporary, traditional, rustic, modern, eclectic or reclaimed to make their wow factor in design uniquely theirs.

Our expertise is not traditional wood stairs, wood treads and wood railings, but uniquely designed and engineered metal stringers, incorporating suspended treads, glass railing and contemporary railing profiles for the latest in design and the best in stair value.

## The Craftsmen

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# STAIR DESIGN IDEAS



Floating stairs with masonry treads for a shore home

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Curved stairs inside an old silo to provide to upscale dining in a renovated barn



Two flights of glass stairs

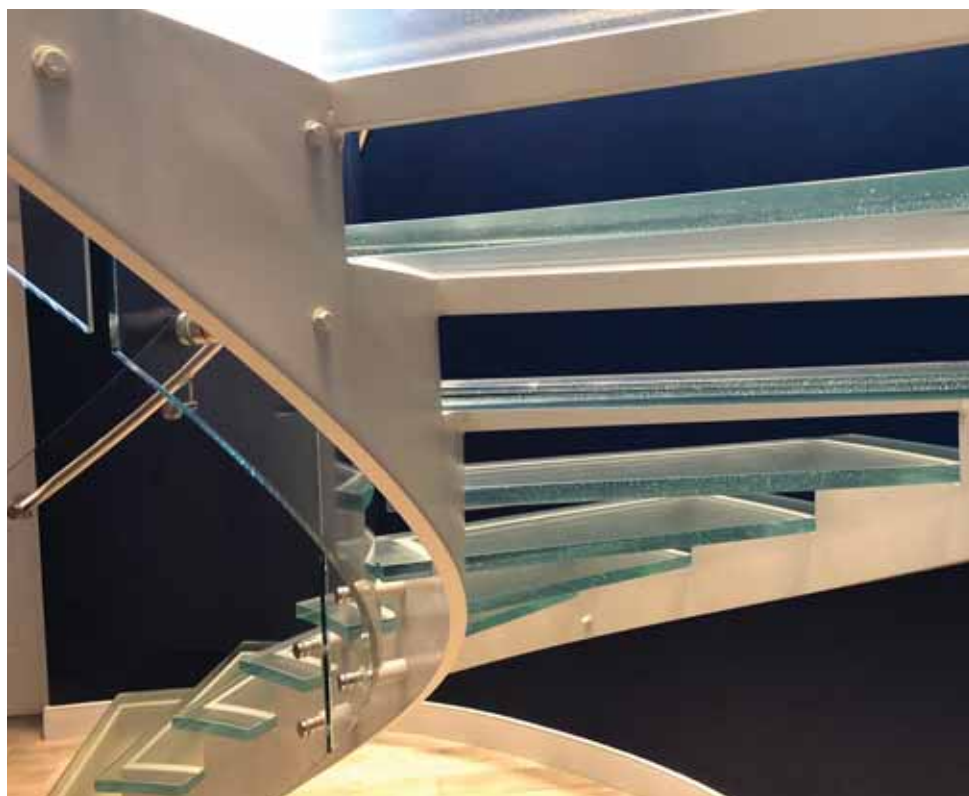




Double flights of curved glass stairs and glass railings



Translucent glass treads on curved stair



View of structural steel stair with glass treads



Polished stainless handrail





Two levels of modern floating stairs on a shore home

## Stair Design Ideas

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Above: Multiple flights of contemporary stairs

Top Right: Steel center stringer stair

Bottom Right: Underside of the structural steel

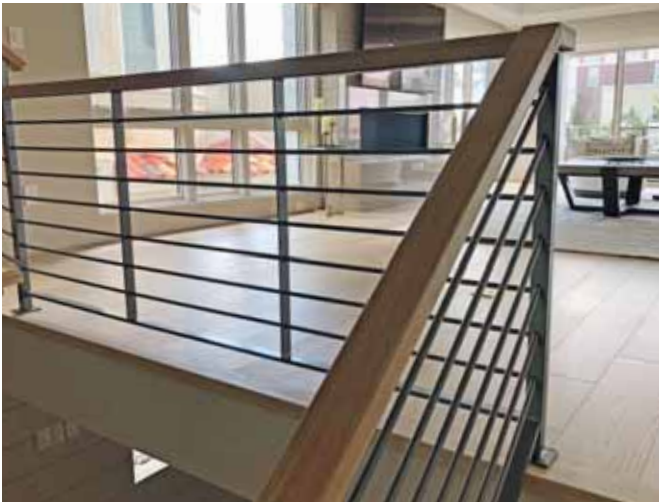


## Stair Design Ideas

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Contemporary railing with wood top



Left: Level railing in living room

Right: Modern Railing on Wood Stair



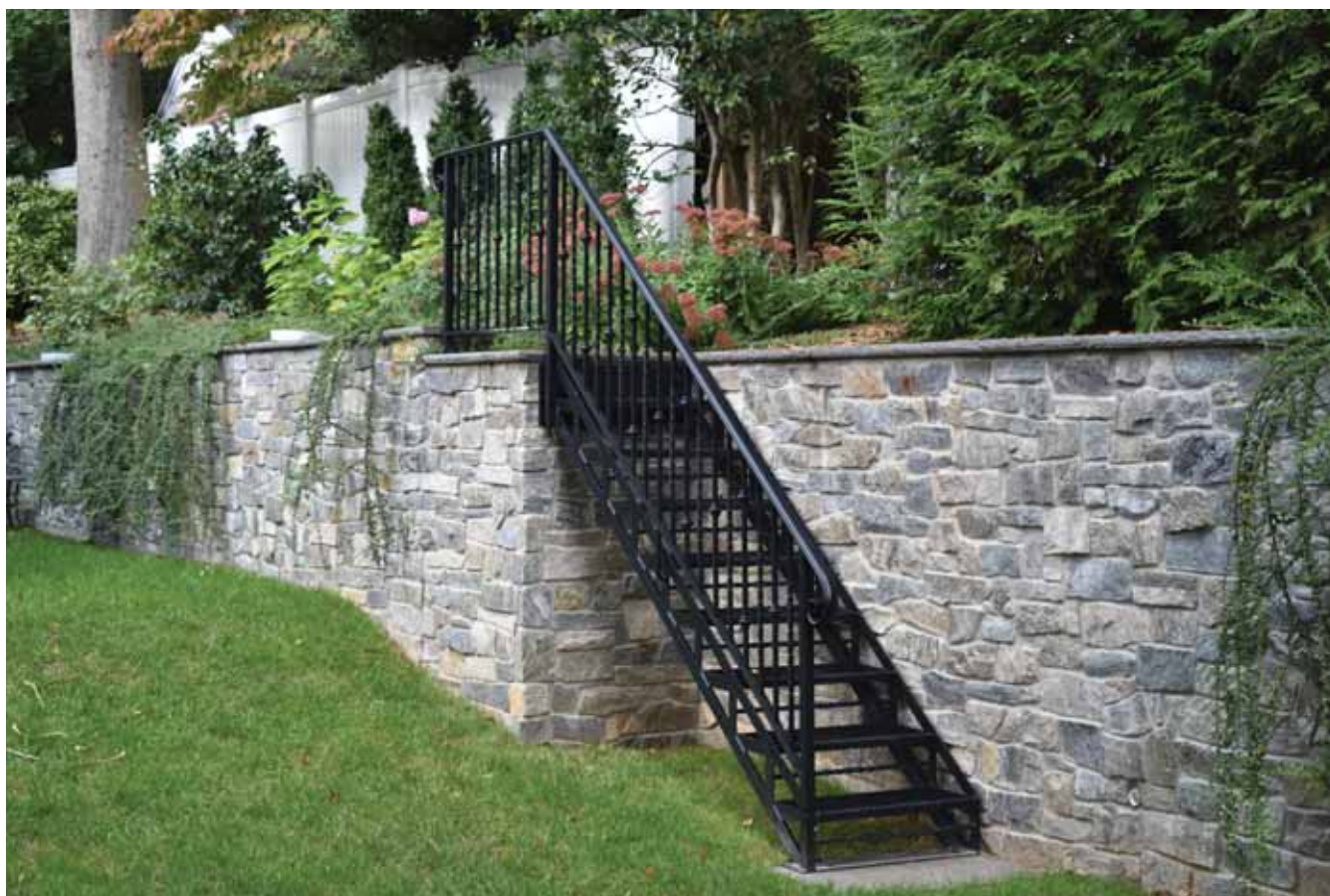


Part of a 6 flight stair





The beauty of glass railing on a landing and switch back stairs



Specially created garden stairs with pervious treads provides access to garden terrace



# SPIRAL STAIR DESIGN IDEAS



Interior spiral staircase provides beauty and accessibility for this multi-level private library

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If you are looking for a quick cheap spiral stair, we are not the best choice. If you are looking for a quality, superbly crafted spiral stair, we are a good fit. And with what we provide with a single welded spiral stair unit, with skirt welded to the outside of the treads makes for a very strong stair, unmatched for strength and rigidity. Plus, the dimensional trim at top and bottom of skirt adds visual and structural character as well.

We can provide unparalleled value in spiral stairs, factoring into the design your choice of wood, masonry or metal treads to match your surrounding deck surface.

Your spiral stair from Compass Ironworks will not just be a cookie cutter stair kit, assembled with bolts and screws. It will be one pre-designed and solid welded structure that will need to be hoisted into place. Fastened into place, it will provide you with many years of elegant service and quality.





Solid welded  
construction of  
treads



## Spiral Stair Design Ideas

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Sleek spiral stair for  
access to matches  
balcony railing



Ipe treads on stair  
match balcony floor



## Spiral Stair Design Ideas

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Transcending  
spiral stair on  
shore home



Uniquely designed  
treads add design  
interest and anti-  
slippage effect







Started in 1998, Compass Ironworks is a family-owned business based in Lancaster County, Pennsylvania. A unique combination of traditional and modern lifestyles is common in the area surrounding the company, where horse and buggy rigs mingle with the cars on the road.

Lancaster County is internationally known for its skilled artisans, impeccable craftsmanship, and dedicated work ethic. This is a fitting location for the work of Compass Ironworks, where, in a 15,000 square foot shop, centuries old decorative iron styles are being fashioned by a talented team of less than ten artisans, using modern tools and up-to-date, highly-durable finishing techniques. It is a place where craftsmen can work at their trade and still watch their neighbors as they work in the fields, planting, cultivating and finally harvesting the crops of corn and hay, seeing the beauty of nature and drawing inspiration for their work.

Compass Ironworks serves the entire Mid-Atlantic region with custom iron work for the mainland estates as well as the waterfront manors by the sea, and wherever the elegance and integrity of old world quality of wrought iron is desired.

PHONE: 717-442-4500 | GAP, PA | [WWW.COMPASSIRONWORKS.COM](http://WWW.COMPASSIRONWORKS.COM)