

HISTORIC HIGHLAND STATION DESIGN GUIDELINES



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Prepared for
Highland Downtown Development Authority
Highland Township, Michigan

ACKNOWLEDGMENTS

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INTRODUCTION

Introduction:

Highland Township has adopted the Historic Highland Station Master Plan to guide development and redevelopment. The Plan's vision seeks to maintain the small town atmosphere while maintaining the general character of the downtown for commercial and residential development. The historical precedent of Highland Station and the general themes are also important goals of the residents, business owners, property owners, Township Officials and the Highland Downtown Development Authority (HDDA). The vision also seeks to retain a viable Historic Downtown sector based on the principals defined in the Historic Highland Station Master Plan. These standards are intended to define and enforce criteria for quality development that meets the vision stated above. The following architectural and site design guidelines are established to apply to all new structures and uses, and to changes or additions to existing structures and uses with the following goals in mind:

Design Goals:

- Increase the variety of residential and commercial opportunities to serve the residents who live, work and shop in Historic Highland Station
- Promote a unique and vibrant identity in the downtown district
- Maintain the scale and flavor of the distinctive architectural character
- Avoid blight and encourage reuse of vacant buildings
- Increase parking capacity in a controlled manner to preserve streetscapes and accommodate anticipated future growth
- Improve the pedestrian experience; health, safety and welfare of the community
- Maintain a "casual" cultural landscape consistent with the town's historical roots
- Stabilize and increase property values in the area
- Promote the arts and cultural activities and attract gatherings of people for community events
- Raise awareness of the district and community's heritage

Design Objectives:

In order to assure that development projects conform to the vision statement and the Historic Highland Station Master Plan of 2008 goals, the Highland Township Planning Commission hereby adopts these "Design Guidelines" to provide direction for decisions relating to building improvements in Highland Station.

INTRODUCTION

Design Policy:

It is suggested that proposed development projects initially be reviewed in sketch form by the Highland HDDA Design Committee for general guidance and conformance to the Highland Station Design Guidelines. This will provide valuable feedback to applicants prior to formal application for site plan approval. Redevelopment and new development projects shall materially adhere to the guidelines outlined in this document as interpreted by the Township Officials or their designated reviewers.

This document is divided into design content sections. Each section contains photographic samples, sketches, and other graphic formats that illustrate examples of appropriate design elements for Highland Station. Should future design documents address the same standards as those contained herein, the more current standards shall take precedence.

FRAMEWORK STYLES

Purpose / Intent:

The Historic Highland Station Master Plan of 2008 contains a framework plan for desired uses and building typologies consistent with historic and current land use patterns (see appendix). The following images portray the general character of compatible uses and potential desired infill development and adaptive reuse of existing structures. These framework styles are not illustrative of the zoning classifications but rather building forms that typify the heritage and character of Highland Station.



(HSC) Highland Station Commercial: refers to commercial automobile intensive uses oriented towards M-59 or where larger sites suggest greater parking intensity. While they will have a style distinct from that within Highland Station, they should still refer to the town's spirit and differentiate themselves from other developments along the highway. Although it is not directly adjacent to M-59, the Kensington Valley Community Credit Union is an example of HSC.

*Bellow are examples of **Highland Station Commercial** appropriately styled buildings, which would compliment (**HSC**) framework.



Anchor Concept



Gas Station



Restaurant



(CSCU) Commercial Style, Commercial Use: includes retail and service-oriented businesses located in buildings that have a recognizably commercial form. For instance, Carpet Classics (historic auto dealership) on Milford Road is CSCU.

*Bellow are examples of **Commercial Style, Commercial Use** appropriately styled buildings, which would compliment (**CSCU**) framework.



Retail, Office, and Residential

FRAMEWORK STYLES



(RSCU) Residential Style, Commercial Use: allows existing homes to be renovated for the use of mostly service-oriented businesses and new buildings that resemble homes to be built for retail and office businesses. R.J. Miller’s accounting office on East Livingston Road is an example of RSCU.

*Bellow are examples of **Residential Style, Commercial Use** appropriately styled buildings, which would compliment **(RSCU)** framework.



Medical

Coffee Shop

Professional

(SSSU) Special Style, Special Use: there are several buildings in Highland Station that exemplify the districts unique, historic and casual atmosphere. Most of these buildings are currently used in a different way.



Methodist Church
(now: Child daycare)

Historic Hotel
(now: Feed store)

Mike Gensen Plumbing

Congregational Church
(now: Senior Activity Center, Historic Society, HDDA & gallery/art shop)

(RES) Residential: refers to single and multi-family homes.

*Bellow are examples of **Residential** appropriately styled buildings, which would compliment **(RES)** framework.



