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JOHNSON CITY HISTORIC PRESERVATION GUIDEBOOK

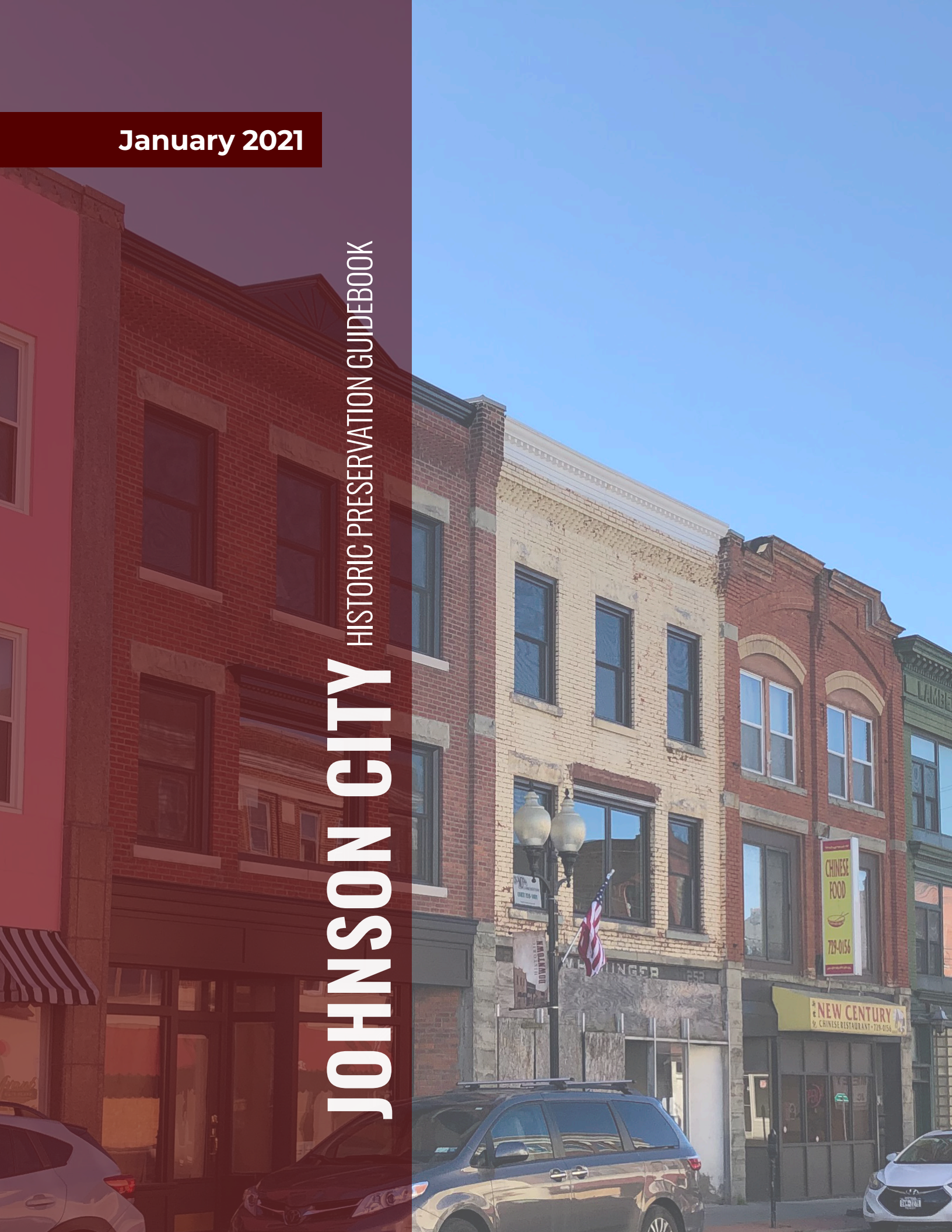

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TABLE OF CONTENTS

APPENDIX

1 HISTORIC PRESERVATION IN THE VILLAGE OF JOHNSON CITY

The purpose of this Guidebook is described in this chapter, as well as who should use the Guidebook and how. This chapter also provides an overview about historic preservation and how it relates to the Village of Johnson City. Specific topics covered in this chapter include:

INTRODUCTION

This Preservation Guidebook (Guidebook) for the Village of Johnson City is a resource for property owners and residents to gain a better understanding about the value of older and historic buildings in the Village. The Village contains a variety of historic buildings that not only represent and define periods of significant local history but are comprised of high-quality materials and craftsmanship that today would be prohibitively expensive to recreate. Therefore, this Guidebook aims to inform about the options available to maintain those buildings into the future, as well as explore some of the benefits to the economy and environment that can result from historic preservation.

GUIDEBOOK FRAMEWORK

CHAPTER 1	enhances the basis for an understanding about historic preservation, and describes the various preservation policies at the national, state, and local levels.
CHAPTER 2	categorizes existing structures in the Johnson City Historic District by architectural types and uses, with representative illustrations and photographs to help property owners and residents understand key elements of the historic building stock.
CHAPTER 3	discusses the benefits of historic preservation, with a special focus about the economic impacts. A matrix of funding programs with guidance about Federal and New York State Rehabilitation Tax Credit Programs is provided.
CHAPTER 4	reviews the Secretary of the Interior's Standards for the Treatment of Historic Properties and describes the four distinct preservation treatments. This section also examines the issues and concerns facing the historic building stock within the historic district boundaries.
CHAPTER 5	provides the framework for determining the appropriateness of modifications to historic buildings within the Village of Johnson City. This chapter is complementary to the Johnson City Design Guidelines, with a special focus on the long-term protection of a property's significance through the preservation of historic materials. This chapter also features an examination of emerging issues such as energy-efficiency and sustainable rehabilitation practices and provides a matrix of Federal, State and local resources and organizations.

WHO SHOULD USE THIS GUIDEBOOK?

The Guidebook serves as an educational base for property owners, developers and residents within the local historic district. It is a user-friendly resource that highlights the benefits of historic preservation and enhances local efforts and best practices for owners of historic properties. The Guidebook is the next step in a series of documents prepared in cooperation by local governments, consultants, and various stakeholders aimed at promoting investment in the Village's downtown core. The Johnson City Design Standards, which focuses on building and site design and codifies the Standards through modifications to the Village's Zoning Code, should be used in conjunction with this Guidebook.

HOW TO USE THE GUIDEBOOK

The Guidebook should be used by property owners who are considering modifications to a historic structure that is designated within the local historic district.

CHAPTER 1	Utilize this chapter to learn about historic preservation and its benefits.
CHAPTER 2	Utilize to understand the character-defining features of a historic building.
CHAPTER 3	Utilize to learn about how to lay the groundwork for organizing local preservation efforts.
CHAPTER 4	Utilize to understand how to choose the most appropriate treatment for your preservation project.
CHAPTER 5	Utilize to learn how to apply appropriate treatments, such as materials, new additions, and architectural features, to your historic preservation project.

WHERE DOES IT APPLY?

Located in the heart of Broome County, the Village of Johnson City is approximately 4 1/2 square miles. It lies in the center of the Triple Cities, with Binghamton two miles to its east and Endicott six miles to its west. The Village of Johnson City has generated significant momentum, as evidenced by a number of community development and revitalization programs.

Recent investments have been concentrated in the southern portion of the Village, found around its historic downtown district (the Johnson City Historic District), the Endicott-Johnson Brownfield Opportunity Area, the Johnson City iDistrict, a HUBZone, and an Opportunity Zone. These programs all have a common goal of spurring investment, and ultimately aim to transform the Village into an attractive and innovative community to live, work and play.

ENDICOTT-JOHNSON INDUSTRIAL SPINE BROWNFIELD OPPORTUNITY AREA (EJ-BOA)

The Department of State's BOA program provides communities with guidance, expertise and financial assistance to complete revitalization strategies for neighborhoods or areas affected by brownfields or economic distress.

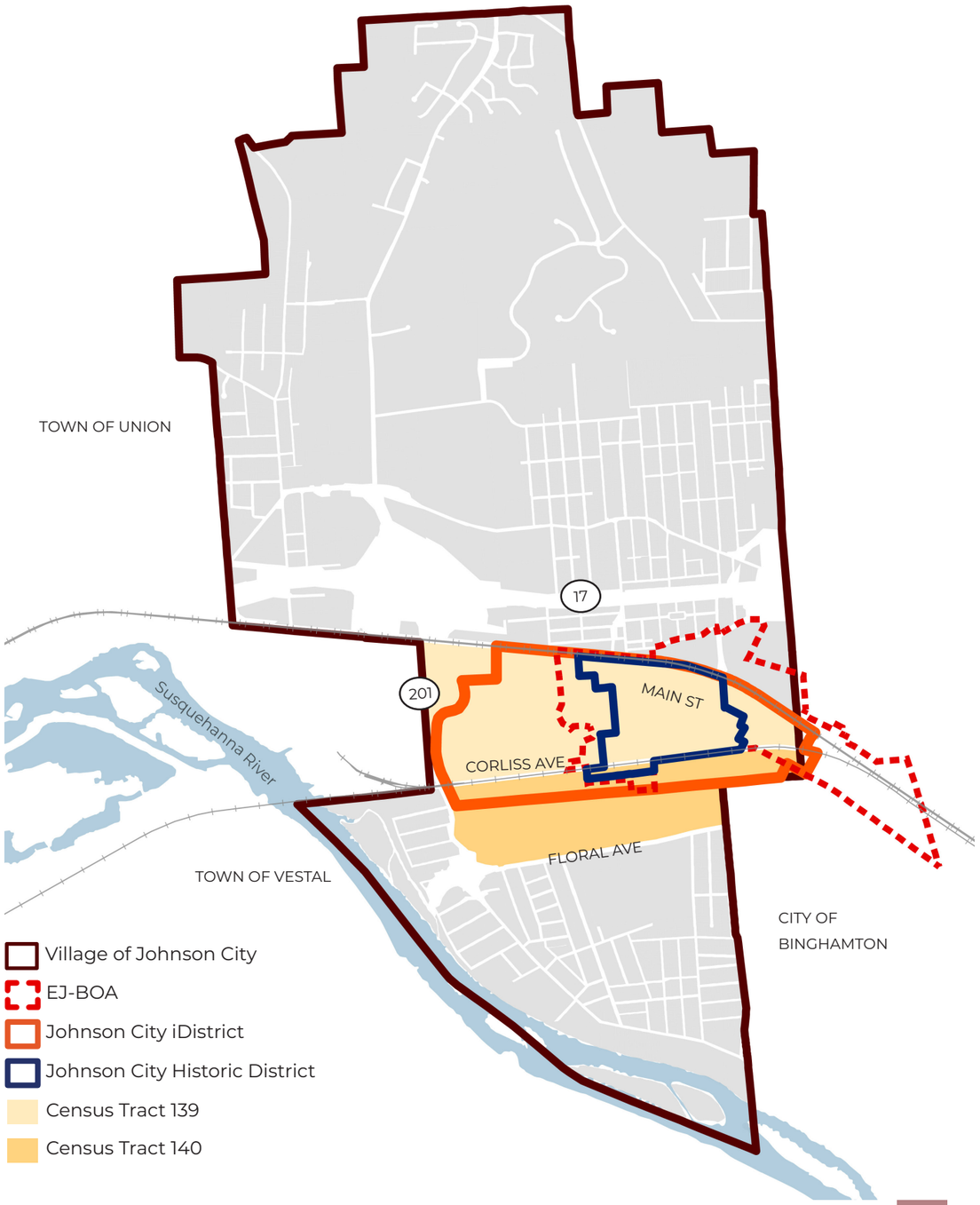
In 2010, the EJ-BOA Study Area was officially designated as a BOA, giving the Village priority access to technical resources, grant preference and enabling the Village become more attractive for private investment. The EJ-BOA Study Area encompasses approximately 0.4 square miles, and is comprised of a number of vacant former manufacturing plants which are essential to re-activating the area.

JOHNSON CITY IDISTRICT

Developed as part of its strategy to "Build the Greater Binghamton Innovation Ecosystem", the Southern Tier Regional Economic Development Council established three iDistricts in the City of Binghamton, Village of Endicott and Village of Johnson City (also known as the Triple Cities).

An iDistrict, short for Innovation District, is a geographic area where cutting-edge, high-tech anchor institutions and companies cluster and connect with startups, business incubators, and accelerators. The Johnson City iDistrict encompass 283 acres, and is anchored by the Binghamton Health Sciences and Technology Innovation Park.

REFERENCE MAP



HISTORICALLY UNDERUTILIZED BUSINESS ZONE (HUBZONE)

The HUBZone is a program administered by the U.S. Small Business Administration (SBA). It helps small businesses gain preferential access to federal procurement opportunities. These businesses must be located within qualified census tracts and meet a number of criteria as outlined by the SBA. Within the Village of Johnson City, Census Tracts 139 and 140 are considered qualified census tracts.

OPPORTUNITY ZONE

Offered through the Tax Cuts and Job Acts of 2017, the Opportunity Zone community development program is a federal program that encourages private investment in low-income communities. The Opportunity Zones are low-income census tracts with an individual poverty rate of at least 20 percent and median family income no greater than 80 percent of the area median. Areas designated as Opportunity Zones can receive funds that provide investors the chance to put money towards rebuilding these low to moderate income communities.

Based on analyses done by NYS, there are 514 census tracts that have been recommended to the U.S. Department of the Treasury for designation as Opportunity Zones. Within the Village, Census Tract 139 has been designated as an Opportunity Zone.

JOHNSON CITY HISTORIC DISTRICT

Listed on the National Register of Historic Places, the Johnson City Historic District encompasses eight acres of the community laid out by the Lester brothers, which was expanded by George F. Johnson for the workers of the Endicott-Johnson Shoe Company, also known as the Endicott-Johnson Corporation.

Within the district are residential and commercial buildings, six former Endicott-Johnson factories, two churches, the former company firehouse, the former company medical building, recreational hall, an old municipal building, the Goodwill Theater, a post office and library. The spine of the historic district is Main Street; capped at the east end by the Sarah Jane Johnson Methodist Church and the US Post Office and west end by St. James Roman Catholic Church and Your Home Library. Diffusing out from Main Street to the north and south are residential streets that in turn are flanked by industrial buildings and factories that are the heart of the Village of Johnson City's history.

CASE STUDY: PRESERVATION SUCCESS STORY 250 MAIN STREET

The three-story, brick commercial building at 250 Main Street was one of 32 priority projects recommended for funding out of 50 eligible submitted through the Greater Binghamton Fund. The Fund is a $20 million dollar program, supported though the Southern Tier Regional Economic Development Council, aimed at transforming the Binghamton iDistrict, Endicott iDistrict and Johnson City iDistrict with mixed-use and mixed-income developments, private retail and commercial development and infrastructure and streetscape improvements. Each priority project selected was considered to be a catalytic project that could jump-start investment in the three iDistricts and make an immediate impact on the surrounding community.

Building owners and longtime community residents, Thomas and Kathryn Sheredy, purchased the building to influence revitalization in the historic downtown core of Johnson City. The building is a contributing resource to the Johnson City Historic District, formerly known as the "Endwell Cigar Building." After the building's exterior envelope was reinforced, including the roof—which was severely deteriorated—the interior was rehabilitated with the assistance of a preservation architect to convert the ground-floor into commercial space and the second and third floors into apartments. It was important to preserve the historic architectural components of the building such as the cornice, which contains an iron pediment with sunburst motif. This project serves as a model of building preservation for other downtown property owners.

WHAT IS HISTORIC PRESERVATION?

The term “historic preservation” generally applies to keeping older buildings as a functioning part of living history. It’s not about keeping the details of history in a museum state—usually it includes changes to the original building to meet contemporary needs or for compliance with current building codes. Maintaining older buildings and their historic integrity and materials can be undertaken in a way that is respectful to the building’s design and surrounding historic neighborhood. Proximity to walkable streets and transit facilities, mixed-use neighborhoods, and downtown revitalization are often byproducts of historic preservation.

NATIONAL HISTORIC PRESERVATION ACT

Formed in 1966, the National Historic Preservation Act (NHPA) established the need for partnerships on local, state, and national levels. The NHPA laid out a procedure and policies for the stewardship of historic properties for the agencies that control them, including prioritizing historic properties before leasing or constructing new facilities.

The NHPA created public policies to protect historic and cultural resources, such as the following:

- Section 106 review, where federal agencies must consider the impact to historic resources that would result from any project undertaken by the federal government;
- the National Register of Historic Places;
- the Advisory Council on Historic Preservation, which oversees the Preserve America Program and the Section 106 process.

In addition to the programs NHPA created, state offices in charge of designating and reviewing the historic resources, called the State Historic Preservation Offices, or SHPOs, were created. Finally, NHPA became the basis for several tax credit and incentive programs that encourage historic-building owners to preserve their buildings by providing financial assistance to make the projects’ costs competitively inexpensive with new construction.

ORIGINS OF THE NATIONAL PRESERVATION ACT

The historic preservation movement is widely thought to have begun with the demolition of New York City’s Pennsylvania Station for a new, underground station in 1963. McKim, Mead, and White’s 1910 Pennsylvania Station was modeled on the Roman Baths of Caracalla. The building was a masterpiece of the Beaux-Arts style and one of the great architectural works of New York City. Although the New York City Landmarks Preservation Commission had included Penn Station on a list of 300 buildings “worthy of preservation,” the commission had no authority to protect the building from demolition. Many cities across the nation have a story like Penn Station where a landmark without protection was threatened and ultimately demolished. Building upon these local catalysts for historic preservation policies, momentum gained on a national scale in the form of the National Historic Preservation Act (NHPA) of 1966. The NHPA remains the most expansive legislation about historic preservation in the United States.

AERIAL VIEW OF PENNSYLVANIA STATION, 1910.
IMAGE CREDIT: LIBRARY OF CONGRESS

NEW YORK STATE AND NATIONAL REGISTER OF HISTORIC PLACES

Among the most significant aspects of the National Historic Preservation Act of 1966 was the creation of the National Register of Historic Places, the nation's official list of properties worthy of preservation. The National Register of Historic Places is a list of districts, sites, buildings, structures and objects of historic or architectural significance as defined by criteria established by the US Department of the Interior.

Properties must usually be more than 50 years of age to be considered for listing. According to the New York State Historic Preservation Office (SHPO), New York leads the nation in the National Register program, with more than 6,000 listings and approximately 120,000 properties.

The New York State Legislature passed the State Historic Preservation Act in 1980, which established the State Register of Historic Places. The guidelines established by the State Historic Preservation Act (SHPA) closely resemble those established by the National Historic Preservation Act.

EVALUATING PROPERTIES FOR LISTING ON THE NATIONAL REGISTER OF HISTORIC PLACES

In addition to possessing integrity of location, design, setting, materials, workmanship, feeling, and association, the following criteria are used:

- **Criteria A**, that are associated with events that have made a significant contribution to the broad patterns of our history; or
- **Criterion B**, are associated with the lives of persons significant in our past; or
- **Criterion C**, that embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant distinguishable entity whose components may lack individual distinction; or
- **Criterion D,** that have yielded, or may be likely to yield, information important in prehistory or history.

BENEFITS OF BEING LISTED ON THE NEW YORK STATE AND NATIONAL REGISTER OF HISTORIC PLACES

BENEFIT 1

A measure of protection is afforded to State and National Register properties from the undertaking, funding, or approval of projects by government agencies. State and federal agencies must consult with the SHPO to avoid, minimize, or mitigate adverse effects to listed or eligible properties.

BENEFIT 2

Eligibility to apply for the state homeowner tax credit and/or the state and federal commercial historic rehabilitation tax credits.

BENEFIT 3

Opportunities for government entities and not-for-profit organizations to receive New York State historic preservation grants. Other grants may be available through additional public and private sources.

VILLAGE OF JOHNSON CITY'S HISTORIC RESOURCES

The Village of Johnson City is home to a variety of historic resources, including several properties listed on the New York State and National Register of Historic Places, and within the Johnson City Historic District:

1. Johnson City Square Deal Arch
2. United States Post Office - Johnson City
3. Goodwill Theatre
4. C. Fred Johnson Park Carousel
5. Your Home Library

The Johnson City Historic District consists of 185 contributing resources (including 1 site and 1 object). Four of the properties in the historic district are previously listed on the National Register: the US Post Office, Goodwill Theater, and Your Home Library (including the Harry L. Johnson Monument). The district is significant to the development of the Endicott-Johnson Corporation, a boot and shoe factory that was the backbone of the village's economy between 1888 to 1966, and illustrates the influence of longtime company president, George F. Johnson, and his policies of welfare capitalism on the community.

The Johnson City Historic District sits in the village's core, with the commercial center of the village laid out along Main Street, the principal east-west route, and the north and south boundaries of the district defined by the railroad tracks. The Village's first industrial area was built to follow the Delaware, Lackawanna & Western Railroad, located at the southern edge of the district.

In the early twentieth century, a second industrial sector was established and followed the Erie Railroad, creating the northern boundary of the district.
The 1888 plat of the proposed village of Lestershire encompasses approximately half of the district. In total, the historic district encompasses approximately eight acres and consists of twenty blocks. The Johnson City Square Deal Arch spans Main Street, east of the Johnson City Historic District, and marks the boundary between Binghamton and Johnson City.

The US Post Office, Goodwill Theater, and Your Home Library (including the Harry L. Johnson Monument), which are all part of the Johnson City Historic District, are intertwined with the Endicott-Johnson Corporation's legacy. These properties stand as monuments to George F. Johnson's distinctive labor relations policies, which he called the "Square Deal." Johnson built recreational facilities, fire departments, libraries, public markets, parks and healthcare facilities for the well-being of

NATIONAL REGISTER SITES

1. JOHNSON CITY SQUARE DEAL ARCH

Constructed in 1920, the Johnson City Square Deal Arch is a historic “welcome arch”, acting as a key gateway into the Village of Johnson City. It was constructed by Endicott-Johnson Shoe Company employees to honor George F. Johnson. Mr. Johnson was a co-owner of the Endicott-Johnson Shoe Company and is known for his progressive labor policies at the time - acting as one of the earliest and largest promoters of welfare capitalism.

The Johnson City Square Deal Arch is one of two identical arches, with the second location nearby in Endicott.

2. UNITED STATE POST OFFICE - JOHNSON CITY

Johnson City’s first post office, which was designed by the Supervising Architect of the Treasury Department, Louis Simon, opened its doors to the public in 1935. The building is a Colonial Revival style, and features an accentuated front doorway with fanlights, a sidelight, and a decorative crown that is supported by pillars, as well as evenly spaced windows along the structure. The interior contains murals in the “American scene” style, depicting ordinary citizens in a realistic manner, produced in 1937 through the Treasury Relief Art Project (TRAP). TRAP was established with funds from the Works Progress Administration.

3. GOODWILL THEATRE

The Goodwill Theater is located on Willow Street and was originally built by the Endicott-Johnson Corporation in the Georgian Revival style in 1920. It was used for minstrel shows, boxing matches, traveling shows and concerts and later operated as a movie house. The Goodwill Theatre. Inc intends to use this building to serve as a regional performing arts and conference center with a professional training academy.

4. C. FRED JOHNSON PARK CAROUSEL

Although not part of the Johnson City Historic District, the C. Fred Johnson Park lies just north of the railroad tracks and was one of the earliest created by the Endicott-Johnson Company. At one time the park contained a large above-ground swimming pool and other recreational facilities. The C. Fred Johnson Carousel, one of six Allan Herschell Carousels that George F. Johnson donated to the people of Binghamton, Endicott, and Johnson City, resides in a 16-sided pagoda at the northwest corner of the park. The carousel is listed on the National Register of Historic Places as part of the Broome County Carousels Thematic Resources.

5. YOUR HOME LIBRARY

Your Home Library was initially the home of Elijah Brigham, the owner of Brigham Brick Yard. It was erected in 1885 using brick from the owner's brickyard. The library was owned and entirely supported by the Endicott-Johnson Corporation, providing special "Americanization" classes aimed at Endicott-Johnson employees who were recent immigrants, until September 1921. The Village of Johnson City was then incorporated and supported the library with annual appropriations of $7,000. Your Home Library was eventually purchased by the Village in 1938. The library still serves members of the public through the hosting and circulation of more than 65,000 books, DVDs, and music materials.

WHY IS IT IMPORTANT TO PRESERVE HISTORIC PROPERTIES?

1. HISTORIC PROPERTIES PROVIDE CULTURE AND PROMOTE A HIGH QUALITY OF LIFE

2. HISTORIC PROPERTIES CONTRIBUTE TO A UNIQUE SENSE OF IDENTITY

3. HISTORIC PROPERTIES SUSTAIN ECONOMIC VITALITY

4. ADAPTIVE REUSE OF HISTORIC PROPERTIES PROMOTES SUSTAINABLE BUILDING PRACTICES

LOCAL HISTORIC PRESERVATION LEGISLATION

Properties listed on the National and State Registers can only receive regulatory protection from incompatible alteration and demolition by a private owner through enactment of a local historic preservation law by a local government. A historic preservation law affords regulatory protection either through local zoning or as a separate landmark preservation law. Communities can also enact both types of laws.

A landmark preservation law protects a community's historic resources—it does not regulate land uses. Municipalities use zoning to preserve historic resources when there are areas such as neighborhoods, downtowns, or other contiguous tracts of historically significant resources. To protect the historic character of an area, a municipality can use zoning to limit the types of uses allowed.

Local governments in New York State have the authority to protect historic resources through local law or ordinance via General Municipal Law §96-a and Article 5-K. A preservation law or ordinance must specify the process for designating an historic building or site, and the criteria to be used in that designation.

Prior to enactment of landmark preservation regulation, a municipality should also conduct a survey of potentially eligible buildings and sites. The survey will act as part of the comprehensive historic preservation program that the ordinance or local law seeks to implement. A survey also affords the foundational basis for decisions on designations as well as determinations on whether to allow alteration of a designated structure. The actual designation of a nominated structure or site is a legislative act, but the regulations should allow the preservation commission, planning board and other appropriate entity to nominate buildings and sites for designation by the local legislative body.

The Village of Johnson City enacted a local law in 2011 for the preservation of local landmarks. The Planning Board of the Village of Johnson City acts as the Historic Review Board. In making its review and determination, the Review Board must consult with a Mayor-appointed advisory committee. The advisory committee reviews and makes recommendation on all certificate of historic review applications to the Review Board. **See Appendix A** for a suggested regulatory procedure for proposed action related to historic buildings located in designated local historic districts or as local landmarks.

2 HISTORICAL & ARCHITECTURAL SIGNIFICANCE

This chapter provides an overview of the history of the Village of Johnson City, its historic significance, and how it is evolving today. This chapter also breaks down the different building types within the Village and what architectural styles these buildings were built in. The styles are broken down into period of significance and character defining features. Specific topics covered in this chapter include:

HISTORIC CONTEXT OF THE VILLAGE

BUILDING TYPES

SIGNIFICANT ARCHITECTURAL STYLES

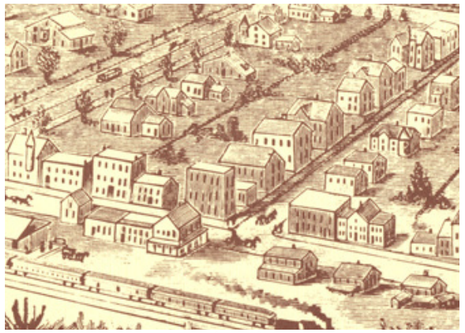
HISTORIC CONTEXT OF THE VILLAGE

Nestled in the lush Susquehanna River Valley, lies the Village of Johnson City, home to approximately 15,000 residents. The Village has been called a memorial to its namesake, George F. Johnson, who transformed the region into what became known as the valley of opportunity—a prominent manufacturing hub for New York's Southern Tier that epitomized the American dream.

VILLAGE ORIGINS

Long before its incorporation as a village, Main Street was the primary route used by the Tuscarora people traveling east or west. After having fled north from North Carolina into New York, Tuscarora people were accepted into the Iroquois Confederacy as its sixth nation, following their defeat in 1713 by European settlers during the Tuscarora War. In the late 1790s, approximately 400 acres of land in what is today central Johnson City were purchased by Samuel Allen, who had traveled from New Jersey to become Johnson City's first settler. Forty-seven years later in 1845, Samuel Allen's son, Lawrence Allen, constructed the village's first home on the same street the Tuscarora people had traveled through many years before.

The catalyst for the founding of Johnson City occurred in 1850, when Horace Lester left behind East Haddam, Connecticut and sought his fortune in Binghamton's growing urban community by establishing a retail shoe trade. Lester was later joined by his brother, George W. Lester, in 1854 and the two brothers established the firm Lester Bros. & Company. After Horace Lester's death in 1882, a void in the firm's management was quickly filled by his son, Harry Lester, who partnered with his cousin Richard W. Lester and became Binghamton's most prominent shoe manufacturer. In 1888, Harry Lester had decided to build his new factory two miles west of the city and laid out streets to form a proper village and create lots for homesites in what was to become the company town of Lestershire.



VIEW OF LESTERSHIRE (1895).
IMAGE CREDIT: DRAWING BY S.J. KELLEY, ALBANY.EDU

VILLAGE DECLINE AND REVIVAL

After the construction of the Pioneer Factory on Corliss Avenue in 1890, the newly constituted Village that surrounded it began to falter following poor business decisions by its founder. In March of the same year, the family firm and its lands were purchased by a syndicate, transforming the corporation into a stock company called the Lestershire Boot and Shoe Company. Three years later, following the depression of 1893, the firm began to see a significant decline in orders and began to lay off its workers.

By 1899, George F. Johnson, who had worked as General Superintendent at the shoe factory, and what became his business partner, Henry B. Endicott, had taken over the company and named it the Endicott-Johnson Corporation. Johnson believed it was the responsibility of the modern, innovative employer to provide for the welfare of their workers. Johnson's progressive labor policies, which were intended to lessen labor turnover, were outlined in pamphlets given to new employees. Through hard work and inventive thinking, Johnson quickly became known for his fair treatment of workers, community outreach efforts, and the investments he made to contribute to the vibrancy of the village.

THE SQUARE DEAL

Johnson believed it was the responsibility of the modern, innovative employer to provide for the welfare of their workers. Johnson's progressive labor policies, which were intended to lessen labor turnover, were outlined in pamphlets given to new employees. In part, the pamphlets read:

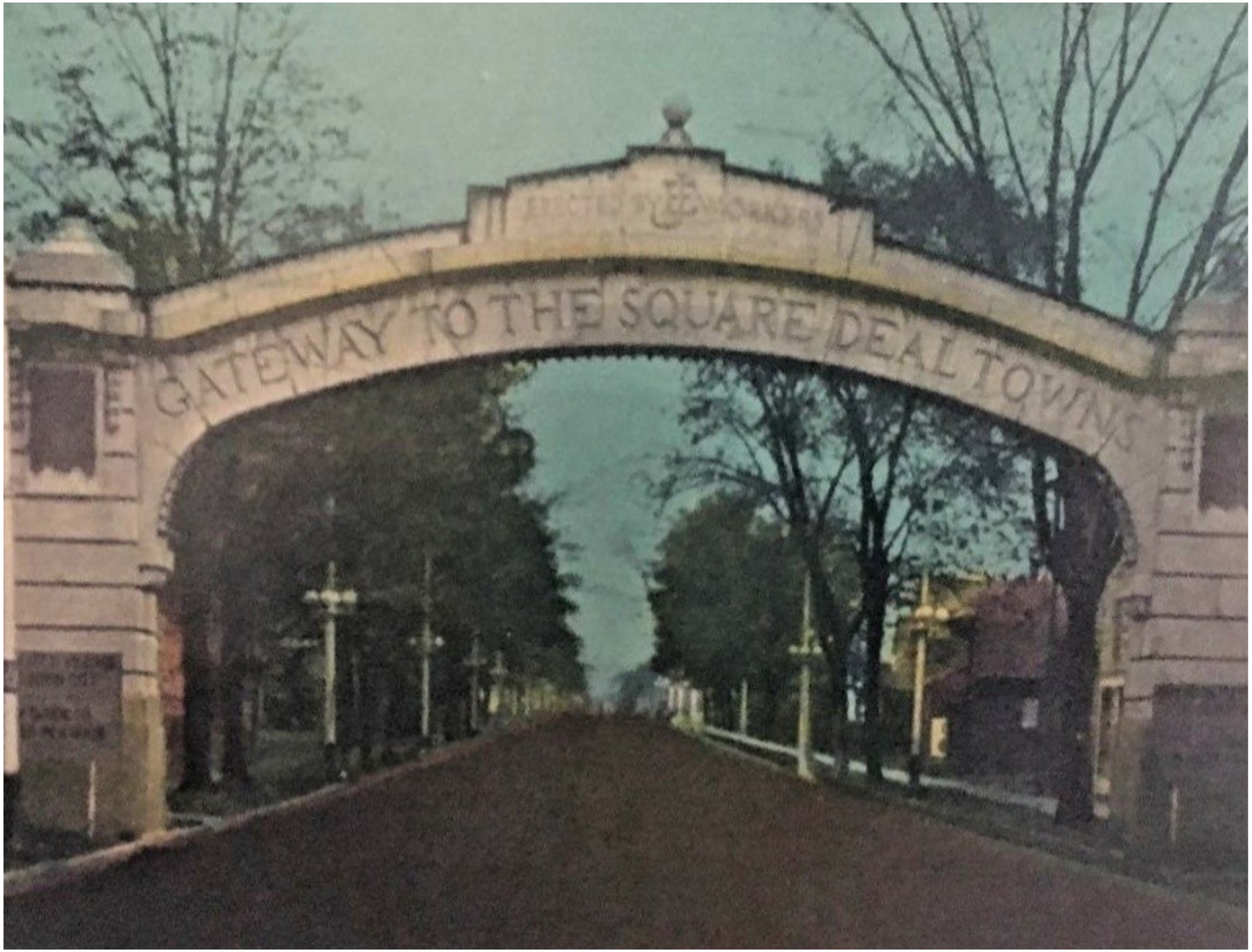
"To the new EJ worker: You have now joined the happy family in the square deal. If you are faithful, loyal, and reliable, you will earn a good living under fair conditions. You are indeed a part of the company. Remember that you are cared for when sick, medical and hospital services are yours, privileges of many kinds are yours.

Your friend,
George F. Johnson."

HOME OF THE SQUARE DEAL

The Village of Lestershire was renamed the Village of Johnson City in 1916 to honor Johnson and his family and became known by the moniker as the “Home of the Square Deal,” where Endicott-Johnson employees were provided an impressive number of benefits in return for their loyalty. These progressive benefits included subsidized worker housing, the most extensive medical plan in the country, and access to numerous recreational amenities such as free rides on merry-go rounds, parks, playgrounds, swimming pools, a golf course and a theater.

Two historic welcome arches were erected in 1920 by Endicott-Johnson employees as an homage to Johnson, who became nationally recognized as a captain of industry. One arch spans Main Street in Johnson City at the Binghamton border and the other sits between the Villages of Union and Endicott. Today, the Endicott-Johnson arches remain a symbol of the bygone era of industrial democracy.



HISTORIC WELCOME ARCH TO THE VILLAGE OF JOHNSON CITY, NY
IMAGE CREDIT: TBD

UNIONIZATION

By the end of the 1930s, the country was still reeling from the effects of The Great Depression, and was dominated by widespread strikes, riots and labor violence. In 1937, two union organizing committees that had vied with one another for the allegiance of shoe workers had risen to dominance: The AFL Boot and Shoe Workers' Union (BSWU) and the CIO United Shoe Workers of America (USWA).

With over 16,000 workers concentrated in a relatively small area, the Endicott-Johnson corporation appeared as a very desirable target for unionization. Johnson was fervently anti-union, and he spent the last two weeks of April 1938 circulating through factories and urging workers to remain loyal to the corporation. Managers at the company reminded workers that the Square Deal rested on the premise that grievances would be resolved without the involvement of other agencies. As a result, eighty percent of Endicott-Johnson workers voted against unionization.

The community may have felt indebted to the Endicott-Johnson Corporation for the elaborate welfare system that was granted to its workers, as well as the low-cost homes, parks, libraries, paved streets, practical education, free medical care and charitable projects that contributed to the quality of life of their families.

VILLAGE GROWTH AND ADAPTATION

The Endicott-Johnson Corporation was not the only industrial powerhouse that contributed to Johnson City's economy. By 1952, a number of large corporations (The Felters Company, Roberson & Son Mill, Johnson City Publishing Company, Lestershire Spool and Manufacturing Company, F.S. Converse Company, United Shoe Machine Corporation, New York State Electric and Gas, Fairplay Caramel Inc, Ozalid Products Division, Vulcan Corporation and General Electric) had been fostering the Village's economic expansion.

Starting in 1918, Johnson City began expanding through a series of annexations and continued until the Oakdale Annexation of 1962, which increased the size of the village by nearly a third. In 1967, construction commenced on New York State Route 17, which later became Interstate 86, cutting directly through the core of Village and transforming it permanently. The development of the major highway, known as the "gateway," had resulted in the demolition of numerous residences. Johnson Field, which served as the home of the Binghamton Triplets, a minor league club of the New York Yankees, was also destroyed. Despite these negative impacts, the placement of Route 17 through Johnson City was a significant event that stimulated regional economic growth.

The construction of hospital staff housing, the first regional shopping center which provided access to major retail chains, senior citizen centers, residential housing, hotels, and the expansion of Wilson Memorial Hospital would most likely not have been possible, had Route 17 or its successor, Interstate 86, bypassed the area.

The Endicott-Johnson Corporation entered decline after the development of Route 17. The company was ultimately faced with growing pressure from corporations operating in cheap labor markets. The steady dismantlement of the company began with the closure of its tanneries in 1968 and its medical department and hospital the following year. In 1998, the plan to close the last of its shoe manufacturing plants was announced.

Despite the deterioration of the Village's most prominent manufacturing company, Johnson City has managed to create a new identity for itself through cutting-edge research. The Village is now home to the Binghamton University School of Pharmacy and Pharmaceutical Sciences, which officially opened in 2018 and is expected to advance Johnson City's economic development. Fittingly, one hundred thirty years after the construction of the Pioneer Factory in Johnson City, a new chapter of economic security unfolds its place.

BINGHAMTON UNIVERSITY SCHOOL OF PHARMACY AND PHARMACEUTICAL SCIENCES.
IMAGE CREDIT: BINGHAMTON.EDU

BUILDING TYPES

The Johnson City Historic District consists of a mixture of public, commercial, residential and industrial buildings that contribute to the historic district designation. A majority of the buildings were built between 1888 and 1966. Within these building types are various architectural styles popular during the time of construction as well as vernacular architecture that evolved during the Village's growth and development.

PUBLIC BUILDINGS

The Village's history is reflected in many of the historic district's public buildings. Public buildings house public services such as churches, schools, government offices and transportation functions such as railroad stations. Many of these public amenities were established by George F. Johnson for the good of the workers at the Endicott-Johnson Corporation as a part of his "Square Deal." These buildings include the former company firehouse and municipal building (NW corner of Corliss St & Willow St), the former company medical building (NE corner of Corliss Street and Broad Street), and the company recreational hall (117/109 Main Street), the Goodwill Theater (36 Willow Street), two churches (on Main Street at the east and west end of the district on prominent corners) and library (107 Main Street). Other buildings were built as part of the public works projects initiated by the federal government during the Great Depression like the Johnson City Post Office (307 Main Street). The US Post Office, Goodwill Theater and Your Home Library are all listed on the National Register of Historic Places.

JOHNSON CITY POST OFFICE.
307 MAIN STREET

FORMER FIRE HOUSE.
15 AVENUE B

FORMER RECREATION HALL.
117 MAIN STREET

COMMERCIAL BUILDINGS

Most of the commercial buildings in the Village were constructed in the late nineteenth and early twentieth centuries. The commercial district has two distinct textures: the denser west end and the less dense east end. The west section of Main Street (between Arch and Willow Streets) consists of structures with side walls that are often shared with or secured to those of the adjacent structure (e.g., party walls). Side walls that face a street or a yard echo the façade's composition, while those that face alleys or service walks stand free. Most of this section is made up two- and three-story brick buildings with flat roofs and shallow setbacks from the sidewalk. The east end of Main Street (east of Willow Street) is less dense and consists of one- and two- story buildings separated by side yards, driveways and parking lots with larger setbacks from the public right of way.

WEST END OF MAIN STREET.

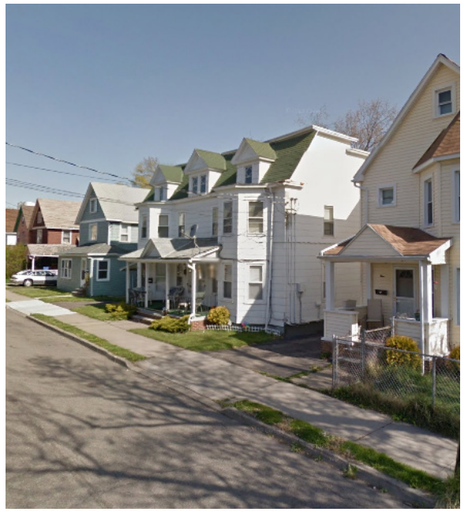
EAST END OF MAIN STREET.

RESIDENTIAL BUILDINGS

The residential buildings within the historic district can be found just outside the commercial areas, on the cross streets between Main Street and Corliss Avenue which include Arch, Broad and Willow Streets, Jennison Avenue and Ozalid Road. Lewis and Laurel Streets are also predominantly residential areas. These residential buildings were built by the Endicott-Johnson Corporation to house its workers between the late nineteenth and early twentieth centuries. There are a variety of types and styles of this building type. While many of the residential buildings are standalone two-story, single family homes, also present within the district are two-family homes and several multi-family/ apartment buildings.

INDUSTRIAL BUILDINGS

Central to the history of the Village are its industrial buildings, which provided jobs and catalyzed its development. Included in this building type are the various factories and warehouses that compose the production for the Endicott-Johnson Corporation. Warehouses, factories and mills played an important role in the development of towns and cities connected by railroads and waterways. The few surviving early to mid-nineteenth century industrial buildings are located on the outskirts of the historic district to both the north and south. They include the Pioneer Annex (48 Corliss Avenue); Former New Toe Box Factory (19 Avenue B); and the Corporation, South End Sunrise Group, south end factory, Welt Department (135-139 Baldwin Street), and Victor Factory (59 Lester Avenue).



VIEW OF RESIDENTIAL STREET.
LAUREL STREET

VICTORY FACTORY.
59 LESTER AVENUE

SIGNIFICANT ARCHITECTURAL STYLES

Most of the high style architecture that exists in the Village is reflected in its public buildings due to the desire for these buildings to be recognizable and proclaim character. This high style architecture also denotes the building as a community resource and boasts community affluence to visitors. In contrast, the less prominent buildings in the historic district, such as residential cottages and some commercial and industrial buildings, follow an American vernacular style.

Vernacular architecture is characterized by the use of local building practices, materials and construction methods without the design guidance of an architect. Vernacular architecture is not one specific style and often cannot be distilled to a series of patterns or elements. It often utilizes a mixture of characteristics from the high styles as well as developing entirely unique styles from traditional architectural styles such as the American Foursquare.

The following section provides an overview of the various building types found within the Village of Johnson City and their associated High Style or vernacular style:

PUBLIC BUILDINGS

- Gothic Revival
- Classical Revival
- Romanesque Revival
- Queen Anne
- Colonial Revival

COMMERCIAL

- Italianate
- Moderne
- Vernacular

RESIDENTIAL

- Vernacular

INDUSTRIAL

- Vernacular

PUBLIC BUILDINGS

The following High Styles can be found in some of the public buildings throughout the historic district:

GOTHIC REVIVAL

The style was popular between 1840 and 1860 and is easily identifiable by its most prominent feature—pointed arches often used in windows, doorways, entries and decorative elements. Window tracery is also common as well as exterior buttresses. This style can be found at 308 and 314 Main Street in the Sarah Jane Johnson Community house and Methodist Church.

SARAH JANE JOHNSON METHODIST CHURCH AND COMMUNITY HOUSE.

IDENTIFIABLE FEATURES

A POINTED ARCHES

Used in windows, doorways, and openings.

B TRACERY

Usually stone, sometimes wood, molding between glass panels in Gothic windows.

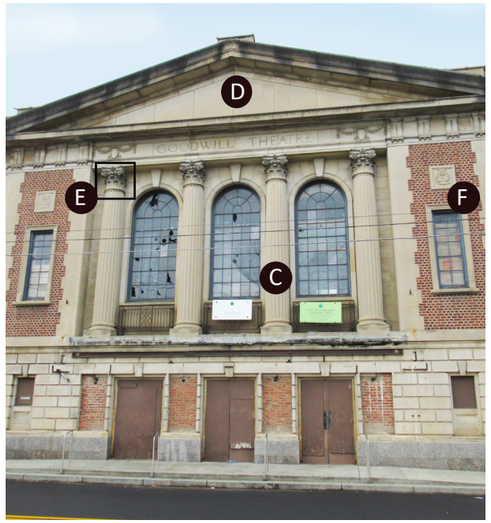
C BUTTRESSES

A structural element; a projecting support of stone or brick built against an exterior wall.

CLASSIC REVIVAL

Classical Revival architecture was a popular architectural style commonly built between 1770 and 1830. This style is typified by its entry porch that dominate the front façade of the building and normally equals the building in height. The porch is supported by classical porch posts, or columns, that are often topped with a classical pediment. Symmetrical alignment of windows flanking the centered porch/door/entry is also a prominent characteristic. This style can be seen at 150 Main Street, which currently functions as a funeral home. The Goodwill Theater located at 36 Willow Street also displays elements of Classical Revival.

FUNERAL HOME AT 150 MAIN STREET.



GOODWILL THEATER AT 36 WILLOW STREET.

IDENTIFIABLE FEATURES

A ENTRY PORCH

Covered area at the entrance to a building, usually supported by columns

B COLUMNS

Free standing structural elements; supporting a roof.

C PILASTERS

A shallow engaged column or pier; a column that appears to be half embedded in a wall.

D PEDIMENT

The triangular face of a gable end above a horizontal cornice, typically above columns or pilasters.

E CAPITALS

Decorative tops of columns or pilasters.

F SYMMETRICAL WINDOWS

Windows flanking centered entry are symmetrically aligned on facade, as well as other architectural elements.

ROMANESQUE REVIVAL

Romanesque Revival was popular in the United States between the 1850s and 1940s. It is characterized by its rounded arches as well as having thick walls and a heavy, masonry aesthetic. Buildings in style are often built with rough-cut, large masonry units and are polychromatic, utilizing masonry of one or two colors or shades to emphasize certain architectural elements. Buildings within the Village that display elements of this style are the former Municipal Building and Fire Station located at 44-48 Willow Street and St. James Roman Catholic Church at 131 Main Street (which also hints at Classical Revival with its columns and pediments).

FORMER FIRE STATION AND MUNICIPAL BUILDING.

ST. JAMES CHURCH.

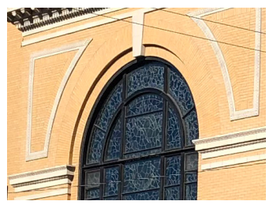
IDENTIFIABLE FEATURES

A ROUNDED ARCHES

Used over windows or entryways.

B POLYCHROME STONE

Using two or three colors of stone to emphasize certain architectural features.



QUEEN ANNE

Queen Anne architectural style also makes a brief appearance in the historic district in the form of the Your Home Library located at 107 Main Street, built in 1885. Queen Anne style was popular between 1880 to 1910 in America. It is characterized by an asymmetrical façade, a dominant front-facing gable, overhanging eaves, a porch covering part or all of the front facade including the primary entrance area, dentils, dormers, painted balustrades and wooden or slate roofs. Another identifying characteristic is a round, square or polygonal tower. Some characteristics of Queen Anne like the wrapping porch and the round tower continued to be used, especially in residential buildings, into the 1920s.

YOUR HOME LIBRARY.

IDENTIFIABLE FEATURES

A TOWER

Can be round, square or polygonal.

B WRAPPING PORCH

Porch covering part or all of the front facade including primary entrance.

C SLATE ROOF

D OVERHANGING EAVES

Part of roof that overhangs the walls of a building.

E DORMER

A bay with window that projects from a sloping roof.

F BALUSTRADES

A railing supported by balusters (short vertical posts) placed along perimeter of a porch, balcony or roof.

COLONIAL REVIVAL

Colonial architecture is associated with the colonial period of the United States. Typically, colonial homes have an accentuated front door with a decorative crown. The crown is supported by slender columns, which form an entry porch. The doors are often positioned in the center and have fanlights or sidelights. A colonial building's façade is normally symmetrically balanced, with windows that are double-hung and in adjacent pairs. This style can be found at 331 Main Street at the former residence of Charles F. Johnson Jr., which now functions as a bank.

FORMER RESIDENCE, NOW BANK.

IDENTIFIABLE FEATURES

A DORMER

B DOUBLE HUNG WINDOW

6/1 (panes of glass; 6 top, 1 bottom) double hung windows on the second story; 8/1 on the first floor.

C PORTICO

A small porch whose roof is supported by columns, on at least one side, that provides shelter for the main entrance.

D CROWN

Flat portico topper, often with railing and simple cornice detailing.

E COLUMNS

Paired, slender, often simple columns.

COMMERCIAL BUILDINGS

The commercial section of the historic district includes a mixture of Italianate and Moderne style buildings as well as some buildings that boast a mixture of elements from both styles and vernacular design elements.

ITALIANATE

Italianate architecture became popular between 1840 and 1885, with Italianate storefronts specifically popular during the 1870s and 1880s. It is one of the first styles successfully built from manufactured materials and accomplished detailing through brick, iron-front or wood construction. Metal was used for decorative details such as the cornice or pilasters. Italianate buildings have tall, narrow windows that are frequently elaborated with crowns, often in the shape of an inverted "U." The first floor is often differentiated from the second floor by an ornamented beam or surface moldings, or simplified cornice, that cap the display windows. This style is most common in the east section of Main Street such as at 263 Main Street. This style can also be found in the old medical building at the corner of Corliss and Broad Streets with its cornice, corbelling and window crowns.

COMMERCIAL BUILDING AT 258 MAIN STREET.

IDENTIFIABLE FEATURES

A CORNICE

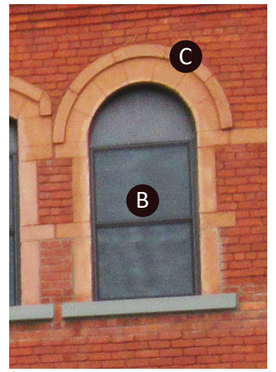
Larger, top of wall and smaller, simpler cornice separating first floor from upper stories.

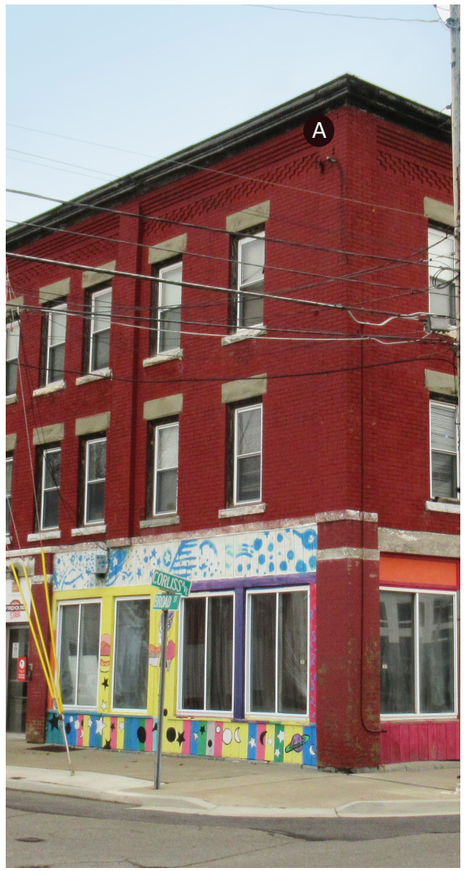
B WINDOW

Tall, skinny, 1/1 windows.

C WINDOW CROWN

Stone, often "U" shaped bracket at the top of a window opening.





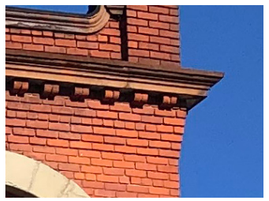
OLD MEDICAL BUILDING.

263 MAIN STREET.

IDENTIFIABLE FEATURES

A CORBELLING

Corbeled brick is when bricks are offset from or angled to main facade to support bricks above.



MODERNE

Popular between 1925 and 1940s, this style is characterized by smooth wall surface, usually of stucco or metal; a flat roof, usually with small ledge (coping) at the roof line; horizontal grooves or lines in walls and horizontal balustrade elements that give a horizontal emphasis; and usually an asymmetrical façade. One or more corners of the building may be curved, with windows frequently continuous around corners; glass blocks are often used in windows, or as entire sections of wall; and small round windows are common. Commonly identifiable examples of the Streamline Moderne style are early American diners, which is one of the two prominent examples of Moderne in the historic district: 266 Main Street and the Ansco factory (an industrial building) and its gatehouse at 25 Ozalid Road.

RED ROBIN DINER ON MAIN STREET.

IDENTIFIABLE FEATURES

A SMOOTH WALLS

Larger, top of wall and smaller, simpler cornice separating first floor from upper stories.

B HORIZONTAL ELEMENTS

C CURVED CORNERS

ASCO FACTORY & GATEHOUSE.

COMMERCIAL VERNACULAR

While some buildings can be identified as a certain architectural style, or High Style, most buildings are a mixture of elements from traditional styles mixed with vernacular architecture.

250 MAIN STREET.

For early commercial buildings on Main Street in America, the brick-front store was the most popular vernacular design for many years which is evident in the west section of Main Street within the Village's historic district. These buildings are composed of one to three stories and are usually in groups up to a block in length, sharing adjoining- or party-walls. Brick-front characteristics resulted from the interaction of elements on the grid that emphasized the façade. Stores were narrow and deep, with single or double windows on the upper floors, panels of brickwork, brick friezes, decorative lintels or sills, and string courses or sections of belt courses that divided the wall laterally. Commercial façades were usually clad with brick as opposed to stone in order to create a more refined appearance. Display space was conventional, whether the entrance was on or off-center. Storefronts spanned the width of the first floor broken up by mullions, sitting on bulkheads and capped with a simple or small cornice on the façade, separating the commercial first floor from the upper stories which often housed offices or residential spaces. The level of transparency differs by floor; the ground floor is very transparent and open to passersby, whereas the upper floors are less transparent in the interest of privacy. Canted bay windows, which were built to allow a large amount light to enter the room, can be found in the district at the western end of Main Street on upper stories.

VISUAL DISTINCTION BETWEEN GROUND AND UPPER FLOORS

TYPICAL STOREFRONT FEATURES

IDENTIFIABLE FEATURES

A CORNICE
Larger, top of wall and smaller, simpler cornice separating first floor from upper stories.

B PARAPET
The uppermost part of a wall that extends above the roof level and provides a degree of protection to roof.

C ADJOINING PARTY WALL
A wall between two adjoining buildings that is shared by and integral to both buildings.

D SINGLE WINDOW

E DOUBLE WINDOWS

F BAY WINDOW
A window built to project outward from an outside wall.

G CENTERED ENTRANCE

H OFF-CENTER ENTRANCE

I ENTRANCE TO ACCESS UPPER FLOORS

J STOREFRONT

K BULKHEAD
Base of the storefront between the sidewalk and the window.

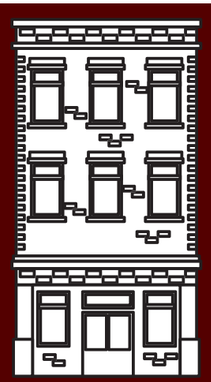
L MULLIONS
A vertical bar between the panes of glass in a window.

M AWNING
A sheet of canvas or other material stretched on a frame, used to shelter storefront, window, or doorway.

N BRACKET
Ornamental or structural/ supportive element (such as to support a cornice); in this case, frames the facade of the commercial building.

Commercial Vernacular: Italianate and Brick-front

Vernacular commercial buildings were constructed as a part of a Main Street or commercial district. The most common type of commercial building built before 1900 are brick-front and Italianate storefronts. These historic storefronts have been susceptible to extensive remodeling and alterations.



ITALIANATE

Italianate storefronts were frequently constructed with cast-iron with elaborate design. The street level can be found with wood mullions and glass panels. This style of building has a significant cornice line. Italianate buildings are usually two to three stories high. Façade detailing was often done with the use of brick, iron-front or wood. This style was popular in the 1870s and 1880s.

Additional characteristics that can often be found:

- decorative cornice (wood, brick, or sheet metal) with visually heavy brackets
- brick cladding or iron front
- flat roof
- tall narrow windows with segmental arch

BRICK-FRONT

Brick-front style buildings were often built as standalone buildings, or in groups up to a block in length with party walls between buildings. They can be one to three stories in height with three to five bays. This style of building was often narrow and deep. This style was the most popular style for the longest time.

Additional characteristics that can often be found:

- brick cladding
- flat roof with parapet
- decorative brickwork frieze
- elaborate cornice
- Entrance can be on- or off-centered

FUN FACT: THE ITALIANATE STYLE BUILDING WAS ONE OF THE FIRST SUCCESSFUL HISTORIC STYLES CONSTRUCTED FROM MANUFACTURED MATERIALS.

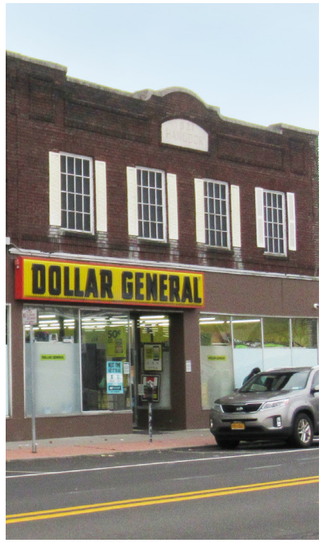
Source: *American Vernacular Design 1870 - 1940: An Illustrated Glossary*, Herbert Gottfried and Jan Jennings

BUSINESS BLOCK

Wealthy entrepreneurs that could afford to buy two or three lots built business blocks—a row of commercial buildings built over an entire block with solid massing, firm lines, a continuity of materials, uniform profile, and orderly fenestration. Sometimes special detailing, such as terra-cotta cladding, was applied. The imposing scale of the business block identified it as the commercial center of the area. These blocks were often known by their proper names which were displayed prominently on the block, often on a pediment or parapet at the top of the building. In the Village of Johnson City, these blocks include the Hancock Block (222 Main Street), the Ash Block (233 Main Street), and the Rich Block (265 Main Street). The business block featured a variety of enterprises, with entrances servicing the first-floor stores or offices and apartments on the upper-level spaces.

233 MAIN STREET.

257 MAIN STREET.



222 MAIN STREET.

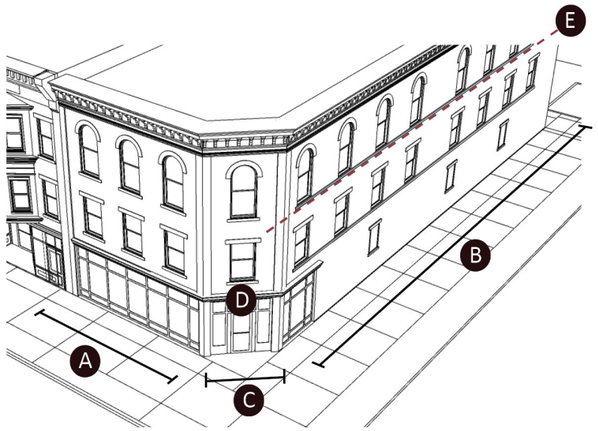
CLOSE UP.

CLOSE UP.

CLOSE UP.

CORNER BLOCK

Another commercial vernacular style found on Main Street America is the corner block. These often featured a tower rising from a recessed or canted ground-level entrance and were visual and financial anchors for many business districts and often marked the edge or the heart of the commercial district. The corner block integrates two elevations and develops a strong entrance. The vertical bays were often broken up through arcading, round-headed elements, continuous sills and lintels, and belt courses. In order to radiate a strong overall shape, cornices of each elevation received more detailing than other sections. Rarely were these buildings uniform in size; one side was usually longer than the other but seldom higher. A canted entrance set at 45 degrees to the intersection of the walls was a popular entrance. This is style can be found at 290, 258 and 263 Main Street.



IDENTIFIABLE FEATURES

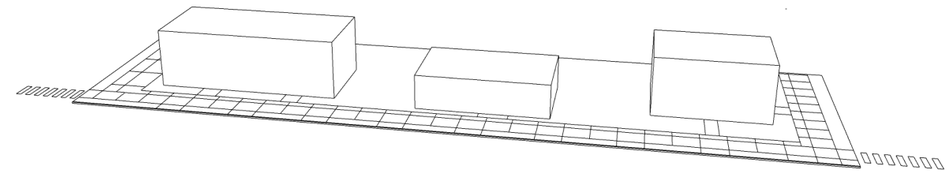
- A SHORT FACADE
- B LONG FACADE
- C ANGLED FACADE
- D ENTRANCE
- E CONTINUOUS SILLS
- F ROUND TOWER

290 MAIN STREET.

MODERNE COMMERCIAL

Later stores developed horizontally as lot depth was lost to alleys and other commercial developments, as evidenced in the east section of Main Street. In the 1960s, after the decline of the Endicott-Johnson Corporation, several Main Street buildings were either lost to fire or were torn down to be replaced with more modern stores. These replacements were one- and two-story buildings that were often wider than they were deep and featured minimal decorative elements and had accentuated horizontal lines via features such as large metal projections used as awnings (248 Main Street). These stores also often had long stretches of uninterrupted glass storefront on their first floors with minimal to no mullions. Most buildings on the east end of Main Street follow this modern efficient design, as well as several tucked between older buildings on the west end.

EAST MAIN STREET DENSITY DIAGRAM



WEST MAIN STREET MODERN

248 MAIN STREET.

253 MAIN STREET.

272 & 278 MAIN STREET.

EAST MAIN STREET MODERN

185, 177, & 167 MAIN STREET.

227 MAIN STREET.

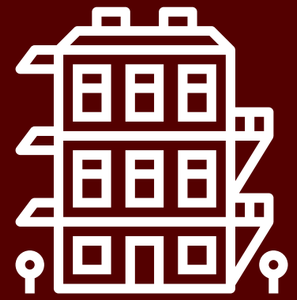
RESIDENTIAL BUILDINGS

The residential buildings in the Johnson City Historic District are predominantly late nineteenth and early twentieth century vernacular housing built for factory workers and their families by the company. The early houses were mostly two-story, wood-frame buildings with cross-gabled roofs as well as a number of two-family residences in the core. A number are traditional flats, with one family on each floor, while others are divided down the middle. There are a few distinctive two-story, five-bay duplexes that were built with steep gabled or hipped roofs and porches on their side elevations, giving each family a private veranda (11-13 Arch, 5-11 Laurel Street, 36-38 Broad, and 37-39 Broad Streets). By the early 1900s, three- and four-story apartment buildings were being constructed throughout the Village (15 Avenue A, 12 N Broad Street, 23 Lewis Street). Once individuals began constructing their own houses, the American Foursquare style became prominent throughout the Village—a few examples exist in the historic district, but most are located in the surrounding neighborhoods.

MULTI-FAMILY HOUSING

APARTMENT BUILDINGS

Multi-family Vernacular Housing



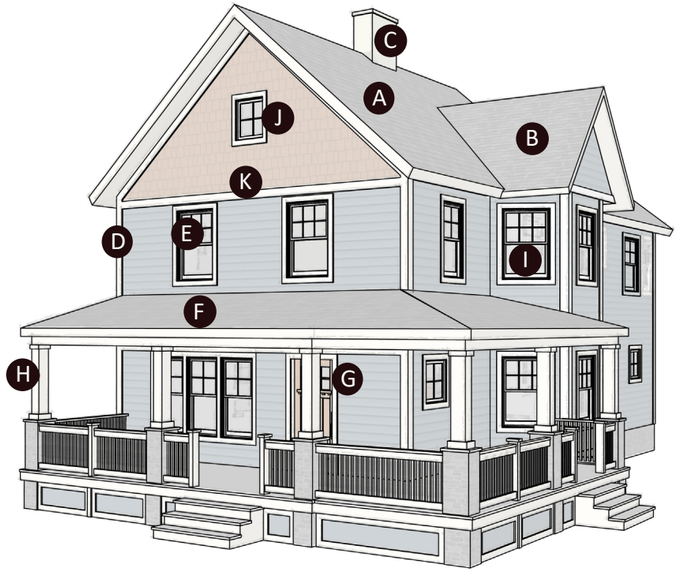
Multifamily housing is typically composed of three or more apartment units. They often have common access, use of land, and service systems. Each unit consists of living space for individuals/families.

Design
Multifamily buildings tend to have main architectural features, often symmetrical, on their facades. These buildings frequently emphasize horizontal lines (i.e. the foundation; banding of windows by floor, etc.). They are typically constructed with masonry or brick, wood, or metal cladding over frame construction, and are rarely more than three stories high.

Examples
Triple decker: Frame construction with rear porches for each story. Primarily found in New England.

Quadriplex (4-family) and Sixplex (6-family): Arranged with unit access via a central hall and stacked units with similar floor plans.

Source: *American Vernacular Design 1870 - 1940: An Illustrated Glossary,* Herbert Gottfried and Jan Jennings

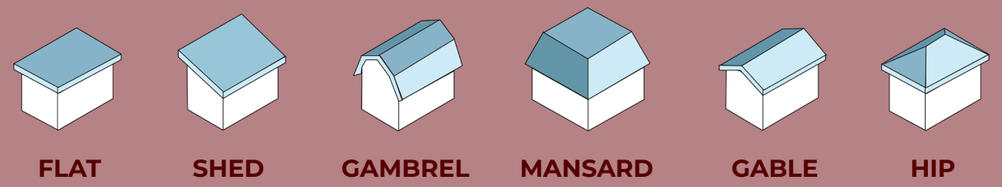


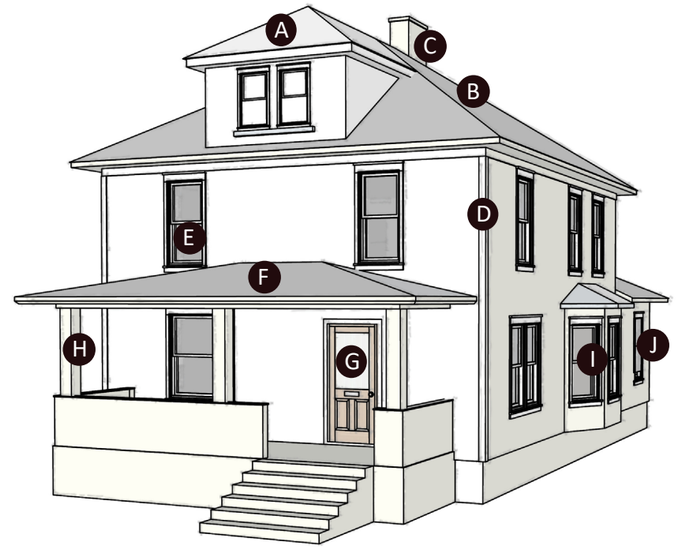
RESIDENTIAL VERNACULAR - GABLE ROOF COTTAGE.

IDENTIFIABLE FEATURES

- **A** GABLE ROOF
- **B** GABLE DORMER
- **C** CHIMNEY
- **D** CORNER BOARD
- **E** 6/1 DOUBLE HUNG WINDOW
- **F** VERANDA ACROSS FRONT FACADE AND WARPED
- **G** OFF-CENTER, MULTI-PANELED FRONT DOOR
- **H** COLUMNS
- **I** TWO STORY BAY WINDOWS
- **J** WINDOW CENTERED IN GABLE
- **K** GABLE CLOSED BY DETAILING

ROOF TYPES





RESIDENTIAL VERNACULAR - AMERICAN FOURSQUARE.

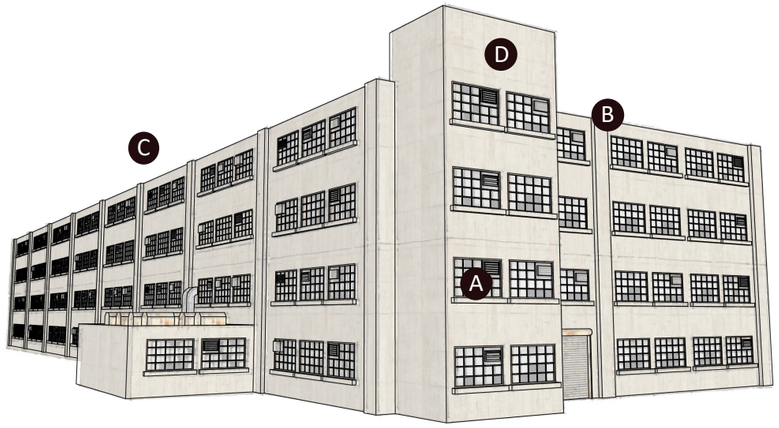
IDENTIFIABLE FEATURES

- **A** DORMER, HIPPED ROOF
- **B** HIPPED ROOF
- **C** CHIMNEY
- **D** CORNER BOARD
- **E** 1/1 DOUBLE HUNG WINDOW
- **F** PORCH ACROSS FRONT FACADE
- **G** OFF-CENTER, MULTI-PANELED FRONT DOOR
- **H** COLUMNS
- **I** BAY WINDOWS
- **J** REAR PORCH

AMERICAN FOURSQUARE.

INDUSTRIAL BUILDINGS

Industrial buildings were often not built to a high style of architecture but rather followed their own industrial vernacular style. Industrial buildings are large utilitarian buildings, uniform in shape and material. They are often long and narrow, two to five stories tall, and made of concrete or brick with ample fenestration to provide the factory floors with light. Piers can be found on the elevations spaced out between stair towers often located at end of the building and sometimes at the mid-point. Another common characteristic are mushroom capped columns inside the factories.



INDUSTRIAL VERNACULAR.

IDENTIFIABLE FEATURES

A AMPLE FENESTRATION

B PIERS

C SKINNY, LONG SHAPE

D STAIR TOWERS

FORMER PIONEER ANNEX.

ENDICOTT VICTORY FACTORY.

NEW TOE BOX FACTORY.

INDUSTRIAL BUILDINGS: FACTORY VS. WAREHOUSE

Use:
Factories are small- or medium-sized buildings designed to accommodate machinery or assembly line processes, which determine the size and shape of the building.

Design:
Small- or medium-sized buildings; designed to accommodate machinery or assembly line processes. The proportion of window to wall in a factory is dramatic, with piers more obvious on the elevations and the windows serving as organizing elements

Materials:
Masonry materials (brick, concrete, etc.)

Use:
Warehouses are large buildings where goods, wares and materials are stored. Warehouses define an industrial district and are often grouped or clustered alongside a transportation route due to their use for the storage and transfer of goods.

Design:
Large openings such as loading docks are found in shipping and receiving areas, sometimes with an office space on the ground level marked by an elaborate entrance. Otherwise, the only architectural element displayed by these modest buildings is the cornice line.

Materials:
Brick.

Source: *American Vernacular Design 1870 - 1940: An Illustrated Glossary*, Herbert Gottfried and Jan Jennings

3 HISTORIC PRESERVATION & ECONOMIC DEVELOPMENT

This chapter explains the benefits of historic preservation on a large scale as well as at a community and local level. This chapter also breaks down the economic impacts of and incentives for preservation and provides a matrix of Federal, State and local funding programs. Specific topics covered in this chapter include:

BENEFITS OF HISTORIC PRESERVATION

ECONOMIC IMPACTS OF HISTORIC PRESERVATION

ADDITIONAL FUNDING RESOURCES

BENEFITS OF HISTORIC PRESERVATION

Historic preservation is recognized largely for its quantifiable economic benefits, such as jobs created through rehabilitation and restoration projects, private investment through tax credit work, increased property values, heritage tourism, and adaptive reuse.

Historic preservation is also beneficial to the environment. Historic buildings contribute to the green building movement. Recycling is a sustainable practice - older buildings reflect this concept through embodied energy, which is the energy that was expended to construct the building. The reuse of a historic building contributes to the kind of development that ensures minimal damage to the environment.

SMART GROWTH AND SUSTAINABILITY

Development without a historic preservation component is not sustainable. When older and historic buildings are rehabilitated in established downtowns and neighborhoods, those buildings are kept in service to support compact building design, the conservation of open spaces, and other elements of smart growth.

New construction can result in scattered development, further consumption of land, and the increased use of fossil fuels needed to access that scattered development. Rehabilitation of historic buildings conserves much of the construction waste that demolition would produce.

ADAPTIVE REUSE IS TO MEET HALFWAY BETWEEN HISTORY AND MODERNIZATION.

BENEFITS OF ADAPTIVE REUSE

Adaptive Reuse involves converting an existing building to a purpose other than what it was originally built or designed for.

ENVIRONMENTAL SUSTAINABILITY

- Reduces energy consumption associated with demolishing an older building and replacing with new construction
- Reduces building materials required to transform a space

ECONOMIC SUSTAINABILITY

- Historic buildings often contain original natural materials that are far less costly to maintain than incorporating modern-day synthetic materials

SOCIAL SUSTAINABILITY

- Historical buildings often hold a cultural significance because of memories associated with it. By utilizing adaptive reuse, a harmony can be created between old and new structures illustrating a community's Identity

LOCAL REGULATION

The strongest protection for historic resources is through local regulation by cities, villages, and towns. Local regulation allows local governments to protect historic resources from demolition and places restrictions on the extent to which owners can alter those historic buildings, which can include removing historic material and constructing additions and new buildings in historic districts. These regulations occur through the use of design standards and elements, such as roof, porch, siding, trim, window, and door materials, and sometimes color.

For new construction in historic districts, regulations control massing, roof design and window and door arrangement as they relate to the appearance of the building from public rights-of-way. These local regulations help to ensure the harmonious, orderly and efficient growth and development in historic neighborhoods, which stabilizes and improves property values.

REPRESENTATIVE IMAGE OF PROPOSED IMPROVEMENTS TO TE VICTORY BUILDING
IMAGE CREDIT: DOWNTOWN JOHNSON CITY DESIGN GUIDELINES

CERTIFIED LOCAL GOVERNMENT (CLG) PROGRAM

The CLG program is a nationwide initiative established by an amendment in 1980 to the National Historic Preservation Act of 1966 that directly links a community's preservation goals to state and federal preservation programs. Each State Historic Preservation Office (SHPO) administers the program through a variety of services designed to help communities protect and preserve their historic resources. SHPO determines if a municipality meets state and federal standards before being certified into the CLG program. The standards include having enacted appropriate preservation legislation and appointing a qualified preservation review commission. After being approved at the state level, applications are forwarded to the National Park Service for certification.

Once certified, CLGs are eligible to receive a variety of services from SHPO, including:

- Ongoing, focused support
- Technical preservation assistance and legal advice
- Direct involvement in SHPO programs, such as identifying properties that may be eligible for listing in the State and National Registers of Historic Places
- Training opportunities that increase the ability of communities to protect their historic resources and integrate them into short- and long-term planning initiatives
- Grants designated exclusively for CLG projects
- Membership in statewide and national CLG networks

WHY SHOULD LOCAL GOVERNMENTS PARTICIPATE IN THE CERTIFIED LOCAL GOVERNMENT PROGRAM (CLG)?

There are approximately 70 communities in the New York State CLG Program, ranging from rural villages to large cities. The programs primary goal is to develop and maintain historic preservation efforts. These efforts not only help to advance local economic development and revitalization goals, but also strengthen community identity and pride. The City of Binghamton and Town of Vestal are currenrly participating CLG communities within Broome County.

COMMUNITY DEVELOPMENT AND NEIGHBORHOOD REVITALIZATION

Historic preservation has numerous community-based impacts, including the stabilization of property values, neighborhood protection from inappropriate changes to the public realm, and the promotion of civic pride. When investments are made in lower income neighborhoods, neighborhoods are revitalized and become attractive destinations for tourists, new residents and expanded economic activity.

The Village of Johnson City and the Town of Union Economic Development Department, which provides financial assistance to start-up and expanding businesses through the Local Development Corporation, has focused on the revitalization of the downtown core through incentive programs.

The Town of Union Business Assistance (TUBA) Program, Central Business District (CBD) Program, Commercial Facade Program, Emerging Enterprise/Emerging Market Entrepreneurial (E^3), Microenterprise Program, Section 108 Program and Site Preparation Program Funding are several of the loan programs offered through the Local Development Corporation of the Town of Union. This assistance helps keep historic main streets and downtowns economically viable.

AFFORDABLE HOUSING

The Village of Johnson City as a historic preservation community can address the issue of affordable housing with a policy agenda for older and historic neighborhoods that would include, but not be limited to the following:

1. Create more local historic districts to protect valuable cultural resources and preserve a rapidly vanishing inventory of affordable housing
2. Inaugurate a fast-track system for the acquisition and redevelopment of vacant, abandoned, and tax-foreclosed properties
3. Give priority to older and historic neighborhoods for infrastructure improvements, police attention, recreation and park facilities, and especially schools

See the **National Trust for Historic Preservation's Historic Preservation and Affordable Housing: The Missed Connection** for more information about how the revitalization of historic urban neighborhoods can improve the quality of life among disadvantaged households due to the prevalence of transportation options, walkability, and quick access to resources inherently present in historic urban neighborhoods.

CASE STUDY: ADAPTIVE REUSE CENTURY SUNRISE

The Apartments at Century Sunrise is located in the former Endicott-Johnson Corporation's Sunrise Group, which consists of the Sunrise Building (1929) and the South End Factory (1918). Both industrial buildings are clustered along the Delaware, Lackawanna & Western rail lines between Baldwin and Willow Streets in the location where the first industrial expansion took place in the Village. The buildings are contributing properties to the Johnson City National Register Historic District. They feature brick curtain walls and large, metal sash industrial windows with a flat roof. The five- and four-story buildings feature a central corridor, which was essential in the rehabilitation, with stair towers at each comer. A skyway at the third story used to connect the Sunrise Building with the Endicott-Johnson Jigger Factory (1926), a four-story brick industrial building located across the railroad tracks to the north. This building was demolished in February 2012 and is now used as a parking lot for Binghamton University's School of Pharmacy and Pharmaceutical Sciences.

This mixed-use adaptive reuse project is the first project in the Johnson City iDistrict to provide modern housing within walking distance to Binghamton University's Health Sciences Campus, which is the district's economic driver and anchor institution. This new satellite campus consists of the School of Pharmacy and Pharmaceutical Sciences and the Decker College of Nursing and Health Sciences.

Century Sunrise features 105 apartments, some of which are affordable units, and 7,500 square feet of commercial space. The 33-million-dollar project was undertaken by Regan Development Corporation and utilized a mixture of financial incentives, including grant funding from Round 6 of the REDC's URI, the Governor's Office of Storm Recovery, Office for People With Developmental Disabilities (OPWDD) and the New York State Homes and Community Renewal (HCR) Homes for Working Families Program, as well as equity investment though the Federal/State Low Income Housing and Historic Preservation Tax Credit Programs. This project serves as a great example for how to leverage multiple funding sources successfully.

ECONOMIC IMPACTS OF HISTORIC PRESERVATION

The revitalization of older neighborhoods, communities and Main Streets across America has contributed to the economy by enhancing property values, private investment, job creation, and stimulating rehabilitation activity in surrounding communities. The Advisory Council on Historic Preservation cites numerous studies that estimate a million dollars invested in manufacturing creates nine jobs; a million dollars invested in new construction creates eleven jobs; and a million dollars invested in historic preservation creates 14 jobs.

Another way that historic preservation contributes to the economy is through the fast-growing sector of heritage tourism. Travelers that visit historic sites and downtown districts generally spend 30% more than other tourists - and stay nearly twice as long.

Historic tax credits have also contributed to the private investment in the rehabilitation of historic buildings. A study conducted in 2011 by the Center for Urban Policy Research at Rutgers University found that since 1978, the historic tax credit program has helped create 2.2 million jobs and has encouraged almost $100 billion in private investment.

TAX CREDIT PROGRAMS

The applicable provisions of the 1986 Tax Reform Law shaped the historic tax credits as they are used today, which is a 20% credit on the qualified rehabilitation costs of historic buildings. The Federal Historic Preservation Tax Incentives program encourages private sector investment in the rehabilitation of historic buildings and is one of the nation's most successful and cost-effective community revitalization programs.

FEDERAL INCOME INVESTMENT TAX CREDIT PROGRAM FOR INCOME PRODUCING PROPERTIES

The Federal Historic Rehabilitation Tax Credit is available to income-producing buildings listed on the National Register of Historic Places. Property owners must consult with SHPO about the tax credit process before work begins, to certify the work will be done according to the Secretary of the Interior's Standards for Rehabilitation. The Federal Investment Tax Credit can be taken for 20% of the qualifying expenses of the rehabilitation. Those expenses include the repair of structural and architectural features of the historic building and other elements essential to the building's operation.

NYS TAX CREDIT PROGRAM FOR INCOME PROPERTIES

Owners that have been approved to receive the 20% federal tax credit automatically qualify for the additional State tax credit if the property is located in an eligible census tract, which is at or below the State median income. The building will then qualify for the credit if it has an approved Federal application. The maximum State credit is $5 million. The State credit is similar to the Federal credit: 20% of qualifying work on the exterior and interior of the building must be consistent with the Secretary of the Interior's Standards for Rehabilitation and can be applied to the owner's state income taxes for work on income-producing buildings.

NYS HISTORIC REHABILITATION CREDIT

This NYS tax incentive offers a state income tax credit equal to 20% of qualified rehabilitation expenses associated with the repair, maintenance and upgrades to historic residential buildings. The credit value is applied to the owner's state tax liability to reduce the amount owed. This program covers 20% of qualified rehabilitation expenses up to a credit value of $50,000 per year.

Qualifications for the Historic Homeownership Rehabilitation Credit program include:

- The applicant must own and live in the house.
- The house must individually be listed in the NYS and National Registers of Historic Places, or as a contributing building in a listed historic district.
- The house must be located in a qualifying census tract.
- The repair costs must exceed $5,000, with at least 5% spent on exterior work.
- All projects must be approved by SHPO before work begins.

PROPERTY TAX ABATEMENTS

Section 444-a of the Real Property Tax Law in New York State authorizes a partial exemption from real property taxation for the alteration or rehabilitation of historic property. Counties, cities, towns, and villages may enact local laws authorizing the exemption; school districts may do so by resolution. Improved properties must be designated as a local landmark or located in a local historic district and satisfy local guidelines and review standards in the local preservation law. Rehabilitation work must also be approved by the local preservation commission. Generally, the exemption is a five-year freeze on increases in assessment that commonly result after an owner has rehabilitated a property. After five years, the increased taxes will be phased in over the next five years (e.g., in year six, the exemption is 80 percent of the increase in value; then 60 percent in year seven, and so on.)

FUNDING PROGRAMS

FEDERAL PROGRAMS

HOW THEY CAN HELP	FUNDING PROGRAM NAME	OVERVIEW	CRITERIA	ELIGIBILITY
NATIONAL PARK SERVICE	**Federal Historic Rehabilitation Tax Credit Program - 20% Tax Credit**	A 20% income tax credit is available for the rehabilitation of historic, income-producing buildings that are determined by the Secretary of the Interior, through the National Park Service, to be "certified historic structures."	A project must meet basic IRS requirements the building must be depreciable, the rehabilitation must be substantial, the property must be place in service and the building must be a certified historic structure, among other criteria.	Properties used for a business or other income producing purpose.
	Federal Historic Rehabilitation Tax Credit Program - 10% Tax Credit	The 10% tax credit is available for the rehabilitation of non-historic buildings placed in service before 1936. The building must be rehabilitated for non-residential use.	In order to qualify for the tax credit, the rehabilitation must meet three criteria: at least 50% of the existing external walls must remain in place as external walls, at least 75% of the existing external walls must remain in place as either external or internal walls, and at least 75% of the internal structural framework must remain in place.	Properties used for a business or other income producing purpose.
NATIONAL CENTER FOR PRESERVATION TECHNOLOGY AND TRAINING	**Preservation Technology and Training Grants (PTT)**	The PTT Grants program provides funding for innovative research that develops new technologies or adapts existing technologies to preserve cultural resources. Grant recipients undertake innovative research and produce technical reports which respond to national needs in the field of historic preservation.	Staff verify applicant eligibility and review applications according to the Council's primary criteria: Service/Outreach to the Public, Artistic/ Programmatic Merit, and Managerial/Fiscal Competence.	Federal agencies, states, tribes, local governments, and non-profit organizations.
NATIONAL TRUST FOR HISTORIC PRESERVATION	**National Trust Preservation Funds (NTPF)**	Grants from NTPF are intended to encourage preservation at the local level by supporting on-going preservation work and by providing seed money for preservation projects. These grants help stimulate public discussion, enable local groups to gain the technical expertise needed for preservation projects, introduce the public to preservation concepts and techniques, and encourage financial participation by the private sector. Grants generally start at $2,500 and range up to $5,000.	National Trust Preservation Fund grants are awarded for planning activities and education efforts focused on preservation. Grant funds can be used to launch new initiatives or to provide additional support to on-going efforts. Applicants must be either a public agency, 501(c) (3), or other nonprofit organization to be considered eligible.	Public agency or non-profit organization.

STATE PROGRAMS

HOW THEY CAN HELP	FUNDING PROGRAM NAME	OVERVIEW	CRITERIA	ELIGIBILITY
NEW YORK STATE PARKS, RECREATION AND HISTORIC PRESERVATION	**Environmental Protection Fund Grant Program for Parks, Preservation and Heritage**	The Historic Preservation Program is to improve, protect, preserve, rehabilitate, restore or acquire properties listed on the State or National Registers of Historic Places and for structural assessments and/or planning for such projects. Properties not currently listed, but scheduled for nomination review at the State Board for Historic Preservation meeting of either June 13, 2019, or September 5, 2019, are eligible to apply.	Key criteria includes: (1) the extent to which the project site has suffered from physical deterioration, decay, vandalism, neglect or disinvestment (2)the relationship of the project to a local, regional and/or statewide planning document or other assessment of need (3) the extent to which the project protects, enhances or interprets natural, cultural or historic resources; (4) the historic significance of the property in the National, State or local context, and the extent to which the project protects or enhances its significant features; (5) the degree to which the project will increase public stewardship or awareness of historic resources	Properties listed on the State or National Registers of Historic Places, as well as properties not currently listed but scheduled for nomination review.
	Certified Local Government Program	Each federal fiscal year, NYS sets aside 10% of the state's allocation of federal historic preservation funds for pass-through to Certified Local Governments. These funds are awarded on the basis of competition among eligible applications, evaluated and ranked according to the established selection criteria.	CLG funding may be applied to many kinds of projects that address the goals of identifying, evaluating, nominating, and protecting a community's cultural resources.	Local government
	New York State Tax Credit Program for Income Producing Properties	This tax credit must be used with the Federal Investment Tax Credit Program for Income Producing Properties. Owners can receive an additional 20% of the qualified rehabilitation expenditures up to $5,000,000.	Must be an income-producing property, the property must be listed on the NYS and National Registers of Historic Places individually or contributing to a listed historic district or in the process of listing, all work must be approved by the Division of Historic Preservation before you begin, and the building must be located in an eligible census tract.	Properties used for a business or other income producing purpose.
	New York State Historic Homeownership Rehabilitation Credit	This program offers a state income tax credit equal to 20% of qualified rehabilitation expenses associated with repair, maintenance, and upgrades to historic homes. The value of the credit is applied to NYS tax liability to reduce the amount owed. The program covers 20% of qualified rehabilitation expenses up to a credit value of $50,000 per year.	The applicant must live in the house, the house must be listed on the NYS and National Registers of Historic Places individually OR as a contributing building in a listed Historic District, the house must be located in a qualifying census tract, the rehabilitation expenses must be $5,000 or more with a minimum or 5% of that being spent on exterior work, and all projects must be approved before work begins.	Owner-occupied residential structure listed on the State or NRHP, or in a state or national registered historic district and listed as contributing.

STATE PROGRAMS

HOW THEY CAN HELP	FUNDING PROGRAM NAME	OVERVIEW	CRITERIA	ELIGIBILITY
PRESERVATION LEAGUE OF NYS	**Preserve New York**	Launched in 1993, Preserve New York makes grants for historic structure reports, building condition reports, cultural landscape reports, and cultural resource surveys. The program provides support up to 80% of the project cost. Applicants must provide 20% of the total project cost as a cash match. Grants are likely to range between $3,000 and $10,000.	Must be an income-producing property, the property must be listed on the NYS and National Registers of Historic Places individually or contributing to a listed historic district or in the process of listing, all work must be approved by the Division of Historic Preservation before you begin, and the building must be located in an eligible census tract.	Local government or non-profit organization.
	Technical Assistance Grants	The Technical Assistance Grant program launched in 2012 to support discrete projects that preserve New York State's cultural and historic resources.	CLG funding may be applied to many kinds of projects that address the goals of identifying, evaluating, nominating, and protecting a community's cultural resources.	Non-profit organizations
THE NEW YORK LANDMARKS CONSERVANCY	**Sacred Sites**	The NYLC Sacred Sites Program provides congregations with matching grants for planning and implementing exterior restoration projects, technical assistance, and workshops. Since 1986, the program has pledged 1,559 grants totaling more than $12 million to 828 religious institutions statewide, helping fund $717 million in repair and restoration projects. Grants are awarded to assist with projects such as conditions surveys, architectural and engineering fees, roof replacements, masonry restoration, stained-glass restoration, and structural repairs. Priority will be given to essential repairs to the primary worship building	Eligible properties include, but are not limited to, churches, synagogues, meetinghouses, mosques, and temples. To be eligible for a grant, the property must be: located in New York State, owned by a religious institution and actively used for worship, listed on the State or National Register of Historic Places or designated pursuant to a local landmarks ordinance certified by New York State, either individually, or as a contributing component of a historic district.	

LOCAL PROGRAMS

PRESERVATION OF THE SOUTHERN TIER (PAST)	**Jim Bryden Memorial Scholarship Program**	For college-bound and trade school-bound students pursuing a career in fields related to historic preservation, such as architecture, urban planning, construction, etc.	Eligibility varies.	

4 THE PRINCIPLES OF PRESERVATION

This chapter provides an overview of the different treatment methods available for historic properties and how to choose which is most appropriate for your property. This chapter explains the most common treatment method - rehabilitation - and discusses common preservation issues evident within the Village of Johnson City, as well as how to address them (for more information see Chapter 5 - specific modifications). Specific topics covered in this chapter include:

SECRETARY OF THE INTERIOR'S STANDARDS FOR THE TREATMENT OF HISTORIC PROPERTIES

SECRETARY OF THE INTERIOR'S STANDARDS FOR REHABILITATION

COMMON PRESERVATION ISSUES IN THE VILLAGE OF JOHNSON CITY

SECRETARY OF THE INTERIOR'S STANDARDS

The Secretary of Interior's Standards (Standards) consists of four treatments: preservation, rehabilitation, reconstruction, and restoration. Initiated as part of the 1966 National Preservation Act, the Standards are accompanied by guidelines that are intended to provide general and technical recommendations to assist in applying the standards to specific projects.

WHO SHOULD USE THE STANDARDS?

The standards and their guidelines are intended to provide guidance for the following:

- Federal agencies
- State and local officials
- Historic district and planning commissions
- Historic building owners and managers
- Preservation consultants
- Architects
- Contractors
- Project reviewers

THE STANDARDS SHOULD BE USED TO ESTABLISH A COMPREHENSIVE APPROACH TO THE IDENTIFICATION, EVALUATION, REGISTRATION AND TREATMENT OF HISTORIC PROPERTIES.

Overview of Preservation Treatments

UNDERSTANDING THE FOUR TREATMENT APPROACHES

PRESERVATION

The Preservation Standards require applying measures to sustain the existing form, integrity, and materials of a historic property.

RESTORATION

The Restoration Standards allow for the depiction of a building at a particular time in its history by preserving materials, features, finishes, and spaces from its period of significance and removing those from other periods.

REHABILITATION

The Rehabilitation Standards acknowledge the need to alter or add to a historic building to meet continuing or new uses while retaining the building's historic character.

RECONSTRUCTION

The Reconstruction Standards establish a limited framework for recreating a vanished or non-surviving building with new materials, primarily for interpretive purposes.

Guideline Considerations

HOW TO CHOOSE AN APPROPRIATE TREATMENT

1 | Level of Significance

Does the property have exceptional national, state or local significance?

2 | Physical Condition

Are distinctive materials, features & spaces in tact?

3 | Code & Regulations

What regulation requirements must be addressed? Will the use of the building be appropriate with necessary modification per codes and regulations?

4 | Proposed Use

Will any proposed uses result in the loss of historic character or integrity?

PRESERVATION

- the property's distinctive materials, features, and spaces are essentially intact and thus convey the historic significance without extensive repair or replacement; or
- depiction at a particular period of time is not appropriate; or
- when a continuing or new use does not require additions or extensive alterations.

RESTORATION

- the property's design, architectural, or historical significance during a particular period of time outweighs the potential loss of extant materials, features, spaces, and finishes that characterize other historical periods; or
- there is substantial physical and documentary evidence for the work; or
- contemporary alterations and additions are not planned.

REHABILITATION

- repair and replacement of deteriorated features are necessary; or
- alterations or additions to the property are planned for a new or continued use; or
- its depiction at a particular period of time is not appropriate.

RECONSTRUCTION

- a contemporary depiction is required to understand and interpret a property's historic value (including the re-creation of missing components in a historic district or site); or
- no other property with the same associative value has survived; or
- sufficient historical documentation exists to ensure an accurate reproduction.

SECRETARY OF THE INTERIOR'S STANDARDS FOR REHABILITATION

Rehabilitation, often referred to as adaptive reuse, is the most common preservation treatment used throughout the Village of Johnson City and nationally. This is largely due to its allowance of alterations and/or construction of new additions, if deemed necessary for the continuing or new use of a historic property. In rehabilitation, historic materials and character-defining features are retained and repaired; however, any deteriorated, damaged or missing features may be replaced with the same materials or compatible substitute materials.

REHABILITATION PRESERVES FEATURES WHICH CONVEY A BUILDING'S HISTORICAL, CULTURAL AND ARCHITECTURAL VALUE.

STANDARDS FOR REHABILITATION

1. A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces and spatial relationships.
2. The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces and spatial relationships that characterize a property will be avoided.
3. Each property will be recognized as a physical record of its time, place and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.
4. Changes to a property that have acquired historic significance in their own right will be retained and preserved.
5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.
6. Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.
7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
8. Archaeological resources will be protected and preserved in place. If such resources must best disturbed, mitigation will be undertaken.
9. New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work will be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.
10. New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

COMMON PRESERVATION ISSUES IN THE VILLAGE OF JOHNSON CITY

The following section identifies some of the most common preservation issues in th Village of Johnson City, as well as approaches for addressing these issues in the future.

DEMOLITION AND DEMOLITION BY NEGLECT

The demolition of historic buildings in the Village of Johnson City has occurred over time due to societal pressure for new and modernized buildings. Several two- and three-story commercial buildings on Main Street were razed and replaced by modern one-story buildings. The buildings at 253, 272 and 278 Main Street were all demolished and replaced by one-story commercial buildings with flat roofs. A hotel at the northeast corner of Willow and Main Streets was also demolished and replaced by a modern one-story building to house a business that was displaced by a fire on the southwest corner of the intersection. Several factory buildings north of the railroad tracks in the original industrial area of the historic district were also demolished after sitting vacant for an extended period of time.

Demolition by Neglect occurs when a property owner intentionally allows a historic property to suffer severe deterioration, potentially beyond the point of repair.

STRATEGIES TO MINIMIZE DEMOLITION AND DEMOLITION BY NEGLECT:

- Increased knowledge and awareness about the Village's historic significance and architectural heritage among property owners, developers, contractors and residents
- Local preservation legislation to landmark significant properties and prevent negligence with respect to ownership and/or maintenance of the property. A carefully drafted provision in the local preservation ordinance can require affirmative maintenance and ensure that the local commission is equipped with adequate remedies and enforcement authority
- Organizational capacity to educate about best practices in historic preservation and incentivize the protection of historic buildings

DEFERRED MAINTENANCE

Deferred maintenance results from delaying or failing to perform cyclical maintenance, such as protecting exterior building components from water infiltration, ultraviolet deterioration, air infiltration and pest infestation. Proper maintenance is the most cost-effective method of extending the life of a building. Over time, the cost of maintenance is substantially less than the replacement of deteriorated historic features and involves considerably less disruption. Stopping decay before it is widespread helps keep the scale and complexity of work manageable for the owner.

STRATEGIES TO MINIMIZE DEFERRED MAINTENANCE:

- Regular inspections, monitoring and seasonal maintenance work
- Developing guidance on maintenance treatments for historic building exteriors
- Keeping a written record of completed work

INSPECTION FREQUENCY CHART

Feature	Minimum Inspection Frequency	Season
Roof	Annually	Spring or fall; every 5 years by roofer
Chimneys	Annually	Fall, prior to heating season; every 5 years by mason
Roof Drainage	6 months; more frequently as needed	Before and after wet season, during heavy rain
Exterior Walls and Porches	Annually	Spring, prior to summer/fall painting season
Windows	Annually	Spring, prior to summer/fall painting season
Foundation and Grade	Annually	Spring or during wet season
Building Perimeter	Annually	Winter, after leaves have dropped off trees
Entryways	Annually; heavily used entries may merit greater frequency	Spring, prior to summer/fall painting season
Doors	6 months; heavily used entry doors may merit greater frequency	Spring and fall; prior to heating/cooling seasons
Attic	4 months, or after a major storm	Before, during and after wet season
Basement/Crawlspace	4 months, or after a major storm	Before, during and after rain season

SUGGESTED INSPECTION FREQUENCIES FOR MAJOR FEATURES ASSOCIATED WITH THE BUILDING'S EXTERIOR, BASED ON A TEMPERATE FOUR-SEASON CLIMATE AND MODERATE LEVELS OF ANNUAL RAINFALL.
PRESERVATION BRIEF 47: MAINTAINING THE EXTERIOR OF SMALL AND MEDIUM SIZE HISTORIC BUILDINGS

INAPPROPRIATE TREATMENTS

Inappropriate treatments refers to alterations or changes to a historic property that are not consistent with the historic materials or a building's distinguishing character. A building's character can be irreversibly damaged or changed in many ways. Throughout the Johnson City Historic District, industrial and commercial buildings reflect the following types of alterations that have changed or destroyed the building's distinguishing architectural features that make up its historic character:

- Covering historic materials with "maintenance free" products and systems such as waterproof sealers, rubberized paints and synthetic siding
- Replacing deteriorated historic materials with inappropriate substitute materials
- Changing the shape or placement of openings commonly found in large industrial buildings and using replacement units that are unlike the original metal sash windows
- In historic commercial buildings, removing transparent storefront components such as glass in doors, transoms and display areas
- Adding or removing character-defining features such as chimneys or cupolas; the various projections on the building, such as porches or bay windows; and the openings for windows and doorways

Non-historic changes to historic residential properties in working class neighborhoods are common. In the Johnson City Historic District, the residential streets retain the vernacular housing stock from the late nineteenth and early twentieth century. Many of the modifications, fortunately, are reversible and the overall character, scale, age and form of the buildings on these streets survive. Alterations include:

- Artificial siding types such as asbestos, asphalt and aluminum
- Window replacements in original openings
- Replacement or enclosure of porches
- One-story commercial additions added to façades. For example, an alteration made during the period of significance which illustrates transformation of early residential areas to more commercial areas.

DEFINING CHARACTER

The following three-step process can be used to identify those aspects that give the building and setting its essential visual qualities and character. This checklist is designed to help in identifying those attributes that contribute to a building's character:

STEP 01

The overall visual aspects: shape, roof and roof features, openings, trim and secondary features, materials and setting.

STEP 02

The visual character at close range including materials and craft details.

STEP 03

The visual character of interior spaces, features and finishes.

See **Preservation Brief 17: Architectural Character—Identifying the Visual Aspects of Historic Buildings as an Aid to Preserving their Character** for more information.

INAPPROPRIATE SIGNAGE

Signage for businesses are often designed to be eye-catching—thus sometimes disregard the character-defining materials, features and spaces of a historic commercial building. Characteristics such as neon or flashing lights, bold colors not found on the façade of the building and disproportionately large lettering can all impact the building's historic significance and context.

For guidance regarding signage in the historic district, see the design standards for the Village Main Street as well as the signage standards for the Village , as well as the signage information under commercial best practices in **Chapter 5.**

ACCESSIBILITY

The majority of older buildings are not compliant with The Americans with Disabilities Act (ADA) of 1990 and revised ADA Regulations. Historically, most buildings and landscapes were not designed to be readily accessible for people with disabilities. Access to historic public buildings is a civil right, and owners of those historic properties must evaluate making buildings and their sites accessible. However, solutions for accessibility can destroy a property's significant materials, features and spaces. Steps, landings, doors, and thresholds often pose barriers for persons with disabilities and need to be evaluated properly so that permanent damage to character-defining features is avoided.

For more information, refer to **Preservation Brief 32: Making Historic Properties Accessible** as well as the accessibility section of **Chapter 5.**

Historic Period Sign Types and Practices

PRE-NINETEENTH CENTURY

- **Flat signs** with lettering mounted flush against the building gradually replaced hanging, symbolic signs.

NINETEENTH CENTURY

- **Fascia** signs, placed on the fascia or horizontal band between the storefront and the second floor, were among the most common. Other painted signs presented figures, products or scenes. Signs in the form of plaques, shields and ovals were used on many nineteenth-century buildings.
- **Hanging or projecting signs,** both lettered and symbolic, were also common in the nineteenth century and often paired with another at a 45-degree angle for increased visibility.
- **Goldleaf signs**, and signs painted or etched on glass in windows, doors and transoms were quite common.
- **Porcelain enamel signs** were also very popular in the latter half of the nineteenth century and into the mid-twentieth century.
- **Posters,** when not pasted onto the building, were sometimes incorporated into display windows.
- The fringe or skirt of an **awning**, as well as the panel at the side, were common places for a name or street number. Flags, particularly hung from the upper floors, and banners that stretched across the sidewalk also appeared on buildings.
- **Rooftop signs** appeared with greater frequency in the second half of the nineteenth century, with later rooftop signs typically found on hotels, theaters, banks and other large buildings.

TWENTIETH CENTURY

- **Electricity** gave signs light and, later, movement. Illuminated signs were not unknown before electricity.
- **Neon** offered signmakers an opportunity to mold light into an infinite variety of shapes, colors, and images. Combined with an electric timer, the neon tubing could present images moving in succession.

5 BEST PRACTICES IN PRESERVATION

This chapter provides the framework for determining the appropriateness of modifications to historic buildings within the Village of Johnson City. This chapter is complementary to Article 57, 58 and 59 of the Village of Johnson City Zoning Code (Design Standards

STRATEGIES FOR COMPATIBLE MODIFICATIONS

WHERE TO FIND HELP

INTRODUCTION

Among the economic benefits of historic preservation is the rehabilitation of historic buildings such as factories, schools and churches into alternate uses, such as housing, as well as the contribution of older and historic neighborhoods to community development. Success stories in downtown revitalization are found today in communities across the country that have maintained and reinvested in their historic buildings. The following section provides guidance about historic materials, systems, features and special issues for historic properties in the Village of Johnson City, depending upon the property's significance, existing physical condition, the extent of documentation available and interpretive goals. The intent is to provide guidance to historic building owners and building managers, preservation consultants, architects, contractors and project reviewers prior to beginning work in order to succeed in preserving the recognized character, quality, and ultimate durability of historic buildings.

Technical Preservation Services has developed a wide variety of guidance and other information on applying the Standards for Rehabilitation. Much of it has been developed in the context of the Historic Preservation Tax Incentives program, but it is applicable to all rehabilitation projects.

"Cumulative Effect and Historic Character" explains that projects meet the Standards when the overall effect of all work on the property is consistent with the property's historic character.

"Interpreting the Standards Bulletins" are case studies of specific rehabilitation treatments that do and do not meet the Standards.

"Planning Successful Rehabilitation Projects" provides guidance and other information on applying the Standards to some common rehabilitation concerns, including windows, interior treatments, additions and new construction, and modern requirement, technologies and materials.

"Incentives" is a guide to the Historic Preservation Tax Incentives program and includes examples of additional treatments that do and do not meet the Standards.

Links to these articles can be found at https://www.nps.gov/tps/standards/applying-rehabilitation.htm

STRATEGIES FOR COMPATIBLE MODIFICATIONS

The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings are intended to promote responsible preservation practices to historic building owners and managers, consultants, contractors, and project reviewers. The Standards are designed to be applied to all historic resource types listed in the National Register of Historic Places, which include buildings, sites, structures, districts, and objects. The Guidelines apply specifically to buildings. There are four types of preservation practices, or treatments: Preservation, Rehabilitation, Restoration, and Reconstruction. Once a treatment is selected, the Standards provide philosophical consistency to the work while the Guidelines focus directly on exterior materials and features, the site and setting, and special requirements such as accessibility requirements, health and safety code requirements, or retrofitting to improve energy efficiency.

INTERIOR FEATURES

Interior features are not addressed in this document. Interiors will only be evaluated as a part of a state or federal tax credit project (see reference to Section 106 in Chapter 1), or for buildings listed on the National Register of Historic Places. For buildings in the historic district that do not fall into one of those categories the Village will only have jurisdiction over the exterior of the building as it pertains to the character of the overall district and as a part of the "public right of way" via local preservation legislation. For more information regarding rehabilitating interiors see the National Park Service Preservation Brief **18 - Rehabilitating Interiors in Historic Buildings: Identifying and Preserving Character-Defining Elements.**

CONSIDERATIONS

Choosing the most appropriate treatment for historic buildings requires careful decision-making about its significance and integrity, especially when considering the historic district's evolving built heritage. The following factors and subsequent questions will dissect the four treatments will help with discerning how to apply the standards appropriately.

FACTORS TO CONSIDER:

1. Relative importance
2. Identify the significant historic period and style of the building
3. Determine physical condition/integrity of the building
4. Proposed use of the building
5. Code requirements

Preservation Tech Notes are a compiled set of articles that provide practical information on traditional practices and innovative techniques for successfully maintaining and preserving the following cultural resources:

- Doors
- Exterior Woodwork
- Finishes
- Historic Glass
- Historic Interior Spaces
- Masonry
- Mechanical Systems
- Metals
- Museum Collections
- Site
- Temporary Protection
- Windows

These notes can be found at https://www.nps.gov/tps/how-to-preserve/tech-notes.html

1. RELATIVE IMPORTANCE IN HISTORY

Properties that retain interpretative value, such as National Historic Landmarks, may be candidates for Preservation or Restoration because of their exceptional degree of historic significance. Questions to ask include: Is the building a nationally significant resource, of statewide significance, or is it locally significant? Was it the home of an important local merchant, or the business headquarters of a nationally renowned industrialist? Is the house or commercial building a local representative of a significant style of architecture? Many buildings listed individually in the National Register of Historic Places often call for Preservation or Restoration. Rehabilitation more frequently applies to buildings that contribute to the overall significance of a historic district for a new and compatible use.

256 MAIN STREET.

2. HISTORIC PERIOD AND STYLE

This information will help determine the significant historic period the building represents and what style it was built in or adapted to. This could be a high style like Gothic, Colonial or Romanesque or it can be vernacular like the American Four Square or the typical commercial storefront. This can be a challenge to discern if alterations were made to the building over time. Modernized buildings often develop a significance in their own right so don't assume you have to undo all that has been done to a building over time. One example of this in the Village is 256 Main St. Although at one time this 3-story commercial building had a similar Italianate appearance to that of its neighbors, it was modified to have a more modern façade and storefront and has developed significance in that time period and should be maintained that way.

Additionally, property owners should determine which features are character defining. In a historic district this pertains to the exterior of the building. While it is a bonus to preserve the interior of an old building it is not necessary unless that building is on the National Register of Historic Places. The character of the exterior must be maintained as a part of the overall historic district and every effort should be made to maintain those character defining features or restore them depending on the decided upon treatment. Character defining features vary per style and time period.

A property owner can request the help of a local historic preservation board or commission member to assist with the determination of character-defining features of a historic building. Preservation Brief 17: Architectural Character - Identifying the Visual Aspects of Historic Buildings as an Aid to Preserving their Character is also available online for reference.

3. PHYSICAL CONDITION

What is the current condition of the building? Have the building materials deteriorated? Has the original massing, form, and orientation survived largely intact, or have those components been altered? Are the alterations an important part of the building's history?

Preservation may be appropriate if distinctive materials, details, and elements are essentially intact and convey the building's historical significance. If the building requires more extensive repair and replacement, or if alterations or additions are necessary for a new use, then Rehabilitation is probably the most appropriate treatment.

4. PROPOSED USE

Will the building function as it was originally intended, or will it be given a new use? Many historic buildings can be adapted for new uses without seriously damaging their distinctive materials, features, spaces, and spatial relationships.

5. CODE REQUIREMENTS

Regardless of the treatment chosen, health and safety and accessibility requirements will need to be considered. Identify the building's character-defining spaces, features, and finishes so that code-required work will not jeopardize a building's materials as well as its historic character. Alterations and new construction will need to meet accessibility requirements under the Americans with Disabilities Act (ADA) of 1990; however, the design should minimize material loss and visual change to a historic building.

The New York State Building Code follows the International Building Code format, as do most state building codes. The Code is comprised of nine books. The "Building Code of New York State" is only part of the Code, as it applies to newly constructed commercial and multi-family buildings. The "Residential Code of New York State" applies to one- and two-family buildings. The "Existing Building Code of New York State" applies to the repair, alteration, change of occupancy, addition, and relocation of existing buildings.

The "Property Maintenance Code of New York State" and "Fire Code of New York State" are two books of the Code that can apply to existing buildings. The "Energy Conservation Construction Code of New York State" applies to existing and new buildings, although provisions are modified for existing buildings to reflect rehabilitation work. The Energy Code does not apply to properties listed in the New York State or National Register of Historic Places. The "Mechanical Code of New York State," "Fuel and Gas Code of New York State," and "Plumbing Code of New York State" will apply if any new work is done.

OTHER CONSIDERATIONS

Once the appropriate treatment has been selected, other factors to consider include:

1. Materials
2. Building Features and Systems
3. Accessibility
4. New Exterior Additions
5. Sustainability

Cultural Landscapes

Cultural landscapes can range from thousands of acres of rural tracts of land to a small homestead with a front yard of less than one acre. Like historic buildings and districts, they reveal aspects of our country's origins and development through their form, features, and the ways they were used. Cultural landscapes also reveal much about our evolving relationship with the natural world.

The Secretary of the Interior's Standards for the Treatment of Historic Properties apply to all types of properties, including landscapes. The Standards identify and explain four treatments: preservation, rehabilitation, restoration, and reconstruction. The Guidelines for the Treatment of Cultural Landscapes illustrate how to apply these four treatments to cultural landscapes in a way that meets the Standards.

Learn about the **Planning, Treatment and Management of Historic Landscapes** from **Preservation Brief 36.**

MATERIALS

When addressing historic buildings, it is important to know how to treat historic materials. Once you have established the style of your building, the next step is to determine what materials were used for that style and time period. Avoid the use of materials that were unavailable at the time the building was constructed. This usually includes vinyl and aluminum siding, anodized aluminum, mirrored or tinted glass, artificial stone and brick veneer. Then, evaluate the condition of the material or feature to determine what to do with that aspect of the building: keep, clean/refinish, repair, replace in-kind or replace with substitute material.

MATERIAL TREATMENT OPTIONS

KEEP

If the historic materials are in good condition, then keep it as it is.

CLEAN / REFINISH

If an element appears to be in poor condition simply because of a cosmetic or aesthetic issue, then cleaning the element may be all that is needed. This can range from washing the glass in windows to stripping metal pieces of paint and rust and repainting them. Often when someone thinks they need to replace the wood siding on their home because it is looking run down what they really need is to just strip the paint and give it a fresh coat.

REPAIR

Repairs are preferable to replacement whether or not the repairs are in-kind or with a synthetic substitute material. A repair could be repointing masonry or using epoxy to fill in the gaps of a wood piece.

REPLACE

Once all reasonable options for repair or replacement in-kind have been exhausted, the choice among a wide variety of substitute materials currently on the market must be made.

SUBSTITUTE MATERIAL

Given the age of many historic buildings, replacing in-kind may not always be possible. For example, a quarry that produced a certain historic stone is no longer in operation. In this case, a substitute material can be used to replace the historic material. There are four circumstances that warrant the consideration of substitute materials:

1. Unavailability of historic materials
2. Unavailability of skilled craftsmen
3. Inherent flaws in the original materials
4. Changes required by code (which in many cases can be extremely destructive of historic resources).

Materials can also be substituted for less expensive ones in an effort to make restoration more affordable. In this case, substitute materials should meet three basic criteria:

1. Compatible with the historic materials in appearance
2. Physical properties must be similar to those of the historic materials, or be installed in a manner that tolerates differences
3. Basic performance expectations over an extended period of time

Some substitute materials can be as simple as a different type of stone. Common substitute materials are paint mixed with sand for stone and stamped metal for a number of materials. Substitute materials can also be synthetic materials like epoxy and fiberglass, also referred to as high-tech materials. These should be used with discretion and only if they meet the criteria above. Often vinyl or molded urethanes are used as cosmetic claddings or as substitutes for wooden millwork. Since millwork is still readily available, it should be replaced in-kind. Other common substitute materials include cast stone, precast concrete, glass fiber reinforced concrete and cast aluminum.

The most common historic materials are wood, metal and stone/masonry. These materials are described below:

WOOD

Wood was once the most abundant resource available in the United States. It has been used in various ways in the distinctive characteristics of the type, period, or method of construction of a property, especially in vernacular residential buildings. Wooden building materials can be found in interior walls, window framing, doors, exterior cladding, molding, and porches. Common wood degradation issues are moisture damage, vandalism, insect attack, paint failure and rotting.

TREATMENT	METHODOLOGY

CLEAN	• Wood only needs to be cleaned if it needs to be repainted. Paint failure should not be interpreted as a sign that the wood is in poor condition as it is frequently in sound physical condition beneath unsightly paint.
	  • Limited paint deterioration - Mildewing, excessive chalking, or staining (from the oxidization of rusting nails or metal anchorage devices) - generally requires only thorough surface cleaning prior to repainting. Intercoat peeling, solvent blistering, and wrinkling require removal of the affected layer using mild abrasive methods such as hand scraping and sanding. In these cases of limited deterioration, after proper surface preparation the exterior woodwork may be given one or more coats of a high-quality exterior oil finish paint.
	  • Extensive paint deterioration - Continuous patterns of deep cracks, or extensive blistering and peeling so that bare wood is visible - the old paint should be completely removed before repainting. (It should be emphasized that because peeling to bare wood—the most common type of paint problem—is most often caused by excess interior or exterior moisture that collects behind the paint film, the first step in treating peeling is to locate and remove the source or sources of moisture. If this is not done, the new paint will simply peel off.)
	  • Total paint removal - There are several acceptable methods, such as thermal devices like an electric heat plate with scraper for flat surfaces such as siding, windowsills and doors or an electric hot-air gun with profiled scraper for solid decorative elements such as gingerbread or molding. Chemical methods such as caustic or solvent-base strippers may be used to remove paint from window muntins because thermal devices can easily break the glass. Detachable wooden elements such as exterior shutters, balusters and columns can likely be stripped by means of immersion in commercial dip tanks. Rinse all chemical residue off the wood prior to painting or the new paint will not adhere.
	• If the exterior woodwork has been stripped to bare wood, priming should take place within 48 hours—unless the wood is wet, in which case it should be permitted to dry before painting. Application of a high-quality oil type exterior primer will provide a surface over which either an oil or latex topcoat can be successfully used.

REPAIR	• Rot - Dry the wood, then apply fungicide such as pentachlorophenol (a highly toxic substance) to all decayed areas; treat with 2 or 3 applications of boiled linseed oil (24 hours between applications). Afterward, fill cracks and holes with putty; caulk the joints between the various wooden members and finally, prime and paint the surface. • Partially Decayed -Strengthened and stabilized by consolidation, using semirigid epoxies which saturate porous decayed wood and then harden, the consolidated wood can then be filled with a semirigid epoxy patching compound, sanded and painted.
REPLACE	• Partial Replacement - If the wood cannot be stabilized, it is possible to replace the deteriorated parts with new pieces. These techniques all require skill and some expense, but are recommended in cases where decorative elements, such as brackets or pilasters, are involved. In some cases, missing edges can be filled and rebuilt using wood putty or epoxy compounds. When the epoxy cures, it can be sanded smooth and painted to achieve a durable and waterproof repair. • Complete Replacement - If there can be nothing done to clean, repair or partially replace a wood element, then complete replacement may be necessary. As wood is still an abundant resource it is advised to replace wooden elements in-kind. Millwork should be replaced with millwork.

METAL

The metals most frequently found in the built environment include lead, tin, zinc, copper and its alloys, nickel and its alloys, iron and its alloys, and aluminum. Metal components of all types are fundamental to the appearance and integrity of historic buildings; metal elements greatly influence their character, their basic form, and their interior spaces. Each type of metal comes with its own challenges and should be treated accordingly. Determining metallic composition can be a difficult process, especially if components are encrusted with paint. Original architect's specifications can sometimes be available from permit offices, town halls, or records of the original owner. This record can be important clues in this regard and should be checked if at all possible.

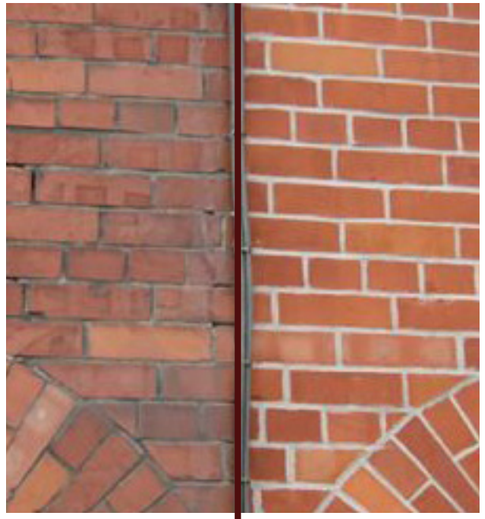
TREATMENT	METHODOLOGY
CLEAN	• Cast iron - Hand scraping and wire-brushing are viable cleaning methods for cast iron where paint buildup and rust are not severe. Remove all rust before repainting; it is not necessary to remove all paint. For extensive paint buildup and corrosion, mechanical methods such as low-pressure gentle dry grit blasting (80-100 psi) can be effective and economical, providing a good surface for paint. Re-caulk and putty the heads of screws and bolts after grit blasting to prevent moisture from entering the joints. Cleaned areas should be painted immediately after cleaning with a rust-inhibiting primer to prevent new corrosion. • Softer metals - Lead and tin, sheet metals (such as sheet copper) and plated metals (such as tin and terneplate) should not be cleaned mechanically (grit blasting) because their plating or finish can be easily abraded and damaged. Clean these softer metals with a chemical (acid pickling or phosphate dipping) method. Once the surface of the metal has been cleaned of all corrosion, grease, and dirt, a rust inhibiting primer coat should be applied. Finish coats especially formulated for metals, consisting of lacquers, varnishes, enamels or special coatings, can be applied once the primer has dried. Primer and finish coats should be selected for chemical compatibility with the particular metal in question. • Bronze Cleaning - from bronze removes some surface metal and patina, which protects the bronze for corrosion, and should be undertaken only with good reason—such as the need to remove encrusted salts, bird droppings or dirt. If it is desirable to remove the patina to restore the original surface of the bronze, several mechanical and chemical cleaning methods can be used. The proper cleaning of metals should not be considered a "do-it-yourself" project. The nature and condition of the material should be assessed by a competent professional, and the work accomplished by a specializing company.
REPAIR	• Patches can be used to mend, cover or fill a deteriorated area. Such patches should be a close match to the original material to prevent galvanic corrosion. Splicing, which is the replacement of a small section with new material, should be undertaken on structural members only when temporary bracing has been constructed to carry the load. • Reinforcing, or bracing the damaged element with additional new metal material, can relieve fatigue or overloading in some situations.
REPLACE	• If metal components have deteriorated to a point where they have actually failed (or are missing), replacement is the only reasonable course of action. In some situations, less expensive substitute materials such as aluminum, wood, plastics and fiberglass, painted to match the metal, can be used without compromising the architectural character of the resource.

MASONRY / STONE

Masonry and stone is found most often as exterior walls of public and commercial buildings as well as in architectural details. The term “masonry” includes all types of natural stone, brick, terra cotta and adobe, as well as concrete and other cementitious materials. Common conditions or issues to look for include spalling or crumbling mortar, which is often caused by ground moisture, leaking downspouts or natural freeze/thaw cycles. Additionally, masonry and stone are often covered with stucco, mastic or paint or show stains or graffiti.

It is important to remember that many mid-nineteenth century brick buildings were painted immediately or soon after construction to protect poor quality brick or to imitate stone. Some historic masonry buildings not originally painted were painted at a later date to hide alterations or repairs, or to solve recurring maintenance or moisture problems. Thus, whether for reasons of historical tradition or practicality, it may be preferable to retain existing paint.

TREATMENT	METHODOLOGY
CLEAN	• DO NOT SAND BLAST or BLAST CLEAN. This leaves the masonry porous and more susceptible to water infiltration and damage, especially during freeze/thaw cycles. Historic masonry should be cleaned only when necessary to halt deterioration or to remove graffiti and stains using the gentlest means possible, such as water and a mild detergent using natural bristle brushes, and/or a non-harmful chemical solution, both followed by a low-pressure water rinse. If new paint cannot be removed without using abrasive methods, it is best to leave the masonry painted. Repainting in a compatible color may help visually, however. • Similar guidelines apply to mastic. Its removal by mechanical means may result in abrading the masonry, and chemical and heat methods may prove ineffective—although solvents like acetone will aid in softening the hardened mastic. If the mastic has become brittle, a flat chisel may be used to pop it off. This technique, if not undertaken with care, may result in damaging the masonry. If complete removal is not possible, the mastic may have permanently stained the masonry. These damaged or stained masonry pieces can be replaced in-kind but replacement with an exact match is challenging. It is advised to paint over the masonry damage to maintain a uniform appearance.
REPAIR	• Repointing - If mortar is missing, repoint using mortar of the same composition, color, texture, and hardness, as well as the joint size and profile of the original. If the mortar is harder than that stone/masonry around it then the stone/masonry will deteriorate faster. • Spalling - Spalling is the erosion or breaking off of small pieces of brick or stone. Deteriorated stone may be replaced in-kind, or with a matching substitute material. In some cases where not visually prominent, the area may be covered with stucco and possibly scored to resemble blocks of stone. Replacement of a large area with new materials may not be acceptable as it may give the building an appearance that is inappropriate to the visual character of a building.



MISSING MORTAR - UNTREATED

ADJACENT BUILDING - AFTER REPOINTING

EVIDENCE OF BRICK SPALLING.

TREATMENT	METHODOLOGY
REPLACE	• Wood can be painted with sand-impregnated paint to imitate cut ashlar stone. • Scoring stucco into block patterns was fairly common in colonial America to imitate stone. This can be used to replace the look of natural stone. • Terra-cotta, a molded fired clay product, was itself a substitute material and was very popular in the late nineteenth and early twentieth centuries. It simulated the appearance of intricately carved stonework, which was expensive and time-consuming to produce. Terra cotta could be glazed to imitate a variety of natural stones, from brownstones to limestones, or could be colored for a polychrome effect. • Dry-tamp cast stone or textured precast concrete may be a suitable substitute if care is taken to ensure that the detail, color and texture of the original stone are matched. It is used both for surface wall stones and for ornamental features such as window and door surrounds, voussoirs, brackets and hoods. • Cementitious patching can be used for sandstone repairs. • Plastic stone can be used for masonry repairs.

Refer to **Preservation Brief 8: Aluminum and Vinyl Siding on Historic Buildings - The Appropriateness of Substitute Materials for Resurfacing Historic Wood Frame Buildings** and **Preservation Brief 16: The Use of Substitute Materials on Historic Building Exteriors** for more information.

INAPPROPRIATE REPAIR
An example of how matching historic stone color and texture can be a challenge. Using substitute materials can be preferable due to its greater control of texture and color.

Image Source:
NPS Secretary of Interior's Standards for Rehabilitation

STAMPED METAL PANEL
The stamped metal facade faces a parking lot. It can be assumed that there used to be a building here that was demolished. The building owner chose to use stamped, painted metal to represent the brick that would typically be on the exterior facade of a building of this style. The condition of the metal panels in this example is deteriorated and in need of refurbishment (see rippling and upturned corners of the paneling). However, if not maintained properly this can be an acceptable substitution for the expensive brick facade. The metal paneling is easier to clean, easier to replace & less cost prohibitive than brick.

The condition of the wall beneath the paneling is unknown based on this photograph. Before using a solution like stamped metal paneling to replace masonry, the original facade should be evaluated for structural integrity as well as for any problems such as water damage/infiltration. These problems could be hidden by the metal paneling causing significant damage in the future and more costly repairs.

APPROPRIATE REPAIR
In left image, the cornice and its stone detailing is deteriorating so instead of replacing the whole cornice with replacement stone of the same kind which may be hard to find, cast stone was used to imitate the historic stone in the right image.

source: Truliance Consulting

OTHER SUBSTITUTE MATERIALS

		DESCRIPTION	USES	ADVANTAGES	DISADVANTAGES
GLASS FIBER REINFORCED CONCRETE		Lightweight concrete compounds modified with additives and reinforced with glass fibers. Fabricated as thin shelled panels and applied to a separate structural frame or anchorage system.	Use in place of features originally made of stone, terra cotta, metal or wood, such as cornices, projecting window and door trims, brackets, finials or wall murals.	• Lightweight, easily installed • Good molding ability, crisp detail possible • Weather resistant • Can be left uncoated or else painted • Little shrinkage during fabrication • Molds made directly from historic features • Cements generally breathable • Material is fire-rated	• Non-loadbearing use only • Generally requires separate anchorage system • Large panels must be reinforced • Color additives may fade with sunlight • Joints must be properly detailed • May have different absorption rate than adjacent historic material
CAST ALUMINUM		Aluminum and aluminum alloys as liquid metal that is poured into a mold.	Can be a substitute for cast iron or other decorative elements including grillwork, roof crestings, cornices, ornamental spandrels, storefront elements, columns, capitals and column bases and plinth blocks. If not self-supporting, elements are generally screwed or bolted to a structural frame. Aluminum castings are used to make complex and detailed parts very efficiently.	• Lightweight (1/2 of castiron) • Corrosion-resistant, noncombustible • Intricate castings possible • Easily assembled, good delivery time • Can be prepared for a variety of colors • Long life, durable, less brittle than cast iron	• Lower structural strength than castiron • Difficult to prevent galvanic corrosion with other metals • Greater expansion and contraction than castiron • Requires gaskets or caulked joints • Difficult to keep paint on aluminum
PRECAST CONCRETE		A wet mix of cement and aggregate poured into molds to create masonry units. Color is generally integral to the mix as a natural coloration of the sand or aggregate, or as a small percentage of pigment.	Can be used in place of masonry materials such as stone or terra cotta. It is used both for flat wall surfaces and for textured or ornamental elements. This includes wall stones, window and door surrounds, stair treads, paving pieces, parapets, urns, balusters and other decorative elements. It differs from cast stone in that the surface is more dependent on the textured mold than the hand tamping method of fabrication.	• Easily fabricated, takes shape well • Rubber molds can be made from building stones • Minimal shrinkage of material • Can be load bearing or anchorage can be cast in • Expansion/contraction similar to stone • Material is firer-ated • Range of color and aggregate available • Vapor permeable	• May be more moisture absorbent than stone although coatings may be applied • Color fades in sunlight • Small air bubbles may disfigure units • Replacement stones are conspicuous if too few models and molds are made
FIBERGLASS		A non-load-bearing material attached to a separate structural frame. Produced as a thin rigid laminate shell formed by pouring a polyester or epoxy resin gelcoat into a mold. The gel coat can be pigmented or painted.	Used as a replacement where a lightweight element is needed, or an inaccessible location makes frequent maintenance of historic materials difficult. Its good molding ability and versatility to represent stone, wood, metal and terra cotta make it an alternative to ornate or carved building elements such as column capitals, bases, spandrel panels, belt courses, balustrades, window hoods or parapets. Its ability to reproduce bright colors is a great advantage.	• Lightweight, long spans available with a separate structural frame • High ratio of strength to weight • Good molding ability • Integral color with exposed high quality pigmented gel-coat or takes paint well • Easily installed, can be cut, patched, sanded • Non-corrosive, rot-resistant	• Requires separate anchorage system • Combustible (fire retardants can be added); fragile to impact. • High coefficient of expansion and contraction requires frequently placed expansion joints • Ultraviolet sensitive unless surface is coated or pigments are in gelcoat • Vapor impermeability may require ventilation detail
EPOXY		A resinous two-part thermosetting material used as a consolidant, an adhesive, a patching compound and as a molding resin.	Can be used to repair damaged material or recreate lost features. It can be used with wood, stone, terra cotta, and various metals. It can be used to bind together broken fragments of terra cotta; to build up or infill missing sections of ornamental metal; or to cast missing elements of wooden ornaments. Small cast elements can be attached to existing materials or entire new features can be cast. Examples of epoxy replacement pieces include finials, sculptural details, small column capitals and medallions. Multiple molds can be combined for larger elements. With special rods, the epoxies can be structurally reinforced.	• Can be used for repair/replacement • Lightweight, easily installed • Good casting ability; molds can be taken from building material can be sanded and carved. • Color and ultraviolet screening can be added; takes paint well • Durable, rot and fungus resistant	• Materials are flammable and generate heat as they cure and may be toxic when burned • Toxic materials require special protection for operator and adequate ventilation while curing • Material may be subject to ultraviolet deterioration unless coated or filters added rigidity of material • Often must be modified with fillers to match expansion coefficients • Vapor impermeable

BUILDING FEATURES AND SYSTEMS

COMMERCIAL
The storefront is the most important architectural feature of many historic commercial buildings and is the feature most commonly altered in these types of buildings. Alterations may completely change or destroy a building's distinguishing architectural features that make up its historic character.

The most common mistake regarding the storefront is covering up transparencies. Historically, first floor storefronts on Main Street consist of full-length display windows on either side of a door, which often has windows in it as well. The display windows sit on one to two-foot-high bulkheads and are often topped with transom windows or a detailed cornice or fascia. The fascia may feature sconces or historically appropriate lighting and/or a sign for the commercial space. Frequently, these full-length display windows are covered up by non-transparent materials or blocked by half walls, reducing the connectivity from the street to the business. The cornices or other detailing are often removed between the first floor and upper stories. Doors are frequently replaced with solid doors due to the belief that they are more energy efficient or cost-effective. These alterations are inappropriate and can irreversibly damage or change a building's character in many ways.

Another common error is redesigning missing or destroyed storefronts to match the rest of the façade rather than distinguishing it as a unique first floor space. For example, filling in the first floor storefront with brick to match the rest of the building, with corresponding windows used in the upper stories. This application is historically inaccurate because the first floor should be distinguishable from the upper floors with more transparency.

INAPPROPRIATE
The storefront pictured has covered up the full length windows typical of this style of building utilizing wood paneling, a material not typically found in storefronts of this period.

When addressing the treatment of a historic storefront, the following questions should be taken into consideration. What are the storefront's construction materials? What are the significant architectural features comprising the storefront and how are they arranged in relationship to each other? What is the physical condition or status of deterioration or integrity of the storefront?

If the original or significant storefront exists, repair and retain the historic features using recommended treatments (see previous section about Materials).

If the original or significant storefront no longer exists or is too deteriorated to save, undertake a contemporary design which is compatible with the rest of the building in scale, design, materials, color and texture. Or, undertake an accurate restoration based on historical research (based in the time of construction/design and the style of architecture or past architectural documents) and physical evidence (elements, features and design principles from nearby buildings of similar types).

TIP: Documentation of the historic storefront can be found in old photographs or post cards or in architectural drawings, all of which might be found at a city hall or the permitting office for the municipality or if the municipality has an archive where drawings are kept on record. Drawings can also typically be found with a historian or an architect's office if it still exists.

APPROPRIATE
The storefront pictured has full length windows typical of this style of building and has used appropriate materials for this period.

PRESERVATION BRIEF 11:
REHABILITATING HISTORIC STOREFRONT GUIDELINES

1 | SCALE Respect the scale and proportion of the existing building in the new storefront design.

2 | MATERIALS Select construction materials that are appropriate to the storefronts; wood, cast iron, and glass are usually more appropriate replacement materials than masonry which tends to give a massive appearance.

3 | CORNICE Respect the horizontal separation between the storefront and the upper stories. A cornice or fascia board traditionally helped contain the store's sign.

4 | FRAMES Maintain the historic planar relationship of the storefront to the facade of the building and the streetscape (if appropriate). Most storefront frames are generally composed of horizontal and verti¬cal elements.

5 | ENTRANCES Differentiate the primary retail entrance from the secondary access to upper floors. In order to meet current code requirements, out-swinging doors generally must be recessed. Entrances should be placed where there were entrances historically, especially when echoed by architectural detailing (a pediment or projecting bay) on the upper stories. Avoid changes in rhythm from original design.

6 | WINDOWS The storefront generally should be as transparent as possible. Use of glass in doors, transoms, and display areas allows for visibility into and out of the store.

7 | DESIGN Keep the treatment of secondary design elements such as graphics and awnings as simple as possible in order to avoid visual clutter to the building and its streetscape

Other architectural features for commercial buildings that contribute to the visual character are awnings, signs, paint color and windows.

Awnings

Where historic precedent exists, consider the use of canvas awnings on historic storefronts. Awnings provide shelter to pedestrians and can be operable for maximum energy conservation effect. Moveable awnings made from soft canvas or vinyl materials are encouraged rather than wood or metal or stationary awnings. If awnings are added, be sure they are installed without damaging the building or visually impairing distinctive architectural features.

Signs

Signs play an important role in defining the character of a business district. Signs types that have a dramatic effect on the visual appearance of a building, such as modern backlit fluorescent signs, large applied signs with distinctive corporate logos, and those signs attached to a building in such a way as to obscure significant architectural detailing, should be removed or replaced. New signs should be of a size and style compatible with the historic building and should not cover or obscure significant architectural detailing or features. Acceptable sign placements include mounting signs on the lintel above the first floor and painting signs directly on the inside of the display windows. Hanging signs are appropriate if they are of a scale and design compatible with the historic buildings. Retention of signs and advertising painted on historic walls, if of historic or artistic interest (especially where they provide evidence of early or original occupants), is encouraged.

Paint Color

Paint analysis can reveal the storefront's historic paint colors and may be worth undertaking if a careful restoration is desired. If not, the paint color should be, at a minimum, appropriate to the style and setting of the building. This means that if the building is located in a historic district, the color selection should complement not only the building but surrounding neighborhood. In general, color schemes for wall and major decorative trim or details should be kept simple; in most cases the color or colors chosen for a storefront should be used on other painted exterior detailing (windows, shutter, cornice, etc.) to unify upper and lower portions of the façade.

Windows

Glass windows are generally the most prominent features in historic storefronts, and care should be taken to ensure that they are properly maintained. Transparency of the first floor should be greater than that of the upper floors. First floor transparency allows for enhanced customer interaction between the street and the interior of the commercial space. Upper story transparencies maintain light into the residential or office spaces while also affording a level of privacy. Replacing windows with ones that do not reflect the original shape of the opening, especially if they are smaller, are not historically appropriate as they do not reflect the character of the building and reduce the amount of transparency of the façade.

Garage Doors/Moveable Transparent Walls

Transparency can also be incorporated into storefronts in more creative ways. Some adaptive reuse projects can utilize new storefront design for doors, transoms and display areas. For example, a storefront that has been so severely modified or altered that it no longer retains historic integrity can incorporate overhead doors within the new façade design in order to allow for visibility into and out of the store.

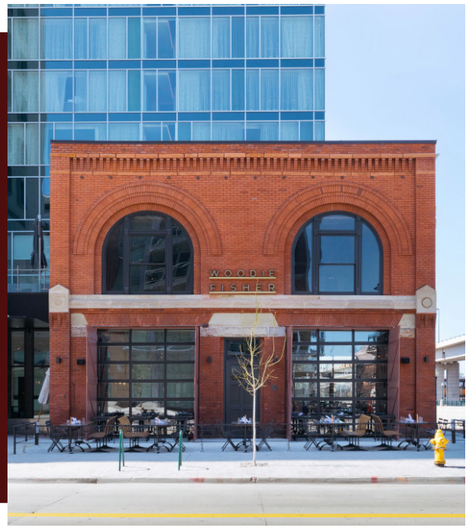
CLOSED

OPEN

PAINT COLOR
The paint color for this store front is not appropriate for the historic district. The rest of the district is filled with muted colors as well as natural earth tones. Additionally, the lack of transparency on the ground floor is inappropriate for the district. This is clearly not the original storefront and should be replaced with a more historically compatible one.

WINDOWS
This is a good example of transparency in a historic commercial building. The first floor has full length windows that connect the store to the street. The upper floors have smaller windows which provide privacy to the residences or offices. The windows clearly fit in the openings in the facade indicating that they are the original windows or historically accurate replacements.

GARAGE DOORS
This building is one of Denver's first fire stations from the 1880s and therefore has historical significance to the city. However, it was no longer being used as a fire station and was deteriorating. The building underwent a full-scale restoration and reopened as a restaurant called Woodie Fisher, a seasonal and approachable eatery at the Hilton Garden Inn. The restoration entailed stabilizing the structure and preserving the arched windows, and maintaining the garage door openings.



INDUSTRIAL
The character-defining features of industrial buildings are the open interiors with exposed brick walls, exposed beams, structural columns and ceiling trusses. Large metal windows and the proportion of window to wall is dramatic, especially in factories.

Vacant industrial buildings that are no longer needed for their original use are often rehabilitated. The sheer size and volume of the interior proves to be a good match for multi-use residential, retail and commercial purposes.

Windows
The preservation of large metal windows is the most common issue facing historic industrial buildings. Character-defining industrial metal windows and openings are oftentimes replaced with smaller vinyl replacements or bricked up. These are essential aspects of industrial character and should be restored whenever possible. Historic metal windows are generally not energy efficient; this has often led to their wholesale replacement. Metal windows can, however, be made more energy efficient in several ways, such as weatherstripping and installing an additional layer of glazing to improve the thermal efficiency. **See Sustainability in this chapter for more information.**

See an example of success for adapting Industrial buildings in Chapter 3's summary of the **Century Sunrise Apartments, page 59.**

The following publications about Industrial Buildings are available online through the National Park Service:

- Adding New Entrances to Historic Buildings, ITS No. 22
- Adding New Openings on Secondary Elevations, ITS No. 14
- Avoiding Incompatible Work: Features, Finishes + Spaces, INCENTIVES: A Guide to the Federal Historic Preservation Tax Incentives Program for Income-Producing Properties
- Landscape Treatments Around Industrial Buildings
- New Infill for Historic Loading Door Openings, ITS No. 16
- Retaining Industrial Character in Historic Buildings, ITS No. 55
- Subdividing Significant Historic Interior Spaces, ITS No. 44
- Treatment of Interiors in Industrial Buildings, ITS No. 15

Links to these articles can be found at https://www.nps.gov/tps/how-to-preserve/by-topic.htm#industrial-buildings

RESIDENTIAL
The most common preservation and maintenance issues associated with historic residential buildings are proper painting and removal, the use of vinyl or aluminum siding, window replacement and porch alterations.

Painting
Paint applied to building exteriors usually occurs for two reasons: weatherproofing (especially wood) and to define and accent architectural features. Treating paint problems in historic buildings can pose complex maintenance problems. It is generally recommended that removing paint from historic buildings—with the exception of cleaning, light scraping and hand sanding as part of routine maintenance—should be avoided unless absolutely necessary. Once conditions warranting removal have been identified, the general approach should be to remove paint to the next sound layer using the gentlest means possible, then to repaint.

Color selection should complement the building in question as well as other buildings in the neighborhood. Sample compatible paint colors are displayed on Page 109. Residential buildings constructed in the American vernacular style usually have a simple one- or two-color palette. If the historic paint colors for a building are unknown, a good rule of thumb is to survey surrounding building stock. In general, pastels and muted or natural tones are historically appropriate. Color schemes for wall and major decorative trim or details should be kept simple. In most cases, the color or colors chosen for exterior detailing (windows, shutter, cornice, etc.) should unify upper and lower portions of the façade.

Routine paint maintenance consists of cleaning surfaces, lightly scraping them (this often only needs to be to the next level of paint below if there are multiple layers of paint built up; paint can adhere just as effectively to existing paint as to bare wood if it was applied appropriately and if there are no other problems) and hand sanding surfaces to prepare a rough texture to receive a new coat of paint. While this work can be tedious, it will protect the painted elements for many more years.

Failure can look like continuous patterns of deep cracks or extensive blistering and peeling so that bare wood is visible. These symptoms are usually caused by moisture penetration or previous application errors. In these instances, the old paint should be completely removed and the underlying remediated before repainting. Complete removal of paint should only be done if absolutely necessary and by the gentlest means possible. The only other justification for removing all previous layers of paint is if doors, shutters or windows have literally been "painted shut," or if new wood is being pieced-

in adjacent to old painted wood and a smooth transition is desired. Total paint removal should only be performed after thorough investigation into and mitigation of the source of the paint failure, such as moisture or insect infestation. Paint removal should be attempted with care; for larger sections, hiring a professional is recommended. Some hazards that come with paint removal include lead vapors, inhaling paint dust and the dangers that come with general misuse of paint removers or paint removing tools.

CRACKING PAINT

PEELING PAINT

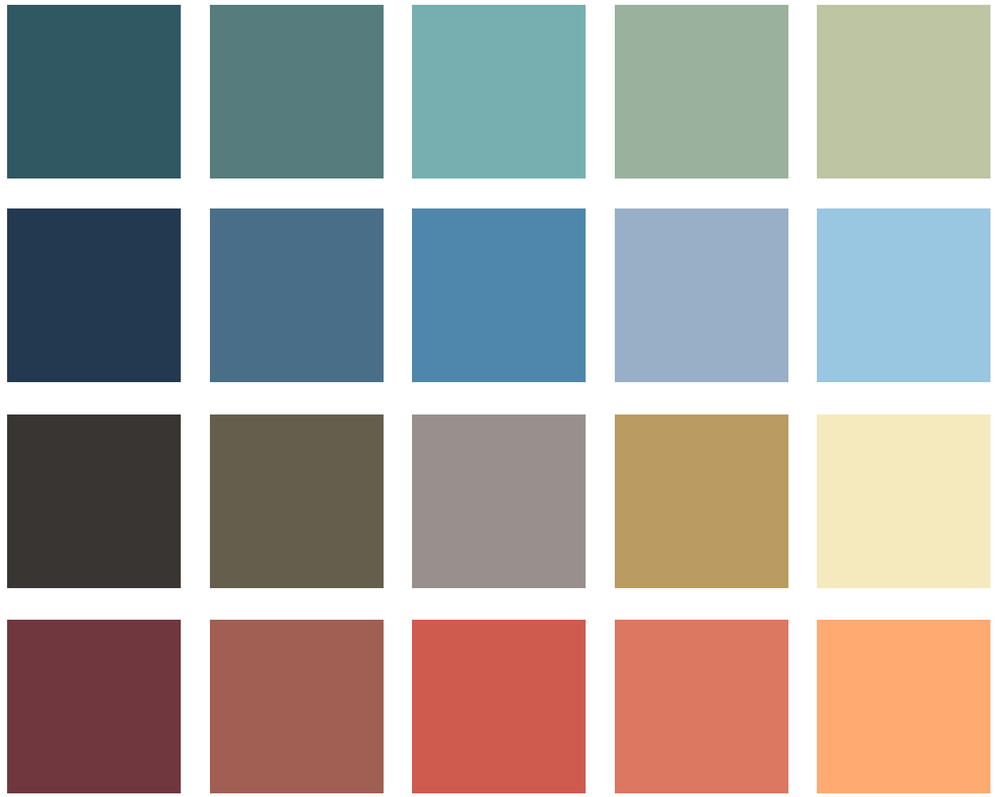
Paint removal techniques are as follows:

- **Abrasive** - "Abrading" the painted surface by manual and/or mechanical means such as scraping and sanding. Generally used for surface preparation and limited paint removal.
- **Thermal** - Softening and raising the paint layers by applying heat followed by scraping and sanding. Generally used for total paint removal.
- **Chemical** - Softening of the paint layers with chemical strippers followed by scraping and sanding. Generally used for total paint removal.

See Preservation **Brief 10: Exterior Paint Problems on Historic Woodwork** for more information about identifying and describing common types of paint surface conditions and failures in addition to recommendations for appropriate treatments for best adhesion and greatest durability of new paint.

COMPATIBLE PAINT COLORS

Exterior paint colors should be complementary and consistent to the existing paint colors and facade materials utilized in the downtown historic district. The palette below displays recommended paint colors. For new construction, earth tones and muted hues are recommended for the main body of the building. The use of bright colors shall be limited and may only be used as accents.



Siding

The maintenance and periodic painting of wood frame structures is a time-consuming effort—and often a substantial expense for the homeowner—so it is understandable that a product that affords relief from periodic painting and gives the building a new exterior cladding would be appealing. For these reasons, aluminum and vinyl siding have been used extensively in upgrading and renovation of the nation's stock of wood frame residential buildings.

For historic residential buildings, aluminum or vinyl siding may be an acceptable alternative only if: (1) the existing siding is so deteriorated or damaged that it cannot be repaired; (2) the substitute material can be installed without irreversibly damaging or obscuring the architectural features and trim of the building; and (3) the substitute material match the historic material in size, profile and finish so that there is no change in the character of the historic building.

Since aluminum and vinyl sidings are typically marketed as home improvement items, they are frequently applied to buildings in need of maintenance and repair. Minor uncorrected problems can progress to the point where expensive, major repairs to the structure become necessary. If there is a hidden source of water entry within the wall or leakage from the roof, the installation of any new siding will not solve problems of deterioration and rotting that are occurring within the wall. For example, if deferred maintenance has allowed water to enter the wall through deteriorated gutters and downspouts, the cosmetic surface application of siding will not correct these problems. In fact, if the gutters and downspouts are not repaired, such problems may become exaggerated because water may be channeled behind the siding. In addition to drastically reducing the efficiency of most types of wall insulation, such excessive moisture levels within the wall can contribute to problems with interior finishes such as paints or wallpaper—causing peeling, blistering or staining of the finishes.

It cannot be overemphasized that a cosmetic treatment to hide difficulties such as peeling paint, stains or other indications of deterioration is not a sound preservation practice; there is no substitute for proper care and maintenance. Aluminum and vinyl siding are not directly at fault in these situations since property owners should determine the nature and source of their problems, then make appropriate repairs. The difficulty arises when owners perceive the siding as the total solution to their required maintenance and forgo other remedial action.

There is also misconception that vinyl siding provides more insulating effectiveness than wood and is therefore a more sustainable option. Studies have shown that replacement of wood siding with vinyl or aluminum results in a loss of insulation. The only insulation gained from adding it to the wood building without removing the wood siding results from the air gap between the two materials. The most heat loss found in historic buildings comes from windows, doors and roofs—changing the siding on the building will have little to no effect on heat loss.

See **Preservation Brief 8: Aluminum and Vinyl Siding on Historic Buildings** for more information.

Windows

Property owners are always encouraged to repair and retain existing historic windows. Not only can windows have architectural or historical significance, but they also admit light to the interior spaces, provide fresh air and ventilation to the interior, provide a visual link to the outside world, and enhance the appearance of a building.

The repair and weatherization of existing wooden windows is more practical than most people realize. Routine maintenance required to upgrade a window can include interior and exterior paint removal to some degree; removal and repair of sash (including reglazing where necessary); repairs to the frame; weatherstripping and reinstallation of the sash and repainting.

Many windows are unfortunately replaced because of the lack of awareness of techniques for evaluation, repair and weatherization. Wooden windows can be stabilized, and deteriorated parts replaced with new matching pieces or splicing new wood into existing members. When repaired and properly maintained, wooden windows have greatly extended service lives while contributing to the historic character of the building.

Yet, there are projects where replacement of the existing windows is an appropriate treatment. An attempt should be made to understand the contribution of the window(s) to the appearance of the façade. Windows should reflect the period, style or regional characteristics of the building, or represent technological development.

EVALUATING WINDOWS ON A HISTORIC BUILDING

The steps for evaluating windows for any historic building include:

01 Evaluate architectural significance

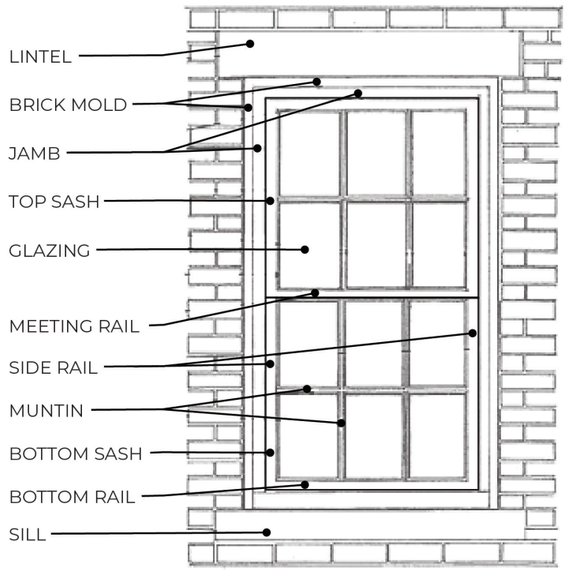
02 Evaluate physical condition

03 Determine level of intervention necessary

04 Confirm that the replacement unit maintains or restores historic integrity of the building

WINDOW EVALUATION PROCEDURE

STEP	DESCRIPTION
01 EVALUATE ARCHITECTURAL SIGNIFICANCE	What style are they a part of and what time period are they from? What was the original placement of the windows? Is there any ornamentation on them? What materials are they made with? How many panes do they have? How many mullions or muntins? How big are they/what are the proportions compared to the rest of the house? Are they casement, double hung, fixed? Most residential windows will be wooden, double-hung windows with varying numbers of panes. Windows are character-defining features of a historic building if they are: · Original · Reflective of the original design intent for the building · Representative of a period or regional style or building practice · Reflective of changes to the building resulting from major periods or events · Examples of exceptional craftsmanship or design
02 EVALUATE PHYSICAL CONDITIONS	If the windows are original or considered significant, they then must have their physical condition evaluated. While some windows can deteriorate due to fungi decay, vandalism or insect attack, the most common form of deterioration is due to moisture penetration/infiltration. Look for: · Moisture infiltration (visible leaking, pooling, condensation) · Failing paint (flaking, peeling, blistering) - often indicates moisture infiltration · Decaying woSod, especially on flat sills where water can pool · Missing, loose, or cracked putty/sealant · Deteriorated joints (between the sill and jamb, corners of the bottom rails and muntin joints) · Cracked or loose glass panes · Rusting hardware (hinges, cranks, locks) · Functionality of window (Does it open properly? Is it painted shut?)



WINDOW EXTERIOR

STEP	DESCRIPTION
03 DETERMINE LEVEL OF INTERVENTION NECESSARY	**1. Routine maintenance procedures:** · Some degree of interior and exterior paint removal · Removal and repair of sash (including reglazing where necessary) · Repairs to the frame · Weatherstripping and reinstallation of the sash · Repainting **2. Structural stabilization** · Partially decayed wood can be waterproofed, patched, built-up, or consolidated and then painted **3. Parts repair/replacement** · Remember that any repairs or replacements should be performed only after the root cause of the deterioration of the material has been determined and eliminated such as moisture penetration locations or decay fungi. **4. Full window replacement** · If repairs and parts replacement are not enough to salvage a historic window, then the installation of a storm window should occur before the full replacement of the window is considered. This can help with energy conservation as well as locking out moisture while preserving the original window. · If it is determined that window replacement is the only option, the following factors should be taken into consideration when designing a replacement: the pattern of the openings and their size. These include: proportions of the frame and sash, configuration of windowpanes, muntin profile, type of wood, paint color, characteristics of the glass and associated details such as arched tops, hoods, or other decorative elements.
04 CONFIRM REPLACEMENT	Based on observation and architectural knowledge, confirm whether or not the replacement unit maintains or restores the historic integrity of the buidling.

For more information, see **Preservation Brief 9 - The Repair of Historic Wooden Windows** and **Preservation Brief 47: Maintaining the Exterior of Small and Medium Size Historic Buildings.**

Porches

The significance of porches has evolved over time. The golden era of the porch was from the second half of the 1800s to the early 1900s. The porch during the late nineteenth century was regarded as a true extension of the home as an outdoor parlor. The porch was a place for pleasantries, socializing, courting, and entertaining company during a time when society was obsessed with manners. By the early twentieth century, “sleeping porches” developed on the second floor next to bedrooms due to the growth in the hygiene movement, which stressed that access to fresh air could help prevent or remedy such diseases as tuberculosis. This era also saw the rise in use of insect screening on porches to guard against mosquitoes and the diseases they spread, such as yellow fever and malaria.

What are some character-defining features of a porch? Besides the most key feature being openness, other important components to consider are overall size, shape and design. What is the shape of the porch roof? Is the porch divided into distinct bays? How many? Are the bays divided with columns? What is the style or size of the columns? Is there a supporting foundation for the porch? Is the porch raised or at grade? Is it simple or highly detailed? What materials make up the different components of the porch? Most porches are made from wood, but some components may be made from masonry like columns or steps.

ENCLOSURE

A traditional technique of porch enclosures still used today involves the insertion in each column bay of one or more glass enclosures set in wood frames . This enclosure is properly set back an entire porch bay from the front of the house and utilizes traditional light divisions and wood frames. The balustrade, added here for illustration purposes, shows the importance of retaining this linear feature within the enclosed bays.

Is the porch enclosed? Is it enclosed completely with full walls creating more of an ante room than a porch or is it enclosed with a half wall, maintaining the openness of the porch but creating more privacy than a balustrade would? While some “porches” were designed and built as enclosures or semi-enclosures, most porches were built as open spaces surrounded by balustrades and then altered to be enclosed later in life. While this is a future modification, do not assume that the enclosure of the porch means that it must be undone to restore historical accuracy. If the porch was altered during the period of significance as many of them most likely were then it is historically accurate to maintain the enclosure.

A historic open porch should not be enclosed. If a porch enclosure is being considered, it should be determined whether it can be done without changing the porch’s and building’s historic character. For example, the significance and location—as well as the nature of the planned enclosure.

Traditionally, the seasonal use of porches was extended with screens and awnings. Screens were often set unobtrusively behind railings and columns, so the decorative components of the porch remained prominent and visible. Since screens can be damaged easily, the screening material was often set in slender, easy to repair, removable wood frames that could be installed during the warmer months and stored in the winter. When screening a porch today, this historic precedent is recommended. Temporary enclosures can be used in colder months while not permanently altering its appearance.

TEMPORARY VESTIBULE

Particularly in New England, there is a cold weather tradition of installing temporary glass and wood panels at entrance doors, thereby creating an enclosed vestibule. These enclosures with their small divided lights were generally removed in the spring.

In New England, there is a tradition of installing relatively substantial glass and wood panels on porches during the winter, especially around an entrance door, creating a sort of vestibule. In recent years, some porches have been enclosed during the winter with plastic sheeting (polyvinyl) for perceived energy conservation or for creation of an enclosed space. Such a treatment generally diminishes a building's historic character and is not recommended for highly visible porches. While it is almost never appropriate to enclose a front porch on a historic building to create interior space, enclosing a less prominent porch on a less visible elevation could have less impact. If the porch is a repeated feature in a row or collection of buildings in a historic district altering the porch is an inappropriate action.

The enclosure of part of a porch on a secondary elevation such as with "L" shaped porches or verandas can be an acceptable alteration. Historically, this method was often used to add bathrooms to first floors. This can be easily done without losing historic fabric by creating new walls between porch columns. If a porch must be fully enclosed, it is encouraged to maintain the feeling of openness and transparency by enclosing the space with windows that are set behind or between prominent features such as columns, brackets and balustrades.

Additional factors to consider when enclosing porches is whether or not the porch foundation is adequate for the new use of the space.

Historic porch safety and building codes should also be considered. Historic porches generally have railings that measure 28 to 30 inches in height from the floor. When additional height is necessary for safety, a simple rail can usually be installed above the historic railing. Not only does this treatment allow retention of the historic balustrade, but it also has a minimum impact to the appearance of the porch.

For more information about the maintenance and repair of wood porches, see **Preservation Brief 45: Preserving Historic Wood Porches.**

SET BEHIND
This old porch enclosure, located on the back side of a house, has acquired significance over time and is remarkable both in the appropriateness of its detailing for use by others today, as well as its high degree of maintenance. The enclosure is set behind the columns; the balustrade has been retained; and the light divisions and the size of the glass panes echo that of the windows above. Within each bay there are two well-crafted, inward swinging doors, providing for greater seasonal use of the porch.

ACCESSIBILITY

DOES THE BUILDING NEED TO BE ACCESSIBLE?

The Architectural Barriers Act (1968), the Rehabilitation Act (1973) and the Americans with Disability Act (1990) all state that buildings designed, constructed or altered by the federal government or with federal funding must be accessible and ensure their programs are accessible to all. The Americans with Disabilities Act (ADA) of 1990 also states that owners of "public accommodations" (theaters, restaurants, retail shops, private museums) must make "readily achievable" changes, or changes that can be easily accomplished without much expense. This could mean installing a ramp, creating accessible parking, adding grab bars in bathrooms, or modifying door hardware. However, if accessibility standards for a building or property threatens or destroy historic fabric, then there are provisions and alternative requirements available.

STEPS FOR ADDRESSING BUILDING ACCESSIBILITY IN A HISTORIC DISTRICT:

1. Review the historical significance of the property and identify character-defining features
2. Assess the property's existing and required level of accessibility
3. Evaluate accessibility options within a preservation context

All applicable accessibility requirements—local codes, State codes and federal laws—should be reviewed carefully before undertaking any accessibility modification. Since many States and localities have their own accessibility regulations and codes (each with their own requirements for dimensions and technical requirements), owners should use the most stringent accessibility requirements when implementing modifications. The Americans with Disability Act Accessibility Guidelines (ADAAG) should be consulted when complying with ADA requirements.

Accessibility modifications should be in scale with the historic property, visually compatible, and, whenever possible, reversible. Reversible means that if the new feature were removed at a later date, the essential form and integrity of the property would be unimpaired. The design of new features should also be differentiated from the design of the historic property so that the evolution of the property is evident.

Most surveys identify accessibility barriers in the following areas: building and site entrances; surface textures, widths and slopes of walkways; parking; grade changes; size, weight and configuration of doorways; interior corridors and path of travel restrictions; elevators; and public toilets and amenities.

Refer to **Preservation Brief 32: Making Historic Properties Accessible** for more information regarding specific accessibility improvements.

SUCCESSFULLY ADAPTED HISTORIC BUILDING

An example of successful adapted accessibility can be found at 331 Main Street, the former residence of Charles F. Johnson Jr., which now functions as a bank. A ramp was incorporated to mitigate the inaccessibility of the steps leading to the front portico. The ramp was designed with materials that already existed on the original building and the railing was designed to mimic the existing balustrade and balusters surrounding the front portico. The sign was also adapted to mimic the characteristics and detailing of the existing building so that the facility is easily identifiable but also does not distract from the main building.

NEW EXTERIOR ADDITIONS

A new exterior addition to a historic building should be considered in a rehabilitation project only after determining that requirements for the new or adaptive use cannot be successfully met by altering non-significant interior spaces. A new addition should adhere to the following criteria:

COMPATIBLE YET DIFFERENT
Is the addition sympathetic to or compatible with the historic property? How does it compare in size, scale, materials, design, and workmanship? What other alterations occurred at the time the addition was construction? Do these cumulatively affect the property's historic integrity?

A new addition also has the potential to confuse the public and to make it difficult or impossible to differentiate the old from the new or to recognize what part of the historic building is genuinely historic. The¬ Secretary of the Interior's Standards for Rehabilitation, which must be applied to historic properties listed in or eligible for listing to the National Register to determine if a rehabilitation project qualifies as a certified rehabilitation, also state that "the new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment".

- Incorporate a simple, recessed, small-scale hyphen to physically separate the old and the new volumes or set the addition back from the wall plane(s) of the historic building.
- Avoid designs that unify the two volumes into a single architectural whole. The new addition may include simplified architectural features that reflect, but do not duplicate, similar features on the historic building. This approach will not impair the existing building's historic character as long as the new structure is subordinate in size and clearly differentiated and distinguishable so that the identity of the historic structure is not lost in a new and larger composition. The historic building must be clearly identifiable, and its physical integrity must not be compromised by the new addition.
- Use building materials in the same color range or value as those of the historic building. The materials need not be the same as those on the historic building, but they should be harmonious; they should not be so different that they stand out or distract from the historic building. (Even clear glass can be as prominent as a less transparent material. Generally, glass may be most appropriate for small-scale additions, such as an entrance on a secondary elevation or a connector between an addition and the historic building.)
- Base the size, rhythm and alignment of the new addition's window and door openings on those of the historic building.

PROTECTION OF SIGNIFICANT FEATURES AND REVERSIBILITY
What is the nature of the connection joining the historic building and addition (exterior and interior)? What alterations and changes occurred to the design, materials, and workmanship of the original building when the addition was constructed (including any changes to the exterior walls or internal corridors to accommodate the addition)? Are changes reversible? Were any significant landscape elements (courtyards, gardens, vistas, etc.) altered or lost when the addition was built?

VISIBILITY
Has the addition obscured, covered, or altered the principal facades, historic entrances, or character-defining (significant) features of the property? How conspicuous is the addition in views of the principal elevations? How conspicuous is it in views of (secondary) minor elevations? How does the addition interrupt, interfere with or dominate any historically significant views of the building or important views seen from the building (including the orientation of the building to the street, scenic vistas, views of an inner courtyard or surrounding campus, or the principal façade as viewed from various approaches)?

Refer to **Preservation Brief 14: New Exterior Additions to Historic Buildings: Preservation Concerns** for more information and best practices about new additions.

The old Endicott Shoe Corporation Factory located at 48 Corliss Avenue in Johnson City was recently adaptively reused into the Binghamton University Decker College of Nursing and Health Sciences. The original 93,000 square foot building was renovated and complemented with a new 20,000 square foot glass facade addition.

SUSTAINABILITY

Green and sustainable design has become increasingly popular in both the preservation and new construction industries due to community interest in energy efficiency, climate change mitigation /adaption and resilience. Preservation and green goals overlap, and reconciling their differences is possible—provided that both sides strive to be as creative and flexible as possible. Before implementing any green or sustainable design measures to a historic building in the Johnson City Historic District, consider the following guidelines to assist in the long-term preservation of historic materials and features:

1. Identify character-defining features
2. Identify existing attributes that are inherently sustainable
3. Perform energy audits prior to changes

Historic preservation is inherently a sustainable practice.

A commonly quoted phrase,

“the greenest building is the one that’s already built,”

succinctly expresses the relationship between preservation and sustainability. The repair and retrofitting of existing and historic buildings is considered by many to be the ultimate recycling project and focusing on historic buildings has added benefits for the larger community.

Traditional materials are generally durable, the continued maintenance of historic buildings and features relies on local craftsmen rather than replacement parts, and these structures generally make up the heart of our towns and cities. For decades, preservation programs like the Historic Preservation Tax Incentives have demonstrated that whole communities can be revitalized by rehabilitating individual buildings.

According to the U.S. Energy Information Administration, buildings are the largest consumers of energy in the nation. In recognition of the role the built environment plays in energy use, Technical Preservation Services develops guidance and technical information about how historic properties can incorporate sustainable practices to reduce energy consumption, while maintaining those characteristics that make historic properties significant.

IDENTIFY CHARACTER-DEFINING FEATURES

It is important to identify character-defining features as to not disturb or alter them. See **Preservation Brief 17: Architectural Character—Identifying the Visual Aspects of Historic Buildings as an Aid to Preserving their Character** for more information.

IDENTIFY INHERENTLY SUSTAINABLE ATTRIBUTES IN BUILDING DESIGN

Common sustainable features include operable windows, interior courtyards, clerestories, skylights, rooftop ventilators, cupolas, and other features that provide natural ventilation and light can reduce energy consumption. Whenever these devices can be used to provide natural ventilation and light, they save energy by reducing the need to use mechanical systems and interior artificial lighting. Thick masonry walls typical of the late-nineteenth and early-twentieth centuries have inherent thermal characteristics that keep the buildings cooler in the summer and warmer in the winter. Walls with substantial mass have the advantage of high thermal inertia, which reduces the rate of heat transfer through the wall. Overhangs provide shading for windows and steep pitched roofs facilitate snow shedding. In cold climates, rooms with low ceilings were clustered around central chimneys to share the heat, while small windows with interior shutters reduced drafts and heat loss.

PERFORM ENERGY AUDITS PRIOR TO CHANGES

When considering energy upgrades, it is imperative to get a clear picture of what an improvement will cost initially and how long it will take to pay back the cost in energy savings. Therefore, the life cycle cost of the improvement must be considered as well as its impact on historic fabric. Reducing infiltration around existing windows and doors, sealing penetrations in the building envelope, and adding insulation—particularly in the attic where it has little impact on historic fabric—can result in significant improvements at relatively little cost. Updating mechanical systems or changing the way in which they are operated can also be cost-effective interventions. For example, installing a more efficient mechanical system alone may pay for itself in ten years.

COMMON MISCONCEPTIONS

The replacement of wooden windows and siding usually occurs due to a lack of awareness of techniques for evaluation, repair and weatherization. Removing historic siding and replacing it with new siding to introduce insulation into the wall cavity of a frame building or replacing repairable historic windows are examples of treatments that should not be undertaken on historic buildings.

A common misconception is that replacing windows alone will result in major energy savings. This argument, often used to sell replacement windows, can be deceiving. Although it varies from building to building, the U.S. Department of Energy (DOE) has documented that air loss attributable to windows in most buildings is only about 10% of the total air loss. Studies have shown that window replacement does not pay for itself in energy savings in a reasonable length of time.

Moreover, there are ways to improve the performance of historic windows that do not require their replacement. In addition, historic windows can usually be repaired and are, thus, sustainable, while most new windows cannot be repaired, or even recycled, and may wind up in landfills.

Additionally, historic windows are often replaced with smaller windows in an attempt to reduce energy lost through the usually large expanse of glass present in historic windows. However, this too is a misconception, as the smaller windows may also provide less light and thus require more electricity to be used to illuminate the house. Changing the size of the windows may also throw off the balance of heating and cooling in the winter and summer months. Thus, a balance of all factors must be considered when addressing sustainability in a historic building.

Alterations to Improve Sustainability

The following describes potential alterations that could be made to historic buildings to improve their environmental sustainability.

ALTERATION	DESCRIPTION
OPERATIONAL CHANGES	1. Install programmable thermostats. 2. Close off rooms that are not in use and adjust the temperature in those rooms. 3. Do not condition rooms that do not need to be conditioned, thereby reducing the thermal envelope. 4. Use insulated shades and curtains to control heat gain and loss through windows. 5. Use operable windows, shutters, awnings and vents as originally intended to control temperature and ventilation. 6. Take advantage of natural light. 7. Install compact fluorescent lights (CFL) and light-emitting diode (LED) lights. 8. Install motion sensors and timers for lighting and local ventilation, such as bathroom exhaust fans. 9. Reduce “phantom” electricity loads by turning equipment off when not in use. 10. Clean and service mechanical equipment regularly.
MINIMAL ALTERATIONS REQUIRED	**1. Reduce air leakage** Seal around windows, doors, where walls meet floor or ceiling, above recessed lighting, around pipe or duct penetrations Do not seal base of siding or windows because moisture needs to escape or weep **2. Add attic insulation** Adding insulation in unoccupied, unfinished attics is a very effective from an energy-savings perspective and simple to install and causes minimal disruption to historic materials. The U.S. Department of Energy (DOE) provides a recommended R-value chart based on climate zones to determine the optimal amount of insulation that should be installed in a particular project. Local codes may also have specific insulation requirements. Insulating trap or access doors should not be overlooked. **3. Install storm windows** The addition of interior, insulated sliding glass windows that align with the primary vertical mullions has proven to be a successful treatment that allows the primary window to remain operable. **4. Insulate basements and crawlspaces** **5. Seal and insulate ducts and pipes** **6. Weather strip doors and add storm doors** **7. Add awnings and shading devices where appropriate** Shading devices can reduce heat gain through windows and storefronts. Keeping existing awnings, or replacing them if previously removed, is a relatively easy way to enhance the energy performance of a building. Awnings should only be installed when they are compatible with the building type and character. In building types that did not have awnings historically, interior shades, blinds or shutters should be considered instead.

ALTERATION	DESCRIPTION
MORE ALTERATIONS REQUIRED	**1. Add interior vestibules** Vestibules that create a secondary air space or “air lock” are effective in reducing air infiltration when the exterior door is open. Adding an interior vestibule may be appropriate in some historic buildings. For example, new glazed interior vestibules may be compatible changes to historic commercial and industrial buildings. **2. Replace windows** If the historic windows are deteriorated beyond repair, if repair is impractical because of poor design or material performance, or if repair is economically infeasible, then replacement windows may be installed that match the historic windows in size, design, number of panes, muntin profile, color, reflective qualities of the glass, and the same relationship to the window opening. Other options should also be considered before undertaking complete window replacement, such as sash replacement or substituting in insulated glass **3. Add insulation to wood-frame walls** Adding wall insulation must be evaluated as part of the overall goal to improve the thermal efficiency of a building and should only be considered after the installation of attic and basement insulation. This technique may require professional evaluation. **4. Add insulation to masonry walls** This approach is not recommended due to drying properties of masonry walls, especially in climates with extreme temperature changes. Periodic monitoring of the condition of insulated masonry walls is strongly recommended to check for increased material disintegration. **5. Install cool roofs and green roofs** Cool roofs and vegetated “green roofs” help to reduce the heat gain from the roof, thereby cooling the building and its environment. Cool roofs include reflective metal roofs, light-colored or white roofs, and fiberglass shingles that have a coating of reflective crystals. All of these roofing materials reflect the sun’s radiation away from the building, which lessens heat gain, resulting in a reduction of the cooling load. Cool roofs are generally not practical in northern climates where buildings benefit from the added heat gain of a dark-colored roof during colder months. Cool and green roofs are appropriate for use on historic buildings only when they are compatible with their architectural character, such as flat roofs with no visibility. It is never appropriate to remove a historic roof if the material is in good or repairable condition to install a cool roof. Green roofs are primarily beneficial in urban contexts to reduce the heat island effect in cities and to control storm water run-off and is compatible on a historic building only if the plantings are not visible above the roofline as seen from below.

ALTERNATIVE ENERGY

Another sustainable practice is the use of alternative energy sources like solar panels and wind-power technology. Alternative energy strategies should be considered only after all appropriate treatments to the building to improve energy efficiency have been implemented, which often have a greater life-cycle cost benefit than on-site renewable energy. Purchasing power generated off-site by renewable energy sources is another alternative to bypass installation costs.

The installation of on-site solar or wind technology to a historic property should occur after other locations have been investigated and determined infeasible. The solar device or wind-powered equipment should be installed in a compatible location on the site or on a non-historic building or addition where it will have minimal impact on the historic building and its site. For example, a solar panel should be installed on a flat roof and set back, or on a secondary slope of a roof out of view from the public right-of-way. Installing wind-powered equipment on a historic building should be done in a manner that does not damage the roof or negatively impact the building’s historic character.

KING’S DAUGHTERS HOME - NORTH CAROLINA.
THIS IMAGE DISPLAYS A HISTORIC PROPERTY IN NORTH CAROLINA WITH SOLAR PANELS APPROPRIATELY INSTALLED ON THE GABLE ROOF.

LEED FOR NEIGHBORHOOD DEVELOPMENT CHECKLIST:

LEED for Neighborhood Development (LEED ND) checklist is the measure for the integration of smart growth, urbanism, and green building. Although historic resource preservation and adaptive reuse is worth 2 points on the checklist, most of the other items on the list—agricultural land conservation, floodplain avoidance, and brownfield remediation; and proximity and access to walkable streets, bicycle and transit facilities, and housing and jobs—are often satisfied in the process of rehabilitating a historic building.

SUSTAINABLE USES FOR VACANT PROPERTIES + PARKING LOTS

Sustainable uses for vacant lots:

- Bike parking facilities
- Community art installations
- Community gardens
- Urban agriculture
- Farmer's markets and farmstands
- Community-based compost facilities
- Green industry research and development
- Community-based alternative energy systems
- Public electric automobile charging stations
- Sub-surface or underground water tanks

Sustainable applications for parking lots

- Allow permeable pavement for parking lots and driveways such as pavers, paving grids, and permeable concrete or asphalt.
- Encourage parking lots over a certain size to use semi-pervious materials for a percentage of the lot. Require a minimum percentage of parking lots to have smaller dimensions for compact cars.
- Consider a reduction in the amount of parking spaces required if shared parking arrangements are in place.
- Allow for land banked parking.
- Require landscaping on the interior and perimeter of parking lots.
- Installation of bioswales, grass channels, and rain gardens within landscaped areas.

GREEN INFRASTRUCTURE

Green infrastructure uses vegetation and soil to manage rainwater where it falls instead of using pipes to drain into lakes, rivers and streams. As a watershed develops, more impervious cover is created. Roads, buildings, parking, sidewalks, and driveways all increase runoff from rain events and snow melt. Stormwater runoff contains pollutants such as nutrients, pathogens, sediment, toxic contaminants, and oil and grease. Water quality problems generated by these pollutants have resulted with lakes, rivers and streams having impaired or stressed uses, such as recreation and fish consumption. Green infrastructure reduces stormwater discharges and lowers pollutant loads.

Preservation of natural features; permeable paving materials for parking lots, walkways, and driveways; driveway reduction; vegetated swales; rain gardens; green roofs; stormwater planters; rain barrels and cisterns; native vegetation; and downspout disconnection or extensions have been identified as green infrastructure practices and techniques that could easily be incorporated into historic districts with some guidance. Building features such as gutters, downspouts and cisterns contribute to the sustainability of the historic property. Rain barrels were a common technique to gather water for drinking and irrigation in the past. Almost every building has a gutter or downspout and thus rain barrels can be a ubiquitous technique in any historic district. Pebble and gravel sidewalks, dirt roads and driveways and later cobblestone and brick pathways have long been used before being paved over with impervious materials. Ribbon driveway, popular in the 1920s through the 1940s, are a low-cost green infrastructure technique, which can contribute to the historic character of any district.

For more information about sustainability as it pertains to preservation, see:

- **The Secretary of the Interior's Standards for Rehabilitation & Illustrated Guidelines on Sustainability for Rehabilitating Historic Buildings**
- **Preservation Brief 24: Heating, Ventilating, and Cooling Historic Buildings—Problems and Recommended Approaches**
- **Preservation Brief 3: Improving Energy Efficiency in Historic Buildings**

WHERE TO FIND HELP

FEDERAL ORGANIZATIONS

HOW THEY CAN HELP	TECHNICAL ASSISTANCE	CONFERENCES & EVENTS	PARTNERSHIPS
NATIONAL ARCHIVES	**NO.** However, the National Archives provides viewers with an opportunity to explore the nation's history through record keeping of documents, photos and records, utilizing various tools and resources.	**YES**. Offers educator resources and programs centered around National Archive learning and research, as wells as lectures and film events on the nation's history.	**NO.**
NATIONAL CENTER FOR PRESERVATION TECHNOLOGY AND TRAINING	**YES.** Provides grant assistance to promote research and training in preservation technology, and technical expertise on a variety of specialized services (materials conservation, historic structure evaluations, mortar sampling analysis, pesticide survey).	**YES**. Develops educational opportunities for professionals including, nationwide seminars and workshops on topics like green building science and non-destructive archaeology.	**YES.** National Park Service, National Trust for Historic Preservation, and the U.S Department of the Interior.
NATIONAL PARK SERVICE	**YES.** Offers project funding and financial assistance for historic preservation, natural resource conservation, recreation and community engagement projects.	**YES**. Offers project funding and financial assistance for historic preservation, natural resource conservation, recreation and community engagement projects.	**YES.** National Park Foundation, Universities in the national network of Cooperative Ecosystem Studies Units, the Student Conservation Association, SHPO and the Internal Revenue Service.
NATIONAL TRUST FOR HISTORIC PRESERVATION	**YES.** Provides advocacy and grant-making experience, historic tax credits resources, economic development assistance to communities, and offers comprehensive insurance solutions to historic property owners and preservation organizations.	**YES**. Provides a Hands On Preservation Experience (HOPE) that provides youth with the opportunity to restore historic sites, while learning preservation trade skills. Each year, the National Trust hosts the Past Forward Preservation Conference.	**NO.**

WHERE TO FIND HELP

STATE ORGANIZATIONS

HOW THEY CAN HELP	TECHNICAL ASSISTANCE	CONFERENCES & EVENTS	PARTNERSHIPS
AMERICAN INSTITUTE OF ARCHITECTS (AIA) - SOUTHERN NEW YORK	**YES.** The AIA provides members with online courses, as well as other education resources for architects.	**YES**. The chapter organizes an array of initiatives, programs and exhibitions that explore topics vital to the architecture profession, including housing, planning, historic preservation, and urban design.	**NO.**
PRESERVATION LEAGUE OF NEW YORK STATE	**YES.** The League has an established Technical Services Program that offers a wide range of services, as well as various grant programs. A monthly newsletter and quarterly print newsletter are also available to members.	**YES**. Provides an array of webinars and public presentations focusing on all aspects of historic preservation (historic tax credits, grant funding opportunities, rehabilitation projects, etc.).	**YES.** New York State Council on the Arts and local organizations.
NEW YORK LANDMARKS CONSERVANCY	**YES.** A “Preservation Hotline” fields questions about building repair, project management, and contractor referrals. Staff also serve as project advisors, and for a free, historical research reports are available.	**YES**. Provides member talks and tours on general historic preservation and conservancy interests.	**NO.**
STATE HISTORIC PRESERVATION OFFICE (SHPO)	**YES.** SHPO reviews a variety of properties and projects, and helps communities identify, evaluate, preserve, and revitalize their historic, archaeological, and cultural resources. It also maintains an online the Cultural Resource Information System.	**NO**.	**YES.** NYS Office of Parks, Recreation and Historic Preservation and the National Park Service.

WHERE TO FIND HELP

LOCAL ORGANIZATIONS

HOW THEY CAN HELP	TECHNICAL ASSISTANCE	CONFERENCES & EVENTS	PARTNERSHIPS
BROOME COUNTY ARTS COUNCIL (BCAC)	**NO.** However, this membership-based organization provides a website directory listing, member meetings and mentorship. BCAC also administers grant awards for artists, art organizations and projects.	**YES**. Cost-based workshops and courses, as well as Historical Sculpture Art tours.	**YES.** Binghamton University, Greater Binghamton Chamber of Commerce, and Visit Binghamton (BING).
BROOME COUNTY HISTORICAL SOCIETY	**YES.** Provides cost-based research services using materials (books, manuscripts, photos, newspaper clippings, obituaries,etc.) located in the Local History & Genealogy Center. Publishes two issues of a newsletter, the Broome County History Bulletin.	**YES**. Hosts nine programs on Broome County History each year, all free and open to the public.	**YES.** Local History and Genealogy Center, Broome County Public Library, and Broome County Planning Department.
BROOME COUNTY IDA	**YES.** Provides economic development assistance through property tax abatement and revolving loan programs, bond issuance, information on federal and state financing resources, and other technical assistance.	**NO**. However, the IDA provides resources through topical articles and reports. Additionally, the Broome County Statistical Dashboard has been developed to provide an overview of key statistics in the County.	**YES.** SUNY Broome, Binghamton University, and American Job Center.
BROOME COUNTY PLANNING DEPARTMENT	**YES.** Provides technical assistance for municipalities and other community organizations. Services include demographic data, mapping, community surveys, grant assistance, environmental reviews, and Capital Improvement Program reviews.	**YES**. Hosts training sessions in land use and zoning issues, as well as grant writing workshops for municipal employees.	**YES.** Local municipalities and organizations, and other County Departments. The Planning Department consists of the GIS division, Binghamton Metropolitan Transportation Study and Environmental Management Council.
OLD VILLAGE OF UNION HISTORIC SOCIETY	**NO.** The Historic Society owns the Endicott History and Heritage Center, a museum that showcases 100 years of Endicott history.	**YES**. Members-only monthly meetings with guest speakers, as well as two dinner events throughout the year.	**YES.** Visit Binghamton (BING), Broome County and Broome County Public Library
IROQUIS STUDIES ASSOCIATION (ISA)	**NO.** Provides educational and cultural programs about American Indians, especially the Haudenosaunee, or Six Nations of the Iroquois. ISA publishes a semi-annual newsletter, the Otsiningo Circle.	**YES**. Hosts various educational programs and two general membership meetings per year. The ISA also publishes the Ostiningo Circle, a semi-annual newsletter.	**NO.**
SUSQUEHANNA HERITAGE AREA	**YES.** Provides assistance with planning initiatives and leveraging funding.	**NO.**	**YES.** Local municipalities and organizations, Broome County, Tioga County, non-profit agencies.

WHERE TO FIND HELP

LOCAL ORGANIZATIONS: Cont...

HOW THEY CAN HELP	TECHNICAL ASSISTANCE	CONFERENCES & EVENTS	PARTNERSHIPS
PRESERVATION ASSOCIATION OF THE SOUTHERN TIER (PAST)	**NO.** PAST promotes historic preservation through various programming efforts, including community education, newsletters, social media, and other events. PAST also provides educational grants and scholarships to students.	**YES**. Hosts a variety of tours, workshops, exhibitions and lectures. Topics generally focus on the environmental, cultural and economic benefits of historic preservation.	**NO.**
ROBERSON MUSEUM AND SCIENCE CENTER	**NO.** The Roberson Museum and Science Center is locally, regionally and nationally recognized for its prominence in art, science education and history.	**YES**. The Museum Center hosts student and adult-based workshops, as well as tours that focus on cultural and scientific enrichment.	**YES.** New York State Council and Broome County Arts Council.
VESTAL HISTORICAL SOCIETY	**NO.** However, the Historical Society seeks to discover and collect any material that may help to illustrate its local history.	**YES.** The historical society offers regular tours and specialized group programs that promote local history and culture. A members-only newsletter is published every quarter.	**YES.** Vestal Public Library and the Town of Vestal.
VESTAL MUSEUM	**NO.** The Vestal Museum is an organization dedicated to the preservation and presentation of local history, and serves as a repository of local artifacts and archives.	**YES**. Public education is accomplished through collection care, exhibits and public and school programs. The museum features an event article series called “Our Featured Objects of the Weeks” that highlight notable artifacts.	**YES.** Town of Vestal, Vestal Historical Society members, Waterman’s Conservation Education Center, and Vestal Public Library.
VILLAGE OF JOHNSON CITY PLANNING BOARD	**YES.** The Planning Board reviews and provides assistance to resident and business owners on site plans for building construction, change of building use, additions, rehabilitations and land partitions.	**NO**.	**YES.** Village Board, Zoning Board, and other local and county departments.
VISIT BINGHAMTON (BING)	**YES.** Offers a variety of free planning services, ranging from housing, site inspections, registration assistance and hotel negotiations.	**NO**. BING serves as a meeting planner and provides opportunities for tourism partnerships and collaboration.	**YES.** Central New York, Brew Central, Trip Advisor, USA Discover America, Go All Out Broome County and other regional businesses.