Downtown Manitowoc
Design Guidelines
Adopted 2-19-2020
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**Introduction**

The City of Manitowoc’s downtown is a unique space that harkens back to the City’s history and offers the opportunity for a sense of place that cannot be duplicated with new development. In order to help preserve and enhance that history and sense of place the City has adopted Downtown Design Overlay District (Section 15.770 of the Municipal Code) and approved the creation of the 8th Street Historic District (Section 15.650 of the Municipal Code). Both sections support the goals and objectives of the City’s adopted Comprehensive Plan and Downtown Master Plan. Both documents highlight the importance of a healthy and vibrant downtown and the positive economic benefits that come from the downtown. Within both districts, there is the opportunity to participate within the City’s Façade Improvement Program as well as the requirement to have projects obtain a certificate of appropriateness. These guidelines are intended to provide assistance and direction on the necessary aspects to take into account when considering a project.

**Design Guidelines**

The Downtown Manitowoc Design Guidelines are first and foremost a resource for property owners, builders, architects, and realtors to use in order to understand the reasons for, the proper methods of, and the overall benefits of historic preservation both to the individual and the community as a whole.

These guidelines are intended to advise ways in which property and business owners can take advantage of downtown's charm and history, by following the appropriate methods for improving their property.

Each individual building façade plays an important role in the makeup of the downtown district. Storefronts, window displays, signage, color, canopies, and architectural details all play an integral part in the successful design of individual buildings. Every commercial area will have its own physical character, although often much of it can be masked behind signs, and altered storefronts. If buildings are properly rehabilitated, they could add important visual variety to the commercial street but also put implied limitations on the design character of new construction.

In order to pursue a certificate of appropriateness to complete a project within the Downtown Design Overlay District or 8th Street Historic District initial contact should be made with the Community Development Department. The Department will assist in interpretation of the guidelines as well as the review process while serving as the liaison with the Community Development Authority (CDA). Depending on the scale of the project, the Certificate of Appropriateness will be issue by the Department or the CDA.
Traditional Façade

The traditional commercial storefront can be considered the most important element that sets these buildings apart and gives historical significance and character to downtown Manitowoc. The majority of our historical buildings date from the mid 1800's to the early 1900's. When originally constructed, our downtown buildings shared a consistency in design and proportion that was key to creating a strong visual image. A visually unified downtown can go a long way in attracting people to our downtown, as well as to the individual shops and businesses that are located here.

The basic commercial façade consists of three parts: the storefront with an entrance and large display windows, the upper masonry façade with regularly spaced windows, and the decorative cornice that caps the building. These components may appear in various shapes, sizes, and styles but the result is essentially providing the street with one unified façade. In the downtown Manitowoc, the typical building façade is a two-story masonry construction. Various "modern" changes have occurred to our buildings over the years in response to merchandising trends, new building material technologies, changing tenants, and automobile accessibility. Too often downtowns have tried to copy the typical highway oriented strip commercial center usually with limited success. Despite this trend, original downtown storefronts are still in place and are simply covered over or in need of maintenance and repair. The Design Guidelines promote the traditional aspects of storefront design and do not recommend the use of strip commercial elements.

Storefront Design:

The traditional downtown building façade has a well-defined opening that the original storefront filled. The opening is bounded on each side by piers, which were usually constructed of masonry. It is bounded on top by the storefront cornice which is the structural member supporting the upper façade, and bounded below by the sidewalk.
The storefront was composed almost entirely of windows. The large glazed opening of the storefront served to display goods the store or business had to sell, as well as to allow natural light deep into the store to minimize the need for artificial light sources. The visual openness of the storefront is also important because it is part of the overall proportion system of the façade. The proportion of window to wall areas in the traditional façade calls for more glass and less wall at the storefront level, balanced by more wall and less glass on the upper façade. When these buildings were built, their owners recognized the importance of maintaining these proportions so that the downtown would maintain a consistent design theme, thus making it an attractive place for its customers to do business.

**Storefront Improvements:**

When considering improvements to the storefront, it is very important that the original opening be recognized and maintained. The remodeled storefront should be designed to fit inside the original opening and not extend beyond or in front of it. The basic storefront design should include large windows with thin framing members, a recessed entrance with overhead transom, a storefront cornice, an exposed structural element or horizontal sign panel at the top to the storefront to separate it from the upper façade, and low bulkheads at the base to protect the windows and act as a platform for window displays. The basic configuration can be constructed from traditional or contemporary materials, achieving the same results.

**Key Features to Consider:**

- The storefront should be composed almost entirely of glass. If glass is not appropriate for the business, consider the use of window treatments as a solution.
- The entry should be maintained and restored in its original location and configuration. If the original entry is gone, the new entry should be designed and placed considering traditional design themes according to any available photographs and its relationship to the overall building façade and symmetry.
- Transom windows that are covered or blocked should be reopened and restored. Storefront bulkheads should be restored or renovated.
- Original elements such as cast iron columns, storefront cornices, entry doors, and lighting fixtures should be restored.
- Signage should be integrated into the storefront design.
- Lighting should be integrated into the storefront design.
- Awnings, if required, should be integrated into the storefront design.
The storefront design must be true to the time period in which the building was constructed. Typically, renovation of late 19th and early 20th Century buildings, such as those found throughout Manitowoc’s downtown, with colonial motifs, mansard roofs, or other tourist themed styles is certainly inappropriate.

When planning the renovation of a storefront, it is recommended to contact the Manitowoc County Historical Society or the City of Manitowoc to see if there are historic photographs available of your building. Old photographs can be a valuable tool to help determine original design, materials, and signage used on your building. If historic information that would inform renovation design does not exist, precedent from similar building types, vintage, and use may be considered.

**Storefront Materials:**

When designing a new storefront or renovating an existing storefront, remember that the goal should be a transparent façade. Keeping the storefront materials simple and unobtrusive will help you achieve this goal. There is no need to introduce additional types of building materials to those that originally existed on your building. Whether building new storefronts, or renovating existing ones, use materials that perform their intended function well and use these materials consistently throughout the design. By doing so, you accomplish simplicity in the design and uniformity in the overall storefront appearance. Always try to utilize existing materials. It is better to repair them than to replace them.

Typical examples of materials and their location on the storefront:

- Storefront Frame – wood, cast iron, anodized aluminum
- Display Windows – clear glass
- Transom Windows – clear, tinted, stained or etched glass
- Entrance Door – wood or aluminum with a large glass panel
- Bulkheads – wood panels, polished stone, glass, tile, metal clad plywood panels
- Storefront Cornice – wood, cast iron, sheet metal
Side Piers – should be same material as upper façade (typically brick and store).

Certain materials should generally be avoided on the traditional commercial building because they have no relationship to the original building’s design themes and therefore flaw the consistency of appearance of the building and the downtown area. Such inappropriate materials include: cultured stone, fake brick, rough textured wood siding, wooden shingles on mansard roofs, gravel aggregate materials, and stucco materials. However, some modern building technologies can achieve the aesthetics of original materials in a cost effective manner and may be considered by the CDA and staff.

**Color:**

As with materials, the color scheme chosen for the façade should be sensitive to the time period in which the building was built. To determine the color scheme to be used, consult a professional or go to the local paint store and ask to see color cards for historic paint colors and their combinations.

Masonry facades should not be painted nor have sealants applied, unless the sealant is intended to help preserve porous materials without impacting the appearance of the original material. If you have a masonry façade that is already painted and the paint seems to be holding, paint it again using colors that are within the natural color range of the material. The best resource for determining appropriate choices is the “Sherwin Williams Historic Exterior” color palate. Alternate paint manufacturers may be used if color matched equally to the aforementioned.

Colors should accentuate the architectural details of the building but don’t overdo it! The levels of coloration might be broken down as follows:

- Base Color
- Major Trim Color
- Minor Trim Color
- Accent Color

**Awnings and Canopies**

The canvas awning was an important design element in the traditional storefront. It provided shelter for pedestrians from the sun and rain, added color, and acted a transition between the storefront and the upper façade. The awning can also be used as a location for building signage.
If an awning is to be used, its shape should reinforce the frame of the storefront opening. It should be attached below the storefront cornice or sign panel and should not cover the piers on either side of the storefront. The standard street level awning should be mounted such that its valance is a minimum of eight feet above the sidewalk and it projects out between four and seven feet from the building.

The awning can also be a useful tool to disguise inappropriate storefront alterations while maintaining the proportions of the traditional storefront.

Awnings are available in several materials and colors of varying cost and durability. They are also available in a variety of profiles. However, only the traditional commercial awning material of canvas and watershed design should be utilized. Other profiles such as the typical "plastic" look found on commercial buildings in highway strip centers are too contemporary and out of context when placed on a traditional façade. Awnings should be selected to insure compatibility with the building and adjacent buildings.

**Signage**

Signs are important to the storeowner for reasons of advertising, identity, and image. As they are an extremely visible element of the storefront, signs must be used carefully so as not to detract from facades. Signs must be integrated into the architecture of the building upon which they are placed. Downtown Manitowoc can become an attractive environment by minimizing visual clutter and confusion. With a little forethought and careful planning, signage can embrace Downtown Manitowoc's image. It is the intent to promote signage which is compatible and complimentary to the historical nature of downtown Manitowoc.

Actual size may vary, but the total area of all signage on any one building wall shall not exceed...
15% of the area of the wall. Big does not necessarily mean powerful. Primary signs of proper size can combine with the entire storefront to become more meaningful than just the sign itself. The sign must be subordinate to the building, not the opposite.

Materials and letter styles are numerous and vary tremendously. The storeowner should have no problem finding a period vintage style representing the desired image. Choose a material and color that complements the building as well as contrasts with the background of the signboard. Light letters on a dark background provide the easiest reading. Because of the large variety of letters and letter types, it is recommended that a sign or advertising company be utilized.

Messages should be kept simple. The major function of the sign is to introduce the storefront and its contents. Wording should be minimal, and slogans avoided. Descriptive words should be used rather than providing listings of items to be sold. Simple wording is easily read by pedestrians and street traffic without becoming distractive.

Installation of signs is subject to the City of Manitowoc Municipal Code (Section 15.450). Property owners and tenants are encouraged to contact the Community Development Department prior to developing sign sketches in order to reduce the likelihood of non-conforming sign plans.

**Primary Wall Signs:**

Primary wall signs shall be limited to one per business directly facing the street on the ground level (plus one building identification sign, if applicable). The maximum area of a wall sign shall not exceed 15% of the wall fronting the right-of-way. The primary wall sign should be located above the storefront display windows but below the sills of second floor windows. On many examples of turn-of-the-century buildings a continuous brick ledge or corbelling is used to separate the second floor and above from the storefront below. This space is ideal for sign placement, as it was often created for this purpose.

Another option for a primary sign location can be an awning, provided the awning is properly integrated with the building. Information should generally be limited to the name of the business, graphics/logo related to the business, and the street number. If the combined area of such sign(s) is in excess of 15 square feet, it must be counted as part of the total area allowed at the building for its exterior signs. Awnings shall be constructed of fabric material (preferably canvas), shall not extend more than six feet outward from the structure or building fascia and shall have a minimum ground clearance of eight feet.
Fonts utilized on wall signs or canopies should take into account the style and history of the building. Common styles are highlighted here, but other fonts may be considered through the design review process.

Secondary Non-Wall Signs

In addition to a primary wall sign, one secondary non-wall sign is allowed on the front of the building. Types of secondary signage include projecting, window, awning, or any non-wall sign that is located below the primary sign.

Projecting signs shall be limited to one per business directly facing the street on the ground level. If a projecting sign is planned, placement will be critical to avoid interference with adjacent signs and architecture of the storefront itself. These signs (including fixtures) should be placed so the bottoms are no less than eight feet above the sidewalk and do not extend more than six feet outward from the structure or building fascia to which they are attached. The maximum area of each sign shall not exceed 16 square feet. Sign fixtures shall be made of wrought iron or be compatible with sign colors.

Window signs should consist of a material and color that contrasts with the display, while being small enough to not interfere with the display area.

Signage for Additional Public Entrances and Riverfront Facades

A second wall sign and projecting sign are encouraged on the rear or side building wall when there is another public entrance to aid pedestrians and others to identify your presence. Buildings with rear facades are allowed a second rear building wall sign and projecting sign even if they do not have a rear public entrance. Signage on riverfront facades is intended to create a sense of place along the river (see Riverfront Parkway section for further information).

Ground Signs

Ground signs shall be limited to one per parcel. Multiple businesses on a parcel should share a sign. The maximum area of a sign shall not exceed 48 square feet and the sign shall not exceed 10 feet in height.

Window Signs and Displays

Temporary window signs shall not exceed 10% of the total glass area of any individual window and shall not be placed on door windows. It is recommended to avoid large or repetitious advertising signs. Keeping written information on window signs to a minimum is more impactful.

Quality display windows should be considered as essential to a storefront as an attractive sign; they help not only to advertise your merchandise but can also serve as an exciting invitation to window shoppers passing by. Showcase display windows
typically frame the entryways of most storefronts. Avoid using important window space to simply stock or store extra merchandise.

Lighting in all windows, especially in display windows should be carefully considered as an essential part in attracting appropriate attention.

**Signboards**

Temporary signs are limited to “sandwich” style signboards that will be placed indoors when the business is closed. Signboards cannot exceed two feet wide by 3 feet high. This size is appropriate for distances the sign will be read from in a downtown setting. Letters should be between eight and eighteen inches high. Lettering should account for at least fifty and no more than sixty five percent of a signboard.

**Prohibited Signs**

Signs that cannot be used are: internally illuminated, animated, flashing, moving, swinging, painted wall signs, or roof signs. Floodlit signs are also prohibited unless the lights are shielded from view. Signs that resemble official traffic signs are not allowed to be used. Please refer to the additional sign design standards that have been developed for downtown.

**Lighting**

Lighting on the building façade is an important element when considering visibility in the evening hours. Generally, the street lighting installed by the city provides good illumination of the overall building façade. Storefront lighting should be tastefully done, including the materials and style used, either to highlight your product, your building, or your signage. Flashing lights, flashing signage, or excessively bright lights are not appropriate.

To attract attention to the storefront area there are a couple of traditional methods of lighting:

- **Well lit display windows**
  - Attracts attention to items in the window
  - Residual light washes the sidewalk and attracts pedestrians
  - Good for security
- **Light over the recessed entry door**
  - Provides entrance recognition
  - Draws pedestrians in
  - Good for safety
- **Lighted signage**
  - Provides identification at night
  - Creates a sense of liveliness
  - Draws attention to facade

**Four-Sided Architecture – Blank Sidewalls of Buildings**

The introduction of vehicular and pedestrian circulation routes, as well as adjacent building demolition will create a potential problem of exposing sidewalls. Infill construction in vacant
lots is encouraged when possible to avoid exposed sidewalls. However, in the event exposed sidewalls cannot be avoided, this type of wall is more difficult to aesthetically treat because there is less to work with. Trim is held to a minimum, and there generally are few windows, doors, or other features to treat. However, there are several treatments that can be used to help "dress up" a blank wall.

**Painting and Cleaning**

If it is determined that the wall in question contains sufficient architectural elements to leave unaltered, cleaning and painting may be satisfactory. Cleaning, painting, and repair of wood and metal trim will complement the remainder of the wall. Before any major changes, be sure to contact the City to ensure compliance with the Manitowoc Municipal Code.

**Graphics**

Non-advertising graphics (murals) are permitted by the City of Manitowoc; however, wall graphics can easily be visually unappealing if done incorrectly. Too many colors, colors used incorrectly, poor proportion, and the type of graphic can become distracting and sometimes worse than a blank wall. We strongly urge the following:

1. Submit a colored and correctly scaled drawing of the graphic and side wall to the Community Development Department for review and approval by the department.

2. If the graphic relates directly to the store's product or function, the graphic is considered a sign and the city sign ordinance applies.

**Continuation of Storefront Elements**

Strong storefront elements can be copied and extended across the sidewall. Examples are façade trim, window head millwork, wall accent trim, or paint color. The introduction of these elements adds a horizontal or vertical rhythm that interrupts an otherwise monotonous wall, which unifies the building as a whole and not just a façade. This also prepares the pedestrian for what they will see when approaching their storefront.

**Doors and Windows**

When a sidewall is exposed and is adjacent to parking or pedestrian access, the introduction of a door would serve not only as an entrance, but would add interest to the wall as well. The door should include trim and other physical amenities to invite use and avoid the appearance of a "hole" in the wall. The addition of windows not only let in light, air, and outside views, they also visually open the wall and building interior to the pedestrian. Caution should be used when adding doors, windows, and their amenities to avoid competing with a main entrance.

**Landscaping**
If the sidewall is clean and not bland enough to warrant the addition of storefront elements or doors or windows, landscaping is an economical solution. When designed and installed professionally, landscaping can add rhythm, pattern and concealment. Landscaping can be used in conjunction with other treatments. It should be noted that landscaping requires maintenance and is susceptible to damage.

Trees, shrubs, and groundcovers should be sized appropriately for their proposed location. Consider vertical and horizontal sight lines, maintenance, safety, scale, signage, circulation, relationship to other plants, color, texture, flowers, seasonal interest, disease resistance, water and nutrient requirements, screening unsightly views such as dumpsters, parking, etc., and hardiness for the site. Consult with a professional landscape architect or horticulturist for assistance.

Landscape plans must be approved by the city as a part of any new construction or redevelopment of an existing property. Check with the Community Development Department prior to developing a landscape plan to insure compliance with the Municipal Code (Section 15.690).

**Visual Screening**

Many places of business require outside appurtenances that often prove unsightly. Trash receptacles, condensing units, electrical transformers, and others are obtrusive and often impair pedestrian traffic. As essential as they may be, these objects do little to add to the aesthetics of the building. There are several methods of reducing their negative effects.

1. **Elimination**

   If possible, eliminate these objects from public view. Trash receptacles can be located inside if there is a space available without endangering health or creating an odor problem. Air conditioning condensers can be roof mounted and electrical transformers can be installed inside the building. However, this can be a costly procedure because transformers must be housed in a fire-rated ventilated area.

2. **Placement**

   The most economical method of "screening" is placing unwanted objects away from pedestrian and vehicular traffic. Consideration should be given to access for maintenance and pickup especially if the objects in question are trash receptacles. Attention should also be given to adjacent property owners and their pedestrian and vehicular traffic patterns.

3. **Concealment**
In many instances, trash receptacles, condensers, or transformers must occupy the same general areas desired for pedestrians. The only option is concealment. There are many visual barriers available on the market such as wood fences. These are acceptable, but a preferable method is to construct visual barriers with traditional materials consistent with the adjacent building. A blending of traditional materials is more compatible with the storefront. Another method of concealment is the use of landscaping or a combination of landscaping and visual barriers made of traditional materials. With professional assistance, the proper pattern and species of plants can be realized. It should be noted, however, that landscaping will need maintenance.

**Pedestrian Access**

Building and business identity are important considerations to the store owner. Points of access must also be considered important to insure convenience, safety, and repeat business of the customer. Pedestrian access must be associated with parking and a clear identity of entry points.

**Front Entrances**

If possible, the original entrance doors should be retained or repaired and finished, the front entrance should be the most important. Front entrances are integral to storefront design and give the street a "hometown" image, which invites browsing and window-shopping. Canopies, color, signage and proportions of the building can combine with the front entrance to create a strong image.

**Window Displays**

Many commercial structures were originally designed with shopfront space which provided the business with large areas of glass for the display of merchandise. Quality display windows should be considered as essential to your storefront as an attractive sign; they help not only to advertise your merchandise but can also serve as an exciting invitation to window shoppers passing by. Showcase display windows typically frame the entryways of most storefronts. Empty, cluttered, or clumsy window displays are a lost opportunity for your business and will only detract from what may otherwise be an attractive storefront. As a general rule temporary window signs should never occupy more than 10% of the total glass areas of any individual display window. Lighting display windows is well worth the cost of installation to provide attractive illumination to the storefront.
**Rear and Side Entrances**

Some of buildings in Manitowoc’s downtown may warrant rear and side entrances. These entrances are conveniently accessible to more parking than entrances in the front. For this reason, rear and side entrance treatments should include the entire exposed rear and sidewalls for identity. The potential positive impact of these walls is often overlooked.

A combination of front entrances with side or rear entrances is called "double fronting." There are certain advantages to double fronting:

1. Circulation patterns are enhanced
2. Better access to off street parking
3. Store identity is created on more than one side of the building

Double fronting can also create disadvantages:

1. Costs of remodeling and maintenance are increased
2. Security problems increase
3. Modification of interior floor space

Front, side or rear entrances must share the common characteristic of presenting an attractive door to the pedestrian. Usually, the best doors are the original units properly maintained and repaired. If these are beyond repair, new doors can be made to closely resemble the original doors. Another option is to use simple, cleanly designed aluminum doors that will not detract from existing wall treatment. A sign to index and identify your presence will also be necessary on rear entrances.
Maintenance and Repair

Many of Manitowoc’s existing downtown structures contain two favorable qualities. One is that they are structurally sound. Modifications that may have been done are superficial, affecting features such as windows, doors and facades. A second quality is the survival of the building’s original design features and materials. It is fortunate that we can easily see what the original structure’s appearance was. Alterations usually consist of materials that are attached to existing walls rather than maintenance and repair to the buildings. With a few exceptions, we can transform "Downtown" into an accurate resemblance of what it was in the past.

Exterior materials will be addressed more extensively than interior materials because business related items such as image, display and theme often dictate interiors. However, considerable attention should be made in inviting the original building design to work both inside and out.

Before considering any repair or remodeling, materials should be examined by an architect or contractor as to their actual condition and potential for cleaning or repair. Once evaluated, cleaning and repair may proceed. All work should be professionally done so proper equipment, working experience, and basic knowledge can be utilized.

Before making any exterior changes, and depending on the scale of the project, the plans must be granted a certificate of appropriateness from the CDA or the Community Development Department of the City of Manitowoc. In addition to this certificate there also must be a building permit. Check with the Community Development Department prior to commencing a project to insure compliance with the Manitowoc Municipal Code (Chapter 15-Comprehensive Zoning Ordnance).

Masonry

As in most downtowns, a large number of Manitowoc’s buildings consist of brick masonry. There are also some structures consisting of stone, concrete block and marble. Several buildings have already been cleaned and repaired, and others were never painted. Untreated, natural brick, marble and stone should not be painted or otherwise concealed. Furthermore, it should not be assumed that all masonry needs cleaning. Deposits of dirt can be detrimental to the structural soundness by hiding signs of building decay. However, minor staining or discoloration can sometimes add character to a structure, or simply remain as an acceptable condition. If, however, the masonry is unacceptable, several cleaning methods may be used. Consulting with the International Masonry Institute for recommendations on cleaning and restoration of specific masonry types is recommended. Common methods for cleaning and restoration include:

*Water Cleaning*

Washing with water and a detergent is the simplest of all methods and is successful on the surface of lightly soiled masonry. This method is probably the easiest for the amateur, but is also time consuming.
Water cleaning involves two steps. The first is spraying to presoak the masonry and remove dirt deposits not tightly bonded to the surface. The second step is time consuming and more difficult; it involves scrubbing with a hand or power brush. Whether done by an amateur or professional, care must be taken to use water efficiently. Cracks in walls or around openings can lead to interior water damage. Brick cleaning should be done before finishing the interior of that particular wall. Water cleaning should be avoided in cold weather because absorbed water can freeze and fracture surfaces. Water staining or streaking can occur when excessive amounts of water are applied to limestone. Test washing a small area of the wall will determine how long it takes and how effective it will ultimately be.

**High Pressure Water Cleaning**

A newer method is to utilize special equipment that develops enough hydraulic pressure to "force spray" masonry, forcing out dirt and staining. Even though less water is used in this process, interior water damage is a concern because pressure can force water into openings. High pressure water cleaning should be done only by professionals and should not exceed 1,000 p.s.i. to avoid damaging the masonry or mortar.

**Chemical Cleaning**

Due to the large variety of chemicals used, potential toxicity, cleanup, and specialized equipment, professional help must be seriously considered before chemical cleaning a building's exterior. Chemical cleaning is best utilized for paint removal and elimination of deep stains. Care must be taken in the use of acids. Even in a diluted solution, acids can harm limestone and marble.

**Sandblasting**

Sandblasting is the most detrimental method of removing paint, stains and deposits, especially when considering brick. Sandblasting removes the outer surface of the brick, exposing the softer inner surface. This leaves the brick more susceptible to weathering. Sandblasting also pits the surface, leaving horizontal areas and pockets for moisture and dirt to collect. We do not recommend sandblasting be used on masonry. In addition, sandblasting will almost always result in a need for tuckpointing as mortar joints are widened or removed by the blasting process.

**Tuckpointing**
Weathering of masonry involves the mortar joints. If masonry is to be cleaned, the addition of new mortar to the joints is necessary. This is called tuckpointing. The joints are first thoroughly cleaned out to existing sound mortar. Then, new mortar (never harder than brick) is filled in and finished to match the depth and style of the intended original joint. Mortar can be pigmented to match any existing color. After tuckpointing, the surrounding masonry must be cleaned because it is impossible to fill joints without touching them with mortar.

**Toothing**

An occasion may arise when an opening must be cut into or enlarged in an existing masonry wall. As the opening is cut into the wall, every masonry unit is cut back to the adjacent vertical joint. This allows new masonry units to be set in such a way as to blend in with existing masonry while creating a stronger joint.

**Wood**

Manitowoc’s existing buildings use wood on the exterior primarily for window and door framing, trim, cornices, bracing and brackets. Although masonry dominates storefronts, maintenance and repair of wood is essential in restoring original building design and integrity. Wood accents the masonry and is the material with which customers have the most contact.

If wood is found to be in need of repair, replace or patch that particular piece of wood. Replacing the wood frame, for example, is not necessary if just one section of the frame is damaged. If possible, replace with the same species of wood for uniform finishing. Conversely, refinishing wood should not be a patch job. Rather, the entire frame, for example, should be refinished. Paint or stain can be removed by several methods; these methods include sanding, melting, or dissolving with chemicals. Sandblasting should not be used because it pits and separates the grain. Modern materials such as wood grain PVC or cement board siding may be considered as an alternate to
original wood, but only with the consent of the CDA or Community Development Department.

**Painting**

Painting windows, doors, and trim will give a fresh appearance to the exterior of any building. Painting at regular intervals should be considered an essential part of maintenance and upkeep and will help to protect vulnerable wood surfaces from deterioration. Painting is also a practical way to visually tie together the color relationships of individual facades and whole blocks of buildings in the downtown. Before you begin to paint, some thoughtful attention should be given to adequate preparation of paint surfaces, choice of paint type (oil, latex, etc.), finish (gloss, semi-gloss, matte, etc.) and selection of color. Even the best paint will not weather well if applied over unprepared surfaces. Old paint should be removed by scrapping, sanding, burning away, or otherwise removing. It is also advisable to use a primer coat before applying the final paint color. Paints and coating should be installed per the manufacturer’s recommended installation methods; including substrate preparation.

As a general rule, never paint brick or other masonry surfaces. It is better to clean masonry than paint it. If brick or masonry is already painted and you wish to repaint rather than clean brickwork, be sure to check existing mortar conditions and tuckpoint before you paint.

**Architectural Metals**

Architectural metals such as cast iron, galvanized steel, aluminum, copper, zinc, and tin are used sparingly at the roof parapet, flashing, cornices, columns and lintel beams, etc. Aluminum is also used for flashing, but mainly for window frames and doors.

Any metal encountered can be cleaned. As with masonry, care should be taken to avoid damage to metals by using gentle cleaning methods. Sandblasting should be avoided except in the case of cast iron. Softer metals can be cleaned with solvents or sanding.

Ferrous metals (metals with iron content) such as steel doorframes should be painted. Copper, stainless steel, or other similar metals are meant to be exposed. Aluminum can be left unfinished, painted, or factory finished with a baked coating.

Most metals, if deteriorated beyond repair, can be fabricated and replaced. Many contractors with the skill necessary exist in Manitowoc and the surrounding areas. Wood, fiberglass, epoxy, or other metal can replace metals damaged beyond repair. Dissimilar metals must be insulated from each other to avoid galvanic action, a naturally occurring
reaction that can corrode metals.

**Windows**

Windows are one of the most prominent and important features of storefronts and upper facades. Unfortunately, they are often the most altered and neglected of the storefront materials.

Original windows should be repaired when possible. Properly maintained and utilized wood framing used in historic windows can have comparable insulating value to some modern windows and is generally easier to repair.

However, there are times when replacement is the best option. In that situation, replacement with other materials may be considered so long as original features of the windows are retained – wood grain, external mullions, etc. In particular, second and third story windows are more likely to allow alternative materials such as aluminum cladding. This is due in part to the difficulty in perceiving the difference based on the distance of observation. Regardless of the method utilized, it is important to replace the glass using the entire opening. This will help to ensure historic aesthetics and character.

If repair is not an option, good replacement windows contain several attributes:

- **Energy conservation.** Modern units contain insulated glazing and "thermally broken" frames. Both glazing and frames contain either an air space or gasketing to eliminate frost and moisture penetration. If original units are beyond repair, custom fabricated storm units can be installed to achieve the same results. However, other alternatives may be considered to avoid unintended consequences or unnecessary costs.

- **Light quality.** Proper sizing of the storefront window can enhance the amount of natural light that enters the store and reduce the amount of electricity needed for artificial lighting and heating. Glass can also be rated to control the type of light entering the store. For example, E-rated glass lessens the discoloring of merchandise. This can be valuable to the store owner for merchandise display but using awnings and changing displays frequently are better options.

- **Aesthetics.** Window manufacturers offer a wide variety of colors, shapes, and styles in standard units. Custom units can be made to fit any opening or building style. Properly designed windows will enhance the original character of the buildings.

If windows are completely replaced, the new units should contain the same proportions as the original. (This is not to be confused with replacement units that may be presently installed.) Consideration should be given to horizontal and vertical mullions that provide design continuity throughout the building. Always use the entire original window opening, even if the opening was partially filled in from previous remodeling.

**Mechanical, Electrical, Plumbing**
Heating, ventilation, and electrical systems are becoming more sophisticated as energy conservation is foremost in the mind of today's society. It is essential that all systems be installed and inspected by licensed contractors or engineers. Existing systems may have been altered into a condition that is impossible to properly evaluate by a layperson. Expansion of store area also dictates an investigation of the system's capacity. Store owners should also be aware that spending more money for efficient systems will mean cost savings on a daily basis. All systems must satisfy both the Wisconsin State Building Code and regulations adopted by the City of Manitowoc.

**A Word of Warning**

Maintenance and repair of existing buildings often requires removal of undesirable or damaged materials. In many cities, buildings were constructed before asbestos was discovered to be a hazardous material. Not only is it unhealthy to remove certain forms of asbestos, it is unlawful. If asbestos or other hazardous materials are suspected, notify an environmental remediation or asbestos specialist. They can verify its presence and recommend a certified asbestos removal company.

**Landscaping**

There are many roles in which plants and related landscape amenities can assume either as central features or as adjuncts to modern urban development. They include a variety of clearly functional uses such as the creation of shade, the buffering of active pedestrian areas from streets and parking lots, and the screening of unsightly development. Also included are equally important visual uses such as helping to establish a comfortable environment adjacent to large buildings, reducing heat-gain associated with large paved areas, providing a sense of structure and organization to urban open spaces, and adding a wide variety of color and texture to the overall setting.

Landscaping of the streetscape can help to soften the pedestrian environment at the street by adding color and life to an otherwise hard and somewhat noisy area. The city is responsible for the installation and care of street landscaping; however, business owners can supplement what is already in place by providing plantings of their own. Planting can be used at rear and side entrances of buildings to make them more attractive. These plantings can be permanent or in planters which are portable. Plantings should be used to screen trash receptacles, non-accessible doorways, and parking areas.

It should be noted that landscaping requires maintenance and is susceptible to damage. If you do incorporate plantings into your plans they must be maintained. An empty or poorly maintained flower box can be unsightly. Shrubbery or trees that are not properly or regularly trimmed could be an eyesore.

Consult with a qualified nursery to select plantings that will perform well in the location and conditions of your site.
Landscape plans must be approved by the city as a part of any new construction or redevelopment of an existing property. Check with the Department of Community Development prior to developing a landscape plan to insure compliance with the Municipal Code (Section 15.690).

**New Construction**

The construction of new buildings on vacant lots in downtown is encouraged. The design of a new infill building, particularly its front façade, creates unique design challenges. New facades should be designed to look appropriate and compatible in the midst of the surrounding buildings.

What is good infill design? There is no absolute answer; a good design will vary according to its setting. Because an infill building is new, it should look new. However, its appearance must always be sensitive to the character of its neighbors without copying them.

There are several ideas that should govern the visual relationship between an infill building and its neighbors.

**Demolition**

Demolition of existing structures should only be considered as a last resort. Priority is placed on preservation and restoration of existing building facades and structures. Demolition of buildings within the downtown area is closely regulated and owners considering removal will be tasked with presenting evidence that preservation is no longer an option. If, as a last result, demolition is the correct course of action, a building meeting the standards outlined below shall be placed on the site. Plans for the new building must be reviewed by the CDA and staff as well as a development agreement reached on the completion of the new building prior to demolition approval.

**Proportions of the Façade**

The average height and width of the surrounding buildings determines a general set of proportions for an infill structure or the bays of a larger structure.

The infill building should fill the entire space and reflect the characteristic rhythm of facades along the street.

If the site is large, the mass of the façade can be broken into a number of smaller bays, to maintain a rhythm similar to the surrounding buildings.

**Alignment**
Maintain the alignment of the new façade even with the existing facades, to have matching setbacks.

Composition

The composition of the infill façade (that is, the organization of its parts) should be similar to that of surrounding facades.

Rhythms that carry throughout the block (such as window spacing) should be incorporated into the new façade. Maintain a clear distinction between first floor and the upper floors. First floor should have large areas of glass, and upper floors should have an emphasis on solid wall, with less window area.

Proportions of the Openings

The size and proportion of window and door openings of an infill building should be similar to those on surrounding facades. The same applies to the ratio of window area to solid wall for the façade as a whole. Maintain the horizontal alignment of the transom and display windows of the first floor. Maintain the pattern created by upper story windows, considering rhythm, horizontal and vertical alignment.

Detailing

Infill architecture should reflect some of the detailing of surrounding buildings in window shapes, cornice lines and brick work, but should not mimic it completely.

Materials

Brick is the primary building material used downtown although other masonry materials, as well as wood, metal and terra cotta are also present. The existing distribution of materials used in neighboring buildings should be considered when choosing materials for new construction. New buildings and additions should use materials that are compatible in size, scale, texture, and color with the existing color materials. The colors chosen for an infill façade should relate to the buildings' neighbors.
City Building and Design Codes

All new building construction, alterations, and renovations are regulated by various City of Manitowoc codes. Building construction plans including electrical, plumbing, heating, ventilating, and air conditioning plans are required to be approved by the City of Manitowoc Life Safety Division at (920) 686-6940 prior to the start of work.

Many modifications require one or more permits, and often need or require the services of trained, experienced, and licensed professionals including engineers, architects, landscape architects, interior designers, surveyors, and others. Drawings and specifications by such persons must often be stamped with their state license number and profession, and signed and dated over that stamp. Check that all professionals carry enough insurance to cover errors, omissions, general liability, and other unforeseen problems. The initial investment of retaining professionals in your project can be more than offsetting problems down the road - they can help you avoid City and State regulation problems.

An architect can advise you on the scope and content of these regulations. In many cases construction plans must be approved by the Wisconsin Department of Safety and Professional Services prior to building construction. Building permits cannot be issued until all local and State approvals are obtained.

The City of Manitowoc through its zoning code also regulates the urban design elements of the property. Building architecture, parking lots, signage, landscaping, and lighting are regulated through the City of Manitowoc’s adopted Comprehensive Zoning Ordinance (Chapter 15 of the Municipal Code). Many of the design guidelines in this report are requirements of the City of Manitowoc's zoning code. Design plans must be approved by the City at some level, so communicating with the Community Development Department early in the process is recommended. As with the building construction plans described above, building permits cannot be issued until all local urban design elements are approved. For further information call the Community Development Department at (920) 686-6930.

Assistance Programs

Contact the Community Development Department at (920) 686-6930 to inquire about the following programs:

*Projecting Sign Grant Program*

Grants are available to assist with the installation of projecting signage that recaptures the historic flavor of downtown while increasing visibility of businesses.

*Façade Grant Program*

The façade improvement program offers up to $25,000 in matching funds per façade and, in certain cases, design assistance to businesses in the downtown design review overlay district.
The program is designed to improve the appearance of individual building facades, as well as the overall look of the downtown.

History of Manitowoc

Manitowoc is located at the base of the Door Peninsula on Lake Michigan in Manitowoc County. Native Americans had occupied the area for centuries before the French laid claim to the land in the seventeenth century.

In 1779, Samuel Robertson became the first European to explore Manitowoc when he traveled from Milwaukee to meet a friend at a place called "Twin Rivers." Jacques Vieau (1757-1853) came to the area in 1795 looking for places to establish trading posts for the Northwestern Fur Company.

The first Europeans known to settle in the area were Matthew Stanley and his wife in 1820. In 1835, President Andrew Jackson authorized land sales for the region, drawing the interest of land speculators. William Jones and Louis Fizette were the two first recorded buyers on August 3, 1835, with the majority of the land being procured by the Chicago firm Jones, King, & Co. Benjamin Jones, brother of William, took the Wisconsin property as his share and is considered the founder of Manitowoc.

Preparations for a permanent settlement at Manitowoc began in 1836 with the creation of a town plat. In 1838, an act of the Territorial Legislature separated Manitowoc County from Brown County, keeping the native name for the region. The first wave of settlers was lumberman, leading to the establishment of several mills along the Manitowoc River. Early immigrant groups included Germans, Norwegians, British, Irish, and Canadians. The first school in Manitowoc was held in the Jones warehouse, with S. M. Peake instructing the twelve children of the community. The first religious organization in the county, St. James' Episcopal Church, first met in 1841.

Manitowoc was chartered as a village on March 6, 1851 and on March 12, 1870 was incorporated as a city. Despite boasting a population of 2,000 people by 1855, Manitowoc's neighbor to the north, Two Rivers, overshadowed the city's early years in industry and commerce.

The area's population fluctuated greatly over the next decades. When the railroad came, many settlers moved further west. A huge influx of Bohemians, Germans, and Poles in the 1870’s helped Manitowoc's population rebound.

Manitowoc's location on a natural harbor helped the city grow. In 1847, taking advantage of the natural harbor, Joseph Edwards built the first schooner in the area, the Citizen, a modest precursor to the shipbuilding industry that produced schooners and clippers used for fishing and trading in the Great Lakes and beyond the St. Lawrence River. The establishment of the Manitowoc Dry Dock Company in 1902 led to the building of steel vessels. In addition, landing craft, tankers and submarines became the local contributions to U.S. efforts in World War II.
On September 5, 1962, a 20-pound (9.1 kg) piece of the seven-ton Sputnik 4 crashed on North 8th Street. Sputnik 4 was a USSR satellite, part of the Sputnik program and a test-flight of the Vostok spacecraft that would be used for the first human spaceflight. It was launched on May 15, 1960. A bug in the guidance system had pointed the capsule in the wrong direction, so instead of dropping into the atmosphere the satellite moved into a higher orbit. A cast was made from the original piece before the Soviets claimed it, and the cast was displayed at the Rahr West Art Museum. A customer in a nearby art gallery jokingly suggested that the city should hold a festival to celebrate the crash. The city held the first Sputnikfest in 2008, which was organized by the head of both museums.

Manitowoc is one endpoint of the ferry route of the SS Badger, which connects U.S. Route 10 to Ludington, Michigan. The city's Great Lakes legacy can still be felt at the Wisconsin Maritime Museum. Tourism has also grown as more people are drawn to the lakes, particularly to fish.