Folk Victorian Home

Rural/ Contemporary Single Family

Multi Family Condo’s

BUILDINGS & STRUCTURES

Purpose / Intent:

The intent of this section is to reinforce the necessity for quality buildings that retain the style of architecture that has been formerly established in Highland Station. The preservation of the historic structures is paramount to maintaining the architectural heritage of the downtown. These design guidelines will serve as standards for renovations as well as new construction but most importantly preservation, which is the purest form of sustainability and green building.

Guidelines:

All architectural improvements should enhance existing structures in a way that does not greatly deviate from the simple Folk Victorian Style found in Highland Station. Architectural features include distinct styles and characteristics unique to Highland Station relative to details, scale and massing which should complement the vernacular of existing buildings without simply replicating this historic style. Structural diversity is encouraged for the desired aesthetic but should stay true to the principals described within these guidelines.

Architectural Classifications:

All architecture in the Highland Station area, both existing and new fall into one of the following three classifications:



Signature / Historic Structures



Complementary Structures



Nonconforming Structures

All classifications include building types of residential, commercial, office, mixed-use and special uses. These guidelines do not attempt to cover every classification for every building type so as not to be repetitive, but highlight the most important attributes of various classifications and building types to best illustrate the desirable features in guiding the towns future buildings.

Future Buildings and Changes:

Future development and change to the architectural fabric in Highland Station will happen in one of the following ways:

- Preservation / Restoration
- Adaptive Reuse
- New Construction

This section makes recommendations for changes and the design standards to buildings for the various classifications and building types which are most prevalent in Highland Station.

BUILDINGS & STRUCTURES

Signature / Historic Structures:

These historic buildings are important to the architectural fabric either by historic value, architectural value and/or location. They should be preserved, restored and/or adapted for reuse in a manner that reflects Highland Station's architectural pattern language. Any building built before 1950 may be considered historical and should be considered worthy of preserving. Keeping these buildings in use and preserving them is necessary so as not to erode the historic buildings stock which is very unique in defining the character of Highland Station.

Below are both historic and current images of some of the most notable structures still standing today that illustrate valuable cues which reveal the historic architectural vernacular and heritage of the town:



Historic Needham Building and Structure Today

*Highland Feed Store
(Historic Highland House Hotel)*



Asa Smith Filling Station Congregational Church

Methodist Episcopal Church

BUILDINGS & STRUCTURES

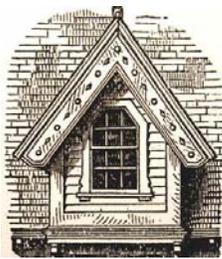
Attributes of Highland Station's Historic Buildings and Structures

- Iconic / Symbolic Buildings
- Beneficial to Highland Character
- Historically Accurate
- Details and features that represent the Folk Victorian Style
- Wrap Around Porches
- Proper scale, massing and proportion



Residential architecture examples with described attributes

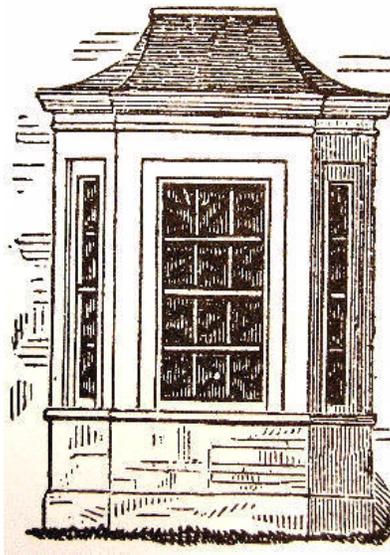
Details and Attributes of Folk Victorian Architecture:



Dormer



Corbel



Bay Window



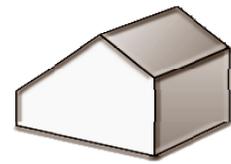
Crossed Gable



Front Gable



Pavilion-hipped



Salt Box

BUILDINGS & STRUCTURES

Complementary Structures:

These are typically quality structures post-1950 or newer construction. They contribute to the prevalent pattern language of Highland Station but are subordinate to the style of the signature historic structures. Existing structures should be adapted for reuse in a way that complements the prevalent architectural patterns.



Offices



Retail / Office



Multi-Family Housing



Multi-Family Residential



Single-Family Residential



*East Side of Milford Road - Complementary Buildings Study Sketch
(proposed building additions are colored)*

BUILDINGS & STRUCTURES

Commercial complementary structures will be critical to the success of the downtown core on East Livingston Road. The desired architecture is one that is harmonious with the existing structures of Highland Station based on several criteria including; scale, material, proportion, setbacks, