Historic Lighting Restoration & Custom Lighting Resource Book

GRAND LIGHT

Lighting & Design Since 1929

104 Day Street – Seymour, Connecticut 06483 – www.GrandLight.com

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Company Overview

American Artisans At Work Preserving History

Company Overview

GRAND LIGHT
Lighting & Design Since 1929

New Grand Light, LLC – Lighting & Design
104 Day Street – Seymour, Connecticut 06483
Primary Contact – Ryan Stockman
Telephone: 800-922-1469 Fax: 203-828-6307
Email: info@grandlight.com
Website: www.grandlight.com

- Grand Light has been in business since 1929
- Ownership – Corporation
- State of Residency / Incorporation – Connecticut
- Office Location – Seymour, Connecticut

Grand Light, located at 104 Day Street, Seymour, Connecticut, is an experienced restorer of historic lighting fixtures, a manufacturer of custom lighting fixtures, and has served the interior and exterior lighting needs of homeowners and professionals for over 80 years by setting a standard of offering handcrafted, design-oriented, quality fine lighting products.

Our mission is to continue to differentiate ourselves as the ultimate source for the highest quality lighting products and the very best professional service available. We realize our clients' complete satisfaction is the most meaningful measurement of our continued success and pride ourselves in providing unparalleled customer satisfaction in all we do.

Our lighting restoration and custom lighting capabilities include research for historic accuracy, drawings, mock-ups, metal fabrication, polishing, painting, welding, abrasive blasting, refining metal components, glass fabrication, replacing all electrical components, rewiring and testing in accordance to UL standards.

Our team of specialists is comprised of professional metal workers and glass blowers whose mission is to restore, create, or re-create lighting fixtures of the utmost quality and authenticity. Our lighting fixtures are wired in accordance with UL standards, and our team of artisans stands confidently behind their work with years of experience and dedication to quality craftsmanship.

American Artisans At Work Preserving History

Executive Personnel

Stephen L. Stockman

GRAND LIGHT
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Principal, Lighting Designer

"It's historical art, intricate, detailed. Electrical has a 100-year life cycle, but at the end of that lifecycle they're not just going to throw it out. That's why we do what we do."

Steve, a forty year industry veteran has held a variety of sales, engineering and senior management positions with General Electric Co. and Grand Light.

Steve, a graduate of Allegany College, Triangle Tech, and General Electric TMP Program, has or currently participates in Industry Organizations such as IES, IALD, NAED, AIA, ALA, and APTNE.

Steve is an active member of day to day operations providing oversight of all engineering, administration, including UL testing procedures for restoration, replication, and custom lighting projects. Steve is certified in OSHA Hazard Recognition Training for the Construction Industry. Grand Light is an Underwriters Laboratories certified manufacturer for luminaires. (Standard 1598)

Steve's Participation in your Project will include:

- Develop overall project scope, timelines, manpower allocation, and vendor resources.
- Develop internal procedures consistent with achieving the project specification and delivery requirements.
- Develop project specific mechanical and/or electrical requirements.
- Develop project specific metal finishing procedures including research, recipes, testing, sampling, mockups, and production runs.
- Provide daily interaction with factory and administrative staff to assure quality standards are upheld and project completed consistent with customer requirements.

American Artisans At Work Preserving History

Ryan M. Stockman

GRAND LIGHT
Lighting & Design Since 1929

Vice President

"Those lighting fixtures existed before us and will remain long after, so it is quite an honor to have our artisans' work immortalized"

Ryan a 2003 Roger Williams University graduate has held a variety of sales, engineering, and manufacturing positions within the company during the past fifteen years.

Ryan is also active in a variety of Industry organizations and is uniquely qualified to interface with project participants both internal and external while providing comprehensive project updates on GrandLight.com.

Ryan is the primary contact for all restoration, replication, and custom lighting projects and collaborates daily with internal and external project participants, i.e. customer, vendors, shop, and management staff. Ryan is certified in OSHA Hazard Recognition

Ryan's Participation in your Project will include:

- Develop of all project specific administration and communication procedures.
- Develop and maintain all customer relations and communications.
- Provide project management and collaboration with company principal.
  - A. Overall project scope, timelines, manpower allocation, and vendor resources.
  - B. Internal procedures consistent with achieving the project specification and delivery requirements.
  - C. Project specific mechanical and/or electrical requirements.
  - D. Project specific metal finishing procedures including research, recipes, testing, sampling, mockups, and production runs.
  - E. Provide daily interaction with factory and administrative staff to assure quality standards are upheld and project completed consistent with customer requirements.
- On-site supervision and management of Subcontractors and Grand Light Artisans.

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Capabilities & Services

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Our process begins with reviewing existing documentation including sketches, architectural drawings, historical photographs, and an on-site inspection to gather the full scope of the project requirements. From there, Grand Light will develop a detailed proposal. When required, Grand Light also develops conceptual sketches and drawings. As required Grand Light conducts research to assure the historical accuracy of all historic projects.

The creation of custom drawings is an important part of the process when it comes to the production of custom lighting. Whether it be a replication or modification of an existing lighting fixture, the client's design, or a creation by Grand Light's design team, a drawing will serve as the blue print for our production process.

Our drawings and subsequent mock-ups address the smallest of detail, allowing our clients to fully visualize the fixture before it goes into production, which reduces the possibility of error, and allows Grand Light to fulfill its commitment of delivering high quality lighting fixtures on schedule.

Our engineering capabilities include:
Customer Consultation
Survey
Evaluation Reports
Concept Sketches
Drawings
Mock-Ups

Mechanical Overview

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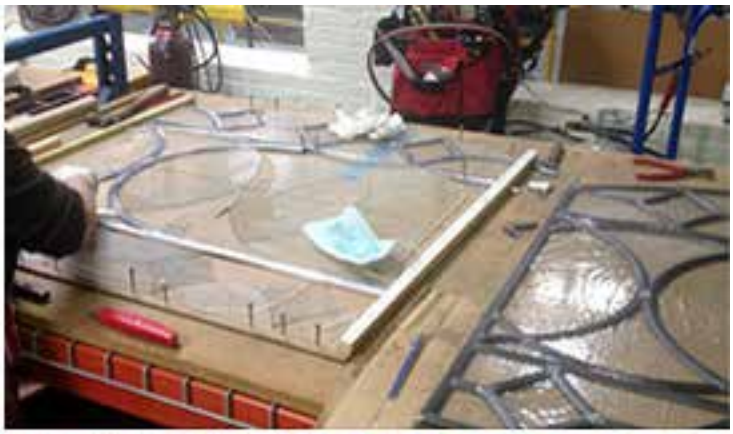
Grand Light's mechanical capabilities are an essential part of the restoration & custom lighting process. Utilizing only the best materials, Grand Light strives to ensure only the highest quality of standards go into crafting each lighting fixture; from minor components to the complete fabrication of full sized lanterns or other custom lighting fixtures.

Using the explicit instructions provided by custom drawings, our factory staff then transform concepts into finished products incorporating the highest regard for accuracy.

Grand Light's technicians inspect and document any mechanical flaws or damage on every lighting fixture prior to any mechanical repair, replacement, or modification.

Project documentation, submittals, and reports are made available to clients for approval including work scope, schedule, record of materials, special provisions, and evaluation recommendations based on a lighting fixture's mechanical integrity.

Our mechanical capabilities include:
Inspection/Documentation
Metal Fabrication
Glass Fabrication
Welding



Finishing Processes

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As a part of the restoration process, our artisans explore the intricate details of preserving the historical integrity of lighting fixtures including color matching and sheen of the original finish.

Custom lighting finishes are available in custom painted colors, sheen, and textures as well as custom patina colors on bronze, copper, and brass components.

Each surface is cleaned and inspected to determine the optimal surface profile to achieve the desired finish. To alter the surface of an existing luminaire, our processes involve a wide range of capabilities including metal polishing as well as media blasting to remove old finishes and foreign material in preparation for a refinish.

Our artisans can match any color or finish utilizing a variety of processes involving powder coat, spray, hot or cold patina custom recipes and color blending an existing finish.

Grand Light exercises meticulous techniques that are unparalleled in the application of protective coatings including UV resistant protective lacquer with various customized sheens and tints. Finishes requiring a protective wax are hand buffed with multiple coats of museum grade clear and tinted waxes.

Our finishing capabilities include:
Cleaning
Surface Preparation
Painting
Polishing/Buffing
Patina Application
Protective Coatings

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Electrical Overview

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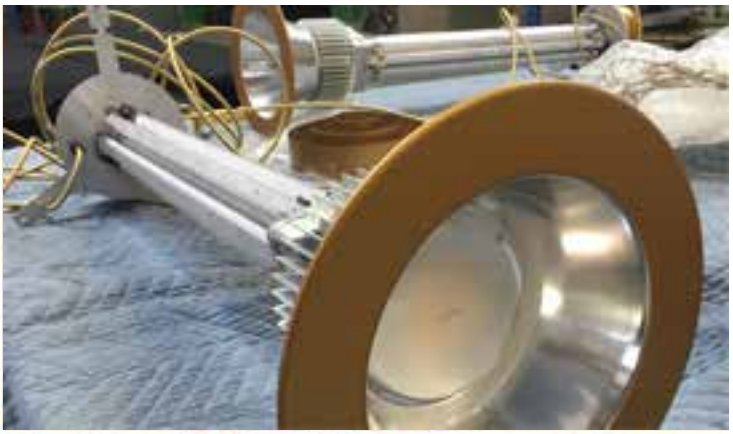
Grand Light's electrical capabilities are often an essential part of the restoration & custom lighting process. Utilizing only UL listed products, Grand Light strives to ensure only the highest quality of standards go into finalizing each lighting fixture; from the rewiring of luminaires, to the installation of modern lamp technology, and the custom conversion of gas powered fixtures to electric.

Using the explicit instructions provided by custom specifications, our technicians transform concepts into finished products incorporating the highest regard for accuracy.

Grand Light's technicians inspect and document any electrical deficiencies on every lighting fixture prior to any electrical component replacement and rewiring.

Project documentation, submittals, and reports are made available to clients for approval including work scope, schedule, record of materials, special provisions, and evaluation recommendations based on a lighting fixture's electrical integrity.

Our electrical capabilities include:
Inspection/Documentation
Luminaire Retrofits
Wiring Methods
UL Testing



Crystal Restoration

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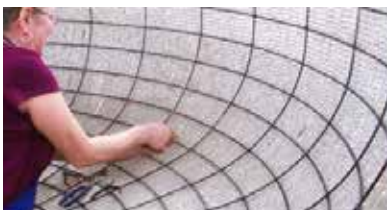
Grand Light's lighting restoration team specialize in the cleaning, repair, pinning, stringing, and replacement of crystal components of varying sizes, shapes, and cuts. Our artisans have decades of experience restoring crystal components on chandeliers, sconces, ceiling fixtures, and pendants from a variety of clients ranging from private homes, hotels, churches, museums, government, universities, and more.

Project documentation, submittals, and reports are made available to clients for approval including work scope, schedule, record of materials, special provisions, and evaluation recommendations based on a lighting fixture's electrical integrity.

Grand Light artisans specialize in the cleaning of crystal components by offering both hand cleaning and ultrasonic cleaning technology. Our artisans utilize a proprietary cleaning solution before each component is rinsed and hand polished.

Grand Light's industrial ultrasonic console system provides the most advanced and portable crystal cleaning tank available. These powerful units incorporate stainless steel tanks combined with superior Vibra-bar® technology transducers and patented high performance generators providing versatile performance from the simultaneous presence of many ultrasonic frequencies within the cleaning chamber.

Our crystal restoration services include:
Cleaning
Repair
Pinning
Dressing
Replacement



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On-Site Services

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Grand Light's on-site capabilities are often an essential part of the restoration & custom lighting process. Grand Light specialists strive to ensure historic lighting fixtures are removed, cleaned, repaired, packed, transported, and installed in the safest and most conscientious methods possible. Our approach puts our customer first, with flexible on-site service scheduling offered at the clients convenience and without causing any disruption to daily activities. Work areas are left in the same manner it was found prior to leaving a site.

Grand Light's On-Site Cleaning Specialists utilize leading technology, decades of experience, and an unwavering commitment in providing superior historic lighting restoration results to our clients. Our specialists have a thorough understanding and extensive experience in cleaning a variety of surfaces including metal, wood, marble, plaster, and crystal using proprietary cleaning solutions and advanced ultrasonic technology.

Our on-site services include:
Cleaning
Removal
Packing
Crating
Transportation
Installation
Temporary Fixtures

Historic Restoration Experience

American Artisans At Work Preserving History

United States Capitol Building

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Property History

Located in Washington, D.C., the United States Capitol Building, often called Capitol Hill, is one of the most symbolically significant and architecturally impressive buildings in the nation, and a monument to the American people and the United States government. The Capitol serves as the seat of the United States Congress, the legislative branch of the U.S. federal government, and houses the meeting chambers of the House of Representatives and the Senate.

The original building, which began construction in 1793 and was completed in the year 1800, was designed by Dr. William Thornton, the first Architect of the Capitol, utilizing 19th century neoclassical architecture. The Capitol Building was declared a National Historic Landmark by the National Park Service in 1960.

Project Description

Grand Light was selected by the Architect of the Capitol to restore historic interior crystal chandeliers. Grand Light's restoration team came fully prepared to disassemble and remove the historic crystal chandeliers on-site, without causing any disruption to the daily activities of the Capitol Building. Each chandelier was removed utilizing lifts, ladders, and scaffolding to carefully disassemble all metal components and remove crystal components to pack for transportation. Temporary chandeliers, provided by Grand Light, were installed to replace the removed historic fixtures.

All silver components, including screws and associated hardware, were re-plated to a 12-15 micron silver thickness. In order to preserve the high polish finish, multiple application of protective lacquer was applied to prevent the silver from becoming dull and protect the metal from pit or tarnish.

The chandeliers had numerous smaller crystal sets that were not original to the chandeliers. These sets were replaced with authenticated Czech Republic bohemian full lead crystal 28% PBO that matched the existing original crystals. All existing original crystal components were re-pinned with .72 thicknesses and all missing glass and damaged pieces with were replaced with full lead crystal with at least 32% lead oxide.

All fixtures were rewired with UL listed components and HIPOT tested in accordance with UL standard 1598. Safety cables were added to each chandelier.

Client

Architect Of The Capitol

Client Project Managers

Raynell Bennett, Director, Planning, Evaluation and Operations, U.S. Capitol Building

Date Awarded

2015

Completion Date

2016

Project Webpage

N/A

Marriott Syracuse Downtown

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Property History
The historic Hotel Syracuse, located in Syracuse, New York, was designed by renowned hotel designer William Stone Post of George B. Post & Sons of New York City in 1921 with the hotel built from 1922-1924. The 91-year old hotel was added to the National Register of Historic Places in 2008.

Project Description
Grand Light had the very challenging task of taking down, refurbishing, rewiring and replicating the amazing array of chandeliers and wall sconces which are located in the Persian Terrace, Grand Ball Room, and the Main Lobby, which symbolize the hotel's splendor.

The chandeliers and sconces in each location were originally fabricated using a wide range of different materials, ranging from plaster, brass, bronze and steel, which required an array of techniques to be implemented by the Grand Light artisans for the restoration of these magnificent fixtures. These techniques included, intricate hand painting and glazing, both hot and cold patination blends to match original pieces which were able to be conserved. Silver plated and copper decorative components were ultrasonically cleaned, stripped of the original lacquer, and hand polished before multiple coats of new lacquer were applied as well as silver and copper plating for decorative elements that were replicated. Grand Light developed a custom LED up-lighting fixture into the existing light clusters to illuminate the ceiling soffit details Thousands of crystal beaded strands were replicated using Austrian crystal for the chandeliers located in the Grand Ball Room. A key element in restoration, as well as with the new fixtures, was to assure that all of the colors that were being applied during this process were historically accurate, and matched what were originally applied, as well as to compliment the colors of the ornate murals in the hotel.

Prior to beginning the process of finish applications to identify what these colors had been, each piece was carefully tested by Grand Light artisans utilizing sophisticated soda blasting equipment that is delicate enough to remove ink from paper without damaging the surface of the paper. Upon discover of these historic colors, a collaborative effort between the Grand Light artisans, and the artisans whom were restoring the murals established the color palate to be utilized not only on the chandeliers, but throughout the hotel.

Client
Marriott Syracuse Downtown

Client Project Managers
Ed & Kevin Riley, Hotel Syracuse Restoration

Date Awarded
2015

Completion Date
2016

Project Webpage
https://grandlight.com/portfolio/hotel-syracuse/

Awards
Preservation League of NYS Excellence in Historic Preservation Award 2017
Historic Hotels of America Awards of Excellence 2017

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Harvard University Winthrop House

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Property History
John Winthrop House, located on the banks of the Charles River, is one of twelve undergraduate residential Houses at Harvard University. The House derives its name from two notable men named John Winthrop who shared both name and lineage. Winthrop House consists of two historical buildings, Standish Hall and Gore Hall, both large four-story U-shaped structures connected by the Yellowwood Courtyard. Both Standish and Gore Hall were originally built in 1912 and share many architectural Neo-Georgian attributes.

Project Description
Grand Light restored forty-nine original luminaries ranging from large chandeliers, exterior lanterns and post lights. These fixtures underwent several different restoration techniques ranging from cleaning and conservation of the existing finishes, to complete refinishing.

Of the historic luminaires requiring restoration, four chandeliers were manufactured by the renowned Edward F. Caldwell & Company of New York City, the premier designer and manufacturer of electric light fixtures and decorative metalwork from the late 19th to the mid-20th centuries. Caldwell lighting fixtures, ornamental bronzes, and ironworks include an impressive range of historical and modern styles that were produced in the company's sixty-four year history. One consistent factor throughout all of Caldwell's lighting fixtures and metalwork was unparalleled craftsmanship demonstrated through decorative details and beauteous finishes.

All fixtures were rewired with UL listed components and HIPOT tested in accordance with UL standard 1598. All exposed conductors were enclosed in fiberglass braided sleeving and were color matched to the fixture finish, in addition where deemed necessary safety cables were added, both of which are standard Grand Light procedures.

In addition to the historic lighting fixture restoration, the project required a total of eleven custom lanterns to be manufactured based off the design of existing historic exterior wall lanterns.

Client
Harvard University

Client Project Managers
Michael Smart, Lynnwell Associates Inc.

Date Awarded
2016

Completion Date
2017

Project Webpages
https://grandlight.com/portfolio/harvard-university-winthrop-house-gore/
https://grandlight.com/portfolio/harvard-university-winthrop-house-standish/

Awards
Cambridge Historical Commission Preservation Award 2018

New Haven Courthouse

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Property History

The New Haven County Courthouse is located in the Downtown of New Haven, Connecticut and opened in 1914. Modeled after St. George's Hall in Liverpool, England, the courthouse was designed by New Haven architects William Allen and Richard Williams. The building was added to the National Register of Historic Places on May 16, 2003.

Project Description

The project scope required Grand Light completely restore two (65”h x 30”w) exterior bronze lanterns and six (8’h x 36”w) exterior bronze doors including forty-five decorative trim panels at its Seymour, Connecticut facility. In addition, two large bronze main entry doors (27’ h x 16’w), transom panels, and windows were restored on-site by the Grand Light team.

The refinishing of the bronze doors, panels, windows, and lanterns involved discovery of the original finish, replication recipes, surface preparation via cleaning and media blasting of the bronze surface, hot application of a statuary bronze patina, multiple layers of a custom red rust patina applied at temperatures of 180-200° F, and multiple applications of a protective lacquer. The repair of the doors involved bronze welding of previously drilled holes, and creating a smooth uniform surface for patination. All decorative bronze detailing, including edges and ornamental rosettes, were meticulously hand burnished by Grand Light artisans to highlight and expose underlying bronze accents. The restoration of the exterior lanterns included refinishing all components, replacement of all electrical components, replicated slumped glass panels, rewiring with UL listed components, and HIPOT testing in accordance with UL 1598 standards.

The massive bronze entry surface preparation and refinishing work was performed entirely on-site. Additionally this work was to be performed on weekends with the scaffolding and containment curtains removed prior to 8:00 AM Monday mornings. Grand Light planned, mobilized and executed this on-site work with a team of ten artisans in only five days. (2 day and 3 day weekend) This on-site work was approved without exception within twenty-four hours of completion.

Client

State of Connecticut

Client Project Managers

Scott Ewen, Kronenberger & Sons Restoration
Roy Olsen, JCJ Architecture
Ricardo Viera, BCA New York

Date Awarded

2013

Completion Date

2015

Project Webpage

https://grandlight.com/portfolio/new-haven-courthouse/

Awards

Connecticut Trust for Historic Preservation Merit Award 2017

Yale University Sterling Memorial Library

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Property History

Located in the heart of today's Central Campus, the Sterling Memorial Library is one of Yale's most prominent buildings, as well as being the largest of all the Yale libraries. Completed in 1930, it was designed by architect James Gamble Rogers and later named for its benefactor, John William Sterling.

It currently houses approximately 4 million volumes on 16 floors of bookstacks. It was built in the Collegiate Gothic style, resembling a European Gothic cathedral, with its 60-foot ceiling, cloisters, clerestory windows, sidechapels, and a circulation desk altar.

Project Description

Grand Light completed the historic lighting restoration of Yale University's Sterling Memorial Library Manuscripts & Archives interior lighting fixtures. This project included the removal and pickup of fifty large bronze pendant lights and ceiling mounts, and over 200 glass shades.

The fixtures were completely dissassembled and components were tested in order to develop an appropriate method of conservation. Each component was ultrasonically and hand cleaned with a proprietary cleaning solution, touched-up where applicable, and protected with multiple coats of a museum grade wax in order to restore the original finish.

New glass shades were replicated from originals and etched to transmit light levels, calculated by the design team, from a custom internal lighting cluster developed to fit specific LED lamps.

The largest pendant light, previously used to illuminate such literary works of Charles Lindbergh, Eero Saarinen, Eli Whitney, and the Gutenberg Bible, was modified with custom LED down lights and up lights for drastically improved floor light levels. The eight down lights consisted of adjustable accent lights with snoot and cross louver accessory in an antique brass patina finish facing downward mounted on the exterior. The up lights, mounted on the crown of the fixture, were four adjustable accent lights in a matching antique brass patina finish.

All fixtures were rewired with UL listed components, HIPOT tested in accordance with UL standard 1598, and received new energy efficient LED lamps All exposed conductors were enclosed in fiberglass braided sleeving and were color matched to the fixture finish.

Client

Yale University

Client Project Managers

Ed Puleo, Project Manager, All-Brite Electric, Inc.

Date Awarded

2017

Completion Date

2017

Project Webpage

https://grandlight.com/portfolio/yale-university-sml-manuscripts-archives/

American Artisans At Work Preserving History

Yellowstone National Park - Old Faithful Lodge

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Property History

Old Faithful Lodge in Yellowstone National Park is located opposite the more famous Old Faithful Inn, facing Old Faithful geyser. The Lodge is constructed in the National Park Service Rustic style, and includes dining spaces and a recreation hall, known as Geyser Hall. The roof structure of Geyser Hall is reminiscent of Gothic wood construction, with a height of 73 feet to the ridge. The Lodge was designed by Gilbert Stanley Underwood and was built in 1923 with additions in 1927. The Lodge is included in the Old Faithful Historic District.

The current Old Faithful Lodge is a result of numerous changes dating back to the early days of tent camps. These camps were erected throughout the park and offered shelter before hotels and lodges were built. By the 1920's, auto traffic into the park was increasing dramatically and it was determined that the tent camp at the site should be replaced with a permanent lodge.

Project Description

Following a site visit earlier in the year, Grand Light was selected to restore and replicate the lighting fixtures from the historic Geyser Hall. Rather than risk loss or damage in transit via a common carrier, Grand Light returned to Geyser Hall and carefully packed and transported the historic fixtures 2,400 miles back to Connecticut. These fixtures included 148 gothic-style pendant luminaires, of which 28 were replicated, as well as 40 larger luminaires of the same style. Grand Light refinished all luminaire components, inspected and repaired all mechanical defects, replaced all existing electrical components with UL listed products, rewired and HIPOT ested the fixtures. To restore the historical integrity of the luminaires, previously installed plastic panels were replaced with historically accurate medium-amber glass.

All structural repairs and replications of missing or damaged components were completed as a first step in the restoration project. The twisted and bent spears at the top and bottom of the fixture were straightened back to their original shape. Frames that were bent were reshaped, and missing rivets were replicated and attached to the fixtures.

Many fixtures were missing tabs that were meant to hold the glass panels. As a previous fix to this problem, some panels had been siliconed to the frame as a temporary solution. This silicone was removed and new tabs were fabricated and soldered to the fixture.

Client

U.S. National Park Service

Client Project Managers

Mark Siedlaczek, Project Manager, Xanterra Parks & Resorts in Yellowstone

Date Awarded

2009

Completion Date

2010

Project Webpage

https://grandlight.com/portfolio/old-faithful-lodge/

New London City Hall

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Property History

Originally constructed in 1856, the New London City Hall once sat amidst rows of residential buildings, but was remodeled in the classical Beaux-Arts exterior in 1912 by New London architect James Sweeney to have a more appealing presence among the flourishing commercial district of the early 20th century.

Project Description

The project scope required Grand Light to remove, completely restore, and to reinstall the early 20th century cast iron exterior lighting standards at the front entry of the City Hall. The restoration included the replication of (8) cast acorn finials, (3) decorative crown filigrees, new center rods which hold the standards together in place, and all of the globes. The globes were made of acrylic for better UV resistance and had custom spun metal necks so they would fit flush inside the fitters since these fitters were not a standard size.

Grand Light disassembled and removed the historic standards on-site, without causing any disruption to the daily activities of the City Hall. Each standard was removed utilizing a combination of a lull forklift, portable power-lifts, and ladders to carefully disassemble all metal components to safely pack for transportation. The City Hall is about three blocks from the Long Island Sounds and these standards had severe rust and rot to most of the components that were made of cast iron. We used scaling methods to remove the existing paint and areas of rot, then media blasted the surface using a 120 grit garnet to give a slight profile to accept the top coat. Excessive rot and deteriorated components were replaced with matching replications.

An extended life black finish vinyl resin was applied to the fixtures, and multiple applications of a UV resistant lacquer top coat was added for protection against the elements of a coastal environment.

All fixtures were rewired with UL listed components, HIPOT tested in accordance with UL standard 1598, and received new energy efficient LED lamps.

Additionally, the massive standard metal bottom base component could not be removed from the precast concrete bases, so all surface preparation and refinishing work was performed entirely on-site. Grand Light planned, mobilized and executed this on-site work with a team of four artisans in only one day.

Client

City of New London, CT

Client Project Managers

Tom Bombria, Community Development Coordinator, City of New London

Date Awarded

2017

Completion Date

2017

Project Webpage

https://grandlight.com/portfolio/new-london-city-hall/

American Artisans At Work Preserving History

Saenger Theatre

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Property History

Designed by notable architect Emile Weil, the Saenger Theatre was opened in 1927. It became the sixty-first theatre in the Saenger Theatre chain founded by J.H and A.D Saenger of New Orleans. Glorified as “Alabama’s Greatest Showplace” the Saenger Theatre has been entertaining the South for over 80 years.

Project Description

The project scope required Grand Light restore a massive crystal chandelier measuring approximately 10 feet in diameter with a gilded gold leaf center column and crown that measure approximately 8 feet tall. This fixture was partially dis-assembled on site, packed, crated, and transported by Grand Light to its Connecticut facility where it was cleaned, all mechanical deficiencies were repaired, rewired, and refinished.

Numerous components had sustained significant water damage and were stripped and refinished using both gold leaf and color matching paint prior to a protective lacquer top coat. The three crystal baskets contained 10,000 faceted crystal beads in graduated chains which were cleaned, hand polished, and required over 2500 individual weaves to re-attach the crystal chains to the frames. Missing crystal chains were replicated and attached to complete the chandelier basket pattern.

This fixture has 144 lamp sockets in three separate clusters and circuits, all of which were rewired using UL listed components and HIPOT tested in accordance with UL standard 1598. All exposed conductors were enclosed in fiberglass braided sleeving and color matched to the fixture finish, in addition safety cables were installed, both of which are standard Grand Light procedures.

The fixture was fully assembled in the Grand Light facility, tested, disassembled, packed, and crated for delivery via Grand Light personnel. Upon arrival the fixture was reassembled, retested, and hoisted 42’ to the ceiling medallion by Grand Light and Saenger Theatre personnel.

Client

Mobile Saenger Theatre

Client Project Managers

Mitch Teeple, Mobile Saenger Theatre

Date Awarded

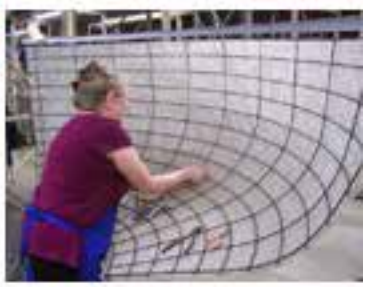
2011

Completion Date

2012

Project Webpage

https://grandlight.com/portfolio/saenger-theatre-chandelier-restoration/



American Artisans At Work Preserving History

East Clinton Street Bridge

GRAND LIGHT
Lighting & Design Since 1929

Property History

The East Clinton Street Bridge, located in Binghamton, New York, is an open-spandrel arch bridge over Chenango River that connects Downtown Binghamton to the City's West Side and First Ward neighborhoods. The bridge, constructed in 1936 and one of the oldest bridges in the city, underwent a $1.9 million rehabilitation project that included the restoration of the bridge's decorative arches and lighting fixtures.

Project Description

Grand Light restored and refinished the bridge's historic exterior lanterns. Years of weather exposure and vandalism had deteriorated the existing finish and resulted in several missing and damaged acrylic panels. Grand Light artisans disassembled each fixture, removed all acrylic panels, and made any necessary mechanical and structural repair. The existing lighting reflectors were carefully hand cleaned and reused to maintain horizontal positioning.

The surface of the lanterns were media blasted to remove all existing finish and foreign material in preparation for an application of a zinc rich epoxy primer and a Sherwin Williams Powdura 4000 Polyester durable powder coat satin black finish.

Custom P95 curved acrylic panels were cut and bent to replace all existing, missing, or damaged panels. To improve energy efficiency while increasing the output and optic spread a Mogul Base 120 watt, 4000K LED with Type 3 distribution was installed with the addition of custom stability brackets.

All wiring was replaced with UL listed components and HIPOT tested in accordance with UL standard 1598.

Client

City Of Binghamton, NY

Client Project Managers

Nicholas DeVincentis, R. DeVincentis Construction, Inc.

Date Awarded

2017

Completion Date

2017

Project Webpage

https://grandlight.com/portfolio/east-clinton-street-bridge/

American Artisans At Work Preserving History

Minute Man National Historic Park

GRAND LIGHT
Lighting & Design Since 1929

Property History

The 971-acre park receives over one million visitors every year, who come to see important sites associated with the opening battle of the American Revolution. Congress established the park in 1959 to preserve and protect areas such as the first four miles of the Battle Road, where Colonists fired upon British troops as they returned from Boston, and the place where the “shot heard ’round the world” was fired. The park also preserves The Wayside, where 19th century authors kept the spirit of the Revolution alive by creating uniquely American literature.

Project Description

The restoration team from Grand Light traveled to Minute Man National Historical Park in Concord, Massachusetts to remove the crystal chandelier on display in the Stedman Buttrick House, which serves as the park’s headquarters and visitors’ center for the historic North Bridge.

The Stedman Buttrick House was constructed in 1911, but the date of the chandelier is unknown. Over time, the crystal chandelier had lost its luster due to grime, dirt, and metal oxidation. The wiring had become brittle and unsafe. It originally had twelve arms, although only nine were attached to the chandelier at the time of removal. The park had the two missing arms, and each was broken. Some spears and crystal chains were also missing from the fixture.

In addition to cleaning, Grand Light artisans repaired the broken arms by attaching new ferrules to the bases and aligning the arms on the fixture body. Each component was hand cleaned and waxed revive the silver plating. All crystal was ultrasonically and hand cleaned before polishing.

Three glass globes with intricate patterns were missing from the crystal chandelier and had to be replicated. Missing and broken glass arms were replicated as well as eight large crystal chains with baguette, octagon, and heavy plain spearhead crystal pendalogues.

Fixture was rewired with UL listed components, HIPOT tested in accordance with UL standard 1598, and reassembled on-site by Grand Light artisans.

Client

U.S. National Park Service

Client Project Managers

Jerry Fabris, Museum Curator, Minute Man National Historical Park

Date Awarded

2009

Completion Date

2009

Project Webpage

https://grandlight.com/portfolio/minute-man-national-historical-park/

GRAND LIGHT
Lighting & Design Since 1929

Custom Lighting Experience

American Artisans At Work Preserving History

Yale University Divinity School

GRAND LIGHT
Lighting & Design Since 1929

Property History

The Divinity School at Yale University was built in 1932 by the New York based architecture firm of Delano and Aldrich. The campus includes the Marquand Chapel, the Day Missions Library, the Trowbridge Reference Library, a refectory, common room, dormitories, common room and classrooms. The buildings were constructed with handmade water stuck brick, and designed in a sophisticated Georgian Colonial style, which Delano and Aldrich were renowned for.

Project Description

Grand Light designed and manufactured several custom lighting fixtures for Yale Divinity School. This project included the replication of a large existing historic iron and brass chandeliers, various multi-tiered crystal chandeliers, a massive brass and crystal chandelier, and numerous custom handcrafted pendant lights.

The historic chandeliers being replicated were previously restored by Grand Light. Extreme attention was taken to replicate the original fixture's intricate detailing to accurately capture the historical significance of the chandelier and its components. the replicated lounge chandelier was then assembled and received a hand applied patina to the brass components and the steel components were painted matte black. All components then received a coat of protective lacquer.

Massive crystal chandeliers in the refractory were partially assembled, wired, and tested at Grand Light's custom lighting factory before being safely transported to the school's lounge. Once they were suspended from their lifts, Grand Light artisans dressed the crystal components on the chandeliers in the refractory.

A one-of-a-kind, beautifully handcrafted, brass & crystal chandelier was custom designed and fabricated specifically for Divinity School's rotunda, and beautifully compliments the elegant pillars and spiral staircase aesthetics. This fixture was carefully dressed by Grand Light artisans in the rotunda.

The fabrication of the custom library pendants consisted of individually cast brass components. Each component was then welded together to obtain the large circumference required to accommodate the custom made flashed opal glass diffuser. A custom cluster configuration allowed 5000 lumens of light output, and accommodating a 277 volt LED A21 screw in lamp.

Client

Yale University

Client Project Managers

Jeromy Powers, Project Planner, Office of Facilities, Yale University

Date Awarded

2017

Completion Date

2017

Project Webpage

https://grandlight.com/portfolio/yale-university-divinity-school-custom-lighting/

Hudson County Courthouse

GRAND LIGHT
Lighting & Design Since 1929

Property History

The Hudson County Courthouse, or Justice William J. Brennan Courthouse, is a six story building located in Jersey City, New Jersey. This structure was designed by Hugh Roberts in the Beaux-Arts architectural style and built with granite between 1906 and 1910.

Project Description

Grand Light replicated historic luminaires for an additional courtroom that was being added in the building. The replication included very ornate, cast bronze chandeliers, wall sconces, and desk lamps that were to be mounted on the judge's bench. The project began with detailed drawings outlining all distinct features of these originals, which also includes a detailed mold breakout. In addition to providing replicated fixtures, Grand Light was also making new molds which were going to be stored at the courthouse should they choose to have more done in the future.

After the fixtures were documented, each component is removed and molded. These wax molds replicate the intricate detailing, shape, and size of each component. During this phase of the project, any deficiencies in the original fixtures castings are able to be corrected. Upon completion of the molds, a wax pattern is pulled from the production mold. Each wax copy is then chased by using a heated metal tool to rub out the marks that show the parting line where the pieces of the mold came together. The wax is dressed to hide any imperfections in the patterns. These patterns were then encompassed in a layer of wax, known as spruing, to create a ceramic shell around the mold. Once the ceramic shell has been allowed enough time to harden, the shell is flashed, which involves heating the wax mold until the inside melts and seeps out leaving the ceramic shell hollow. Melted bronze was then be poured into each shell to create a casting for each replicated component.

The surface of each component is cleaned and media blasted in preparation for hot patina which is formulated to match the patina of the original luminaires. After the application of the hot patina, the surfaces of each element were hand burnished to create an iridescent, three-dimensional look. To preserve this detailing and to promote the longevity of this custom finish, a lacquer top coat was applied to all surfaces. Once the components are cured, they were assembled, crated, and delivered to the courthouse by Grand Light personnel.

Client

City of Jersey City

Client Project Managers

Nick Burgagni, SMBA Construction

Date Awarded

2015

Completion Date

2016

Project Webpage

https://grandlight.com/portfolio/hudson-county-courthouse/

Harvard University Dunster House

GRAND LIGHT
Lighting & Design Since 1929

Property History
Harvard University, established in 1636, is the oldest institution of higher education in the United States. Harvard University's Dunster House was constructed as part of a House Plan proposed by University President Abbott Lawrence Lowell to construct seven dormitories to separate upperclassmen from freshmen.

Project Description
This project required thirty custom replications of large exterior lanterns and wall brackets fabricated in iron with seeded glass panels frosted.

All custom iron components were hand-crafted individually by artisans to accurately match the original lanterns intricate metalwork, including a distinct Harvard "H" located at the top of each fixture. Each fixture was coated in a satin black finish and a UV resistant Incralac lacquer.

Custom fabricated frosted seedy glass panels were installed to each side of the replicated lanterns. A total of eight custom glass panels were fitted to each lantern attributing to a total of over 200 custom glass panels. Each glass panel required a custom removable mounting bracket to be fabricated, painted to match, and installed on the interior of each lantern to keep all glass panels anchored to the fixture without the use of silicon.

The fixtures were wired using a SOOW outdoor cable, porcelain sockets, and UL listed components were installed to accommodate the use of new energy efficient LED lamps. UL standard wiring is fed through the bottom of each lantern frame into a canal that runs through the entirety of the bracket to the back-plate. Each lantern was HIPOT tested in accordance with UL standard 1598 prior to packing and delivery.

Client
Harvard University

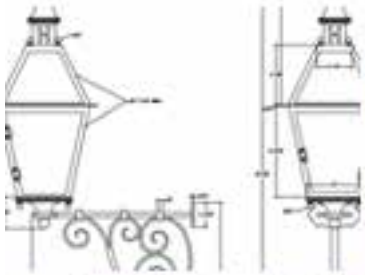
Client Project Managers
Clare Kirk, Turner Construction
Joanne Aitken, Kieran Timberlake
Ricardo Viera, BCA New York

Date Awarded
2013

Completion Date
2015

Project Webpage
https://grandlight.com/portfolio/harvard-university-dunster-house/

Awards
Cambridge Historical Commission Preservation Award 2016



American Artisans At Work Preserving History

Cathedral of St. John

GRAND LIGHT
Lighting & Design Since 1929

Property History

Located in Paterson, New Jersey, the current Cathedral of St. John the Baptist began construction in September of 1865. Designed by prominent church architect, P. C. Kiely, in a neo-Gothic style, St. John's was built by the volunteer labor of members of the parish and completed in July of 1870. The Cathedral is governed by the Roman Catholic Diocese of Paterson, which oversees 109 parishes, 39 Catholic Schools, 64 Catholic Charities locations, and various ministries in the Passaic, Morris, and Sussex.

Project Description

Grand Light was selected by the Diocese of Patterson for the replication and manufacturing of new lighting for the cathedral. This project included the design and custom fabrication of pendant fixtures resembling an existing historic fixture and the replication of a missing exterior fixture.

The custom pendant lights were constructed with aluminum and include six custom acrylic panels fitted by Grand Light technicians to each custom pendant. The fabrication of the raw components consisted of cast aluminum Fleur De Lis and rope tassel finials, and each panel was cut from 6061 aluminum plate and the details were cut with our CNC machine. Each component was then welded together, making the fixture sturdy and achieving the same look of the hand forged iron original. Custom loops for the hanging chain were all hand forged giving the top crown a masculine look.

A two-tone finish was applied utilizing Aqua Leaf Pearlescent Metallic on the Fleur De Lis, rope tassel finials, and the top loop. An extended life satin black finish was applied to the body which incorporated multiple applications of primer, top coats, and protective layers of UV resistant lacquer. The fixture was then diffused with a special clean acrylic panel with one side frosted, keeping with the look of the historic fixture used for inspiration.

This project also included the replication of a missing exterior fixture. The original wall mounted exterior frame and bracket featured intricate detailing and a beautiful verdigris patina, all of which were accurately reproduced on the replicated fixture. Grand Light artisans replicated every detail exact, even down to the use of bronze for the base metal. All fixtures were wired with UL listed components and tested in accordance with UL standard 1598.

In addition to these custom fabrications, the project required the restoration of original luminaries ranging from large chandeliers, wall sconces, pendant lights, and exterior lanterns.

Client

Roman Catholic Diocese of Paterson

Client Project Managers

Rebeca Ruiz-Ulloa, Architect, R.C. Diocese of Paterson

Date Awarded

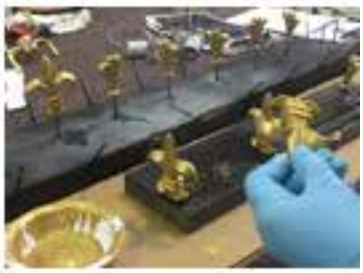
2015

Completion Date

2016

Project Webpage

https://grandlight.com/portfolio/cathedral-of-st-john-the-baptist-custom/



American Artisans At Work Preserving History

Wadsworth Antheneum Museum of Art

GRAND LIGHT
Lighting & Design Since 1929

Property History
Founded in 1842 by Daniel Wadsworth, the Wadsworth Atheneum Museum of Art is one of the oldest public art museums in the United States. Construction began in 1842 on the site of the family home of Daniel Wadsworth in downtown Hartford, Connecticut. The museum houses nearly 50,000 works of art from the spanning from around the world from the last 5,000 years.

Project Description
The project scope required Grand Light use the lost wax casting method to fabricate six bronze replications of a historic E.F Caldwell bronze wall sconce based on a 1910 photograph.

A spiral arm pattern was sculpted in clay while the bobesche and back-plate patterns were carved out of wood. Each pattern then lays in a rigid outer mold while being soaked in a softer inner mold that forms around the pattern. These molds are then encompassed in a layer of wax to create a ceramic shell around the mold.

Once the ceramic shell has been allowed enough time to harden, each shell is heated until the wax mold inside melts and seeps out leaving the ceramic shell hollow. Melted bronze is then poured into each shell to create a casting for each replicated component. The shells are then cooled as the metal phases from liquid to solid before removal. All excess metal parts are removed and any pits or stubs in the metal are meticulously filed down and polished leaving a smooth, consistent surface.

A statuary bronze hot patina finish was applied to all components using a custom recipe developed by Grand Light artisans. Each component was heated while a brush is used to first apply a weaker base coat followed by an application of a stronger base patina. Each component received multiple layers of a museum grade bronze metal wax.

All fixtures were wired with UL listed components and HIPOT tested in accordance with UL standard 1598.

Client
Wadsworth Antheneum Museum of Art

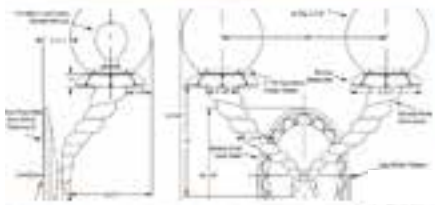
Client Project Managers
Cecil Adams, Director of Museum Services, Wadsworth Antheneum
George Sexton III, I.E.S., I.A.L.D., George Sexton Associates

Date Awarded
2014

Completion Date
2015

Project Webpage
https://grandlight.com/portfolio/wadsworth-atheneum/

Awards
Connecticut Preservation Merit Award 2016
Hartford Preservation Alliance Preservation Award 2016



American Artisans At Work Preserving History

St. Peter's Church

GRAND LIGHT
Lighting & Design Since 1929

Property History
St Peter's Church, located in Plattsburgh, New York, was chartered in 1853 under Reverend Jean-Pierre Bernard to create a Catholic church for French-speaking residents. Today, Saint Peter's is the largest Roman Catholic Church congregation in the Ogdensburg Catholic Diocese.

Project Description
The goal of this project was to take the existing luminaires and design a LED specific core retrofit system enhancing the performance of the fixture while significantly decreasing its energy consumption and maintenance.

After significant product tests, calculations, and mock-ups; a custom LED illuminaire retrofit assembly was designed for installation in the existing fixtures. The system incorporates Nichia Series157 Power LEDs for up lighting and a custom tailor made ENERGY STAR certified down light utilizing the specified CCT.

This custom designed assembly, which was to replace the existing assemblies on both luminaire types, included three up lights, three body lights, and one down light with concentric ring louver. Each assembly was sized appropriately for the size of the housing. The larger pendants were retrofitted with a 42W down light providing 3431 lumens and a 57W core providing 3960 lumens. The smaller pendants were retrofitted with 14W down light providing 1238 lumens and a 35W core providing 2470 lumens. The original lamping assembly for the large fixtures used 1580W, which is reduced to 99W total with the new LED assembly. The smaller fixtures originally used 905W which were reduced to 49W total using the new LED assembly. Not only was energy consumption reduced but the life rating was significantly improved from 1,200 hours to 50,000 hours.

The assembly is designed to drop into the fixture housing, utilizing all original mounting points and chain connections. The original luminaires are not structurally compromised or modified in any way. All assemblies were installed by Grand Light and all lead wires were supplied as specified by the electrical contractor making installation the matter of plug and play.

The down lights were installed with a custom matching color trim, which took the place of existing louvers allowing maximum spread and lumen output.

Client
St. Peter's Church

Client Project Managers
Brian Baker, Baker Liturgical Art, LLC

Date Awarded
2016

Completion Date
2016

Project Webpage
https://grandlight.com/portfolio/st-peters-church-led-retrofit/

Malaga Cove Library

GRAND LIGHT
Lighting & Design Since 1929

Property History
The Malaga Cove Library in the Palos Verdes Library District (CA) was designed in Spanish style by Pasadena architect, Myron Hunt, and constructed in 1929. In 1995 it was placed on the National Register of Historic Places.

Project Description
Grand Light was selected to replicate lighting fixtures based on historic archived photographs of fixtures that are no longer in existence, which were located in the main area of the library. In addition to fabricating the ten replications of the historic pendants, Grand Light designed and manufactured twenty-five ceiling lighting fixtures, thirteen wall sconces and thirty-one pendant lighting fixtures of varying lengths for a new addition to the library.

Every component was custom fabricated, using aluminum which was spun on our custom made tools to be historically accurate based on the archived photographs. Custom made white flashed opal glass was fabricated for the replicated pendant to serve as a decorative bottom diffuser for the four florescent lamps.

These custom fixtures required custom tooling as each component was spun using aluminum for replications and brass for the custom designed pendants. Both fixture types used a custom opal shade. A statuary bronze powder coat was applied to the historic replications that were made of aluminum and an antique brass patina was applied to the custom designed brass fixtures.

Each custom fixture was wired for the use of 42 watt fluorescent lamps and contained the appropriate ballast with the fixture for ease of maintenance in the future.

Client
Palos Verdes Library District

Client Project Managers
Charles Crouse, Facility Manager, Palos Verdes Library District
Tom Michali, M2A Milofsky Michali & Cox Architects

Date Awarded
2012

Completion Date
2012

Project Webpage
https://grandlight.com/portfolio/malaga-cove-library/

Yale University Center for British Art

GRAND LIGHT
Lighting & Design Since 1929

Property History

Presented to the university by Paul Mellon (Yale College Class of 1929), the Yale Center for British Art houses the largest and most comprehensive collection of British art outside the United Kingdom. The collections re-flect the development of British art, life, and thought from the Elizabethan period onward. The Center offers a year-round schedule of exhibitions and educational programs, as well as numerous academic resources. The Yale Center for British Art is designed by the internationally acclaimed American architect Louis I. Kahn. Located across the street from his first major commission, the Yale University Art Gallery (1953), the Center was Kahn´s final work and was completed in 1977, three years after his death. In 2005 the Center received the prestigious Twenty-five Year Award of the American Institute of Architects which each year honors a single architectural landmark, completed twenty-five to thirty-five years prior, which has withstood the test of time.

Project Description

Grand Light replicated one of the existing historic pendant light fixtures original to the architecture of the building. The pendant is a spun, tapered aluminum, shade which was anodized further enhancing the characteristics to the hand spun part. Each component for the fixture was custom made to assure complete historical accuracy to the ones that had been originally made.

In addition to historic pendant replications, Grand Light designed and fabricated custom aluminum LED exit sign replications of existing historic exit signs while also retrofitting those exit signs original to the architecture of the building. Each exit sign has LED circuit boards installed inside the frame along the sides and top and a separate LED downlight board, creating a consistent illuminated face plate and a uniform downlight. Custom glass face-plates, using a specific frame size, stencils, and chevrons, were fabricated to meet UL 925 Standards.

By installing these custom exit signs, the Center maintains its historical architectural accuracy while still upgrading to modern LED lighting technology with improved light levels and efficient energy savings that both employees and visitors can appreciate.

Client

Yale University

Client Project Managers

Daphne Kalomiris, Knight Architecture LLC

Date Awarded

2013

Completion Date

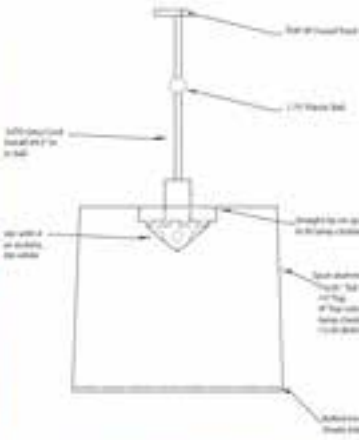
2015

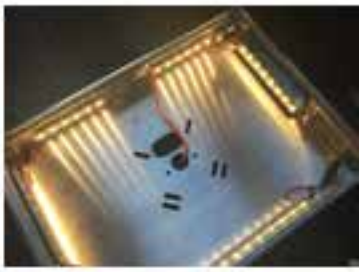
Project Webpage

https://grandlight.com/portfolio/yale-center-for-british-art/

Awards

CT Trust For Historic Prervation Merit Award 2017





Cathedral of St. Joseph

GRAND LIGHT
Lighting & Design Since 1929

Property History

The Cathedral of St. Joseph was first built in 1892, after 20 years of planning and construction overseen by three Bishops. The original architect was Patrick C. Keely, and the design was well received by the parishioners of Hartford and surrounding municipalities. On December 31st, 1956, a fire of unknown origin burned the church to the ground and destroyed the entirety of the original structure. Work was done to rebuild the church and it was re-opened in 1962. It features twenty-six windows, designed and crafted in Paris by Jean Barillet, bells built in Holland, and a massive organ consisting of 8000 pipes. The size of the church requires tremendous lighting capability, and the cost of operating the 216 lights that are hung around 100 feet in the air has grown over the years to be a large part of the annual budget.

Project Description

The Cathedral of St. Joseph, the Archdiocese of Hartford, selected Grand Light to retrofit their current lighting system for improved efficiency and lower operating cost. We decided to go with a QL Induction Lighting System that would enable a ultra long life per unit, consistent color, and the ability to dim as needed.

Grand Light artisans crafted a pre-production model of the system and demonstrated it, and upon approval by the Archdiocese, began production of the parts that would be used to retrofit the 216 light kits they have installed.

A template was measured and created for drilling the holes into each hat and additional tables were set up to help with production flow. While the hats were being drilled, the reflector was modified to fit the custom built heatsink and attached to the heatsink.

After the holes were drilled, long screws and spacers were fitted into the hats to fit the generator casing onto. Wiring was run for the unit in preparation of the arrival of the generators while verifying each unit's status through a quality assurance process.

The existing 232 historic luminaires were retrofitted with a 165W induction lamp, positioned properly in the lens and reflector assembly, in order to provide a lighting quality more similar to the original system. Due to the design of the retrofit kit housing, the average light level exceeds 17.0 fc while only using 1.9 w/sf of power.

Client

Archdiocese of Hartford

Client Project Managers

David Giarrusso, Project Manager, Trane Commercial Systems

Date Awarded

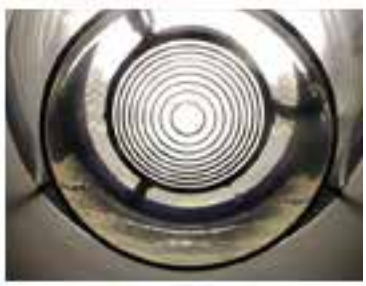
2013

Completion Date

2013

Project Webpage

https://grandlight.com/portfolio/st-josephs-cathedral/



White House Visitor Center

GRAND LIGHT
Lighting & Design Since 1929

Property History

The White House Visitor Center is located at 1450 Pennsylvania Ave. NW in the Department of Commerce Building on the Southeast corner of 15th and E Streets. The White House Visitor Center completed a $12.6 million renovation which reopened to the public in September 2014. The project was a public private endeavor between the National Park Service and the White House Historical Association.

Project Description

As a part of a renovation, Grand Light was selected to replicate eight sconces that were original to the building for an addition during this phase. A total of eight historic replications were made using cast bronze and hand forged iron. An original fixture was shipped to Grand Light were it was disassembled so that molds could be made to replicate cast brass components, and the iron components served as a template to our craftsman for replication on the hand forged pieces.

The cast brass components we made using the lost wax method of casting the hand-forged steel components will be forged using old world blacksmith techniques. The cast brass components were antiqued for an aged look and the hard forged steel portions received a black patina, and then received three coats of protective wax.

All fixtures were rewired with UL listed components and HIPOT tested in accordance with UL standard 1598.

Client

U.S. National Park Service

Client Project Managers

David Osborne, Circuits Unlimited Inc.

Date Awarded

2012

Completion Date

2012

Project Webpage

https://grandlight.com/portfolio/white-house-visitor-center/

American Artisans At Work Preserving History

Notable Projects

Project Name	Contractor / Contact	Type	Date
EF International Language Campus New York, Tarrytown, NY	Ferguson Malone Architecture - Irvington, NY	Educational Institution	2018
Massachusetts State House - Senate Chambers, Boston, MA	Colantonio, Inc. - Holliston, MA	Government	2017-2018
Harvard University - Lowell House, Cambridge, MA	Consigli Construction Co., Inc. - Milford, MA Lynnwell Associates Inc. - Quincy, MA	University	2017-2018
Kirby Episcopal House, Glenn Summit, PA	Allegrone Companies - Lenox, MA	Landmark Building	2017-2018
United States Military Academy (West Point) Pershing Barracks, West Point, NY	Ducci Electrical Contractors, Inc. - Torrington, CT J. Kokolakis Contracting, Inc. - Tarpon Springs, FL	Educational Institution	2017
Yale Divinity School, New Haven, CT	All-Brite Electric Inc. - West Haven, CT	University	2017
East Clinton Street Bridge, Birmingham, NY	R. DeVincentis Construction, Inc. - Birmingham, NY J & R Electric, Inc. - Pierrepont Manor, NY	Government	2017
Yale University Sterling Memorial Library Manuscripts & Archives, New Haven, CT	Standard Builders - Newington, CT	University	2017
New London City Hall , New London, CT	City of New London - New London, CT	Government	2017
St. Joseph - Immaculate Conception Catholic Church, Milbrook, NY	Baker Liturgical Art - Plantsville, CT	Religious Institution	2017
Yellowstone National Park - Mammoth Hot Springs Hotel Yellowstone National Park, WY	Swank Enterprises - Valier, MT	Hotel	2016
United States Capitol Building, Washington, D.C.	Architect Of The Capitol - Washington, D.C.	Government	2016

Project Name	Contractor / Contact	Type	Date
First Baptist Chruch, Pleasanton, TX	First Baptist Church - Pleasanton, TX	Religious Institution	2016
Harvard University - Winthrop House Gore Hall, Cambridge, MA	Consigli Construction Co., Inc. - Milford, MA Lynnwell Associates Inc. - Quincy, MA	University	2016
Harvard University - Winthrop House Gore Hall, Cambridge, MA	Lee Kennedy Co Inc - Quincy, MA	University	2016
Charles Washington Hall, Charles Town, WV	Rockwell Construction Company - Mercersburg, PA	Landmark Building	2016
Cathedral of St. John the Baptist, Paterson, NJ	Roman Catholic Diocese of Paterson - Paterson, NJ	Religious Institution	2016
St. Peter's Church, Plattsburg, NY	Baker Liturgical Art - Plantsville, CT	Religious Institution	2016
Marriott Syracuse Downtown, Syracuse, NY	Hayner Hoty Corporation - Syracuse, NY	Hotel	2015
Hudson County Courthouse, Jersy City, NJ	SMBA Construction - North Arlington, NJ	Government	2015
Massachusetts Institute of Technology - Kresge Auditorium, Cambridge, MA	J+M Brown Co - Jamaica Plain, MA Lee Kennedy Co Inc - Quincy, MA	University	2015
United States Military Academy (West Point) MacArthur Short Barracks, West Point, NY	J. Kokolakis Contracting, INC. - Bohemia, NY Ducci Electrical Contractors, Inc. - Torrington, CT	Educational Institution	2015
New Haven County Couthouse, New Haven, CT	Kronenberger & Sons Restoration - Middletown, CT JE Shea Electric - Plantsville, CT	Government	2013-2015
Isham-Terry House, Hartford, CT	Southern Electric - Hartford, CT Connecticut Landmarks - Hartford, CT	Landmark Building	2015

Project Name	Contractor / Contact	Type	Date
Harvard University - Dunster House, Cambridge, MA	John A Penney & Co - Cambridge MA Turner Construction - Boston, MA	University	2014-2015
Wadsworth Anthenum, Hartford, CT	Beacon Electric, Inc - Plantsville, CT Consigli Construction - Hartford, CT	Museum	2014-2015
Bradley Home For The Aging, Meriden, CT	D+M Manson Electric - Stratford, CT	Commercial	2014
Massachusetts Institute of Technology - Chapel, Cambridge, MA	J+M Brown Co - Jamaica Plain, MA Lee Kennedy Co Inc - Quincy, MA	University	2014
Yale University - Lanman Wright Hall, New Haven, CT	Bonner Electric, Inc. - Uncasville, CT The Whiting-Turner Contracting Company - New Haven, CT	University	2014
Oakland University - Carillon Tower, Rochester, MI	LaBelle Electric - Macomb, MI	University	2014
International Revenue Service Building, Washington, D.C.	Total Electric, Inc. - Upper Marlboro, MD	Government	2014
Dartmouth College - Sanborn Library, Hanover, NH	Dartmouth College Electrical Shop - Hanover, NH	University	2014
Clyde-Savannah School, Clyde, NY	Kyle Lawrence Electric - Palmyra, NY	Educational Institution	2014
St. Joseph's Cathedral - Archdiocese of Hartford, Hartford, CT	Tine Dale Electrical Contractors - Rocky Hill, CT Trane Corporation - Rocky Hill, CT	Religious Institution	2013
Yale University - Sterling Chemistry Hall, New Haven, CT	Fortin Electric - New Haven, CT Standard Builders - Newington, CT	University	2013
Sagamore Hill National Historic Site, Oyster Bay, NY	Cooper Power and Lighting Corporation - Farmingdale, NY E&A Restoration Inc. - Syosset, NY	National Park	2013

Project Name	Contractor / Contact	Type	Date
New Haven Courthouse, New Haven, CT	JE Shea Electric - Plainville, CT	Government	2013
Yale University - Center for British Art, New Haven, CT	Turner Construction Company - New York, NY White Electric LLC - Guilford, CT	Museum	2013
Cornell University - Sigma Phi Fraternity, Ithica, NY	Flynn Battaglia Architects - Buffalo, NY	University	2013
Harvard University - McKinlock Hall, Cambridge, MA	Dagle Electrical Construction Corp - Woburn, MA Dimeo Construction Company - Providence, RI	University	2013
White House Visitor Center, Washington, D.C.	Circuits Unlimited, Inc. - Waldorf, MD Clark Construction Group, LLC - Bethesda, MD	Government	2012
Malaga Cove Library, Palos Verdes, CA	M2A Milofsky Michali & Cox Architects - Los Angeles, CA	Library	2012
Columbia University - Morningside Campus, New York, NY	Columbia University - New York, NY	University	2012
Phillips Exeter Academy - Phillips Hall, Exeter, NH	Windover Construction - Beverly, MA Longchamps Electric Incorporated - Manchester, NH	Educational Institution	2012
Massachusetts State House, Boston, MA	J.K. Scalan Company, Inc. - Falmouth, MA	Government	2012
Dakota Middle School Theater, Rapid City, SD	Muth Electric Inc - Rapid City, SD	Educational Institution	2011
Town of North Canaan, North Canaan, CT	Allied Engineering Associates, LLC - Canaan, CT	Government	2011
Holy Trinity Orthodox Church, New Britain, CT	Baker Liturgical Art - Southington, CT	Religious Institution	2011

Project Name	Contractor / Contact	Type	Date
New Haven Museum, New Haven, CT	New Haven Museum - New Haven, CT	Museum	2009
Minute Man National Historical Park, Concord, MA	Minute Man National Historical Park - Concord, MA	National Park	2009
Weehawken Schools, Weehawken, NJ	Jeral Construction Services - Bloomfield, NJ	Educational Institution	2009
Yale Calhoun College, New Haven, CT	Genovese & Massaro - Hamden, CT	Educational Institution	2008
Washington Irving Intermediate School, Tarrytown, NY	Allstar Electric - Hawthorne, NY	Educational Institution	2008
Yale University - Brady Memorial Lab, New Haven, CT	Fortin Electric Company - New Haven, CT	University	2008
Orford Congregational Church, Orford, New Hampshire	Haynes & Garthwaite Architects - Norwich, VT	Religious Institution	2008
Yale Timothy Dwight Hall, New Haven, CT	Giordano Construction Co., Inc. - Branford, CT	University	2007
Yale Silliman College, New Haven, CT	Genovese & Massaro - Hamden, CT	University	2007
Otesaga Resort Hotel, Cooperstown, NY	Bassett Healthcare - Andes, NY	Hotel	2007
Yale Davenport College, New Haven, CT	Daniel O'Connels Sons, Inc. - New Haven, CT	University	2007
Southern Hills Country Club, Tulsa, OK	Haynes & Garthwaite Architects - Norwich, VT	Commercial	2006

Project Name	Contractor / Contact	Type	Date
Lincoln Square Theatre, Decatur, IL	Bodine Electric Company - Decatur, IL	Theater	2006
Yale Leigh Hall, New Haven, CT	Genovese & Massaro - Hamden, CT	University	2005
Yale Battell Chapel, New Haven, CT	Fortin Electric Company - New Haven, CT	University	2005
Yale SSS Lecture Hall, New Haven, CT	Genovese & Massaro - Hamden, CT	University	2003
Yale Pierson College, New Haven, CT	Genovese & Massaro - Hamden, CT	University	2002
Yale Marquand Chapel, New Haven, CT	Genovese & Massaro - Hamden, CT	University	2002
Yale Divinity School, New Haven, CT	Genovese & Massaro - Hamden, CT	University	2002
Yale Branford College, New Haven, CT	Genovese & Massaro - Hamden, CT	University	2002

GRAND LIGHT
Lighting & Design Since 1929

Historic Lighting Restoration Guidlines

American Artisans At Work Preserving History

PART 1 – GENERAL

The purpose of this document is to specify the scope of work required for the restoration of existing historic lighting fixtures and the replication of others.

1.1 RELATED DOCUMENTS

A. The provisions of the Contract Documents, Drawings & Instructions to Bidders, General Conditions, Supplementary Conditions, Alternates and Addendas apply to this Specification.

1.2 DESCRIPTION OF WORK

A. Provide lighting fixtures as shown on the Drawings and identified as "historic lighting" and herein specified or scheduled.
B. The work to be performed on this project shall include the restoration of existing historic fixtures and the replication of luminaires from both existing fixtures and from photographs, drawings, and historic information available, where actual luminaires do not exist.
C. For new replications of existing and non-existing lighting, work shall include complete studies of photographs, drawings, and available historic information allowing concise preparation and design of engineering drawings with complete bills of materials for the fabrication of each fixture. All ornamental design, structural elements and component parts shall be fully detailed in addition to all anchoring support, wireway, and joinery conditions.
D. Completed fixtures shall meet all applicable codes regarding materials and methods. All NEC guidelines and UL procedures shall be followed.
E. Electrical contractor shall be responsible for verifying existing conditions and coordinate the mounting hardware with Grand Light. It is the responsibility of the fixture manufacturer to ensure that all structural, mechanical, electrical, design, construction and fabrication of fixtures meet all applicable codes as related to public safety concerns. It is the responsibility of the electrical contractor to ensure that fixtures are safely installed with careful attention to fixture weight and mounting, lift and lowering devices and safety/seismic cables, where applicable.

1.3 QUALITY ASSURANCE

A. New and restored historic light fixtures and assembled components shall be wired and tested in accordance with UL standards.
B. Work on historic lighting shall be performed by a qualified Restoration and Replication Manufacturer (Grand Light) with no less than ten years successful experience in comparable restoration and replication projects and employing personnel skilled in the restoration and replication processes and operations indicated. Upon Request, Grand Light shall provide proof of qualification.

C. Qualification Data:

Grand Light shall submit qualification data as listed below, in their response to the request for bids, along with their price quotation. Data shall demonstrate Grand Light's capabilities, experience and financial stability. It shall include a history of the firm, number of years the firm has restored and replicated historic lighting. Qualification data should include five projects within the last five years of similar scope and magnitude, photo documentation of completed work and project references.

1.4 SUBMITTALS

A. Grand Light shall refer to contract bid documents regarding shop drawings, product data, and samples, submission procedures.
B. For custom replicated luminaires, submit shop drawings indicating all details of mechanical and electrical construction (including circuitry, lamping, ballasts, transformers, wireways, lampholders, etc.), diffuser assembly, mounting accessories and hardware, finishes and list of materials.
C. For existing luminaires; Provide shop drawings for structural modifications only indicating the project name, manufacturer, all materials, finishes, lamping, voltage, ballast information and mounting details.
D. Finish Samples: Samples of shades, glass diffuser material, metals and metal finish samples shall be submitted for approval prior to the notice to proceed with mock-ups.

1.5 MANUFACTURERS MOCK-UPS

A. Grand Light shall provide, access to the manufacturing plant for the project architect/engineer and owner project manager to review work in progress. The project architect/engineer and owner will coordinate these trips for timely review of work in progress.

1.6 PRODUCT HANDLING – REMOVAL THROUGH INSTALLATION

A. All costs for removing historic fixtures from existing locations, disassembly, packing, crating, insurance and freight for luminaires from the job site to Grand Light shall be the responsibility of the Electrical Contractor. The Electrical Contractor shall coordinate the removal and re-installation with other project contractors to insure convenience for all concerned. Packaging, crating, insurance and shipping of restored and replicated fixtures to the Electrical Contractor for re-installation shall be the responsibility of Grand Light. The Electrical contractor shall be responsible for receiving, assembly and installation of both restored and replicated fixtures.

B. The Electrical contractor shall be responsible for final lamping adjustment, luminaire adjustment and cleaning. Grand Light shall be on-site during fixture removal to assist with the photo-documentation of the existing condition, location, tagging and supervising the proper handling, disassembly, packing and crating of the historic lighting fixtures. When fixtures are re-installed, Grand Light shall again be on-site to supervise the proper handling, uncrating and assembly of the fixtures prior to their being installed by the Electrical Contractor.

1.7 GUARANTEE

A. Grand Light shall furnish to the owner a written guarantee for luminaries against all defects in materials and workmanship, including without limitation, against failure to function, for two (2) years from date of acceptance.
PRODUCTS Lamps, ballasts, transformers, lampholders, as specified.

1.8 MATERIALS

General:
Utilize materials to match the original or with matching equivalent physical characteristics of strength, finish, resistance to corrosion, etc. Utilize gauges and thickness required to provide the appropriate structural performance and durability.
The restoration of existing luminaires shall consist of, electrical rewiring, new glass globes, cleaning and refinishing. Physical restoration shall consist of the repair or replacement of any parts that are missing, broken, or damaged. Replacement shall match the original parts in strength and appearance, including degree of detail.
Electrical restoration shall consist of the replacement of all electrical components and wiring. Luminaires shall be wired with UL listed components and tested in accordance with UL standards.

1.9 STRUCTURAL MEMBERS

A. All visible structural members shall be fabricated in the material used in the original or, in the case of luminaires based on photographs or drawings of the original, the material that would have been used in a quality luminaire at the time. Thickness and gauges shall be as required for structural integrity.
B. All castings shall be free of pits, scratches, blemishes, parting lines, burrs and internal flaws.
C. Assemblies of structural elements joined by soldering, brazing, or welding shall exhibit no external discoloration at the seams. External fasteners shall be finished to match the parts in which they are installed.

2.0 ORNAMENTAL MEMBERS

A. Applied ornamental pieces (cast, spun, stamped or hand wrought) shall be of the material to which they were attached unless otherwise indicated by the originals or in the specifications.
B. Applied ornamentation shall be attached using fasteners in discreet locations. Visible fasteners shall be finished to match the material into which they are set.

2.1 NEW FINISHES (New Luminaires)

A. It shall be the responsibility of Grand Light to research and propose the finish or combination of finishes to be employed on the luminaires. Finish shall be uniform, free of runs, specs, smudges, “checking”, “rainbowing” or milkiness caused by humid environments.
Manufacturer shall provide samples for approval of all finishes and materials to be used with the Shop Drawing Submittal.

2.1A CLEANING FINISHES (EXISTING LUMINAIRES)

A. Existing luminaires shall be cleaned only and the existing patina appearance shall be retained were specified.
B. Restoration/Conservation includes cleaning, repair, patination, painting, and application of protective coatings. Multiple coats of museum grade waxes or lacquer as required.

2.2 DIFFUSERS - GLASS

A. Match the original diffuser-glass as shown in historic photos. It shall be the responsibility of Grand Light to research and propose the diffuser. Grand Light shall provide samples for approval of all finishes and materials to be used with the Shop Drawing Submittal.
B. Match the existing in all aspects: size, thickness, material, color, surface texture design, etc. Shelf Stock: furnish additional diffusers for each fixture type, as specified.
C. Replace the diffusers-glass on the existing luminaires to match the diffusers on the new luminaires.

2.3 REPLICATION LUMINAIRES

A. The contract documents define the required visual appearance and performance characteristics, which must be achieved in the existing replications. Variances will be considered only, if in the opinion of the architects, their consultants, and the project historians, they will achieve the desired appearance, quality of construction and performance.

B. Lamp holders shall hold lamps securely against vibrations and maintenance handling. For enclosed incandescent standard base lampholders, provide glazed porcelain, nickel-plated brass screw shell type lampholders. Other lampholders shall match the original or as specified. Decorative sleeves over lampholders should match the original.
C. Wiring: Shall meet the applicable U.L. Standard and all local codes and the National Electrical Code. Exposed wire shall be of similar color to existing finish and be installed in such a manner as to be as invisible as possible. Wires through the chain shall be in such a manner that chains hang plumb and straight without crimping the wire at any point. Grand Light shall coordinate with Electrical Contractor for any special wiring or attachment considerations (plugs, quick disconnects, extra length, sleeving, etc.)
D. Lamps: Shall be provided by others.

2.4 FABRICATION

A. Luminaires shall be free of light leaks and shall be designed to provide sufficient ventilation of lamps and ballasts, including vent holes where required.
B. Lamps shall be oriented to provide the best light distribution, free of shadows or “hot” spots.
C. Sheet metal work shall be free from tool marks and dents and shall have accurate angles bent as sharp as compatible with the gauges of the required metal. Intersections and joints shall be formed true and of adequate strength and structural rigidity to prevent any distortion after assembly. Sheet metal shall be free of light leaks. Edges shall be finished so there are no sharp edges exposed. Sheet metal work shall be properly fabricated and supported so that planes will not deform (i.e. become concave or convex, due to normal expected ambient and operating conditions).

The GRAND LIGHT Difference

American Artisans At Work Preserving History

Why Choose Grand Light

- Long Standing History of Successful, Award Winning Projects
- Dedicated, Full-Time Project Management & Engineering Team
- Artisans and Specialists with Decades of Experience
- Extensive Background in Restoration, Manufacturing, and Design
- Understanding of Large and Small Projects
- Exceptional Client Communication and Customer Service
- Committed to Safety Without Compromise

The Grand Light Difference extends beyond the restoration and manufactoring process. Our word is our commitment, and we strive to earn your trust. While challenges are inevitable, we will never waiver from a commitment we make and work hard to exceed your expectations.

Repeat business from satisfied clients is critical to our success. Our goal is to ensure our clients receive more value than expected in Quality Assurance, Cost, Scheduling, Performance, Communication, and Safety. We have never failed to complete a project on-time and commit ourselves to delivering the highest quality products and service possible.

Thank you for reviewing our team's qualifications, please do not hesitate to contact us with questions or for additional information needed for your assessment of our company.

Regards,

Steve Stockman
Principal

American Artisans At Work Preserving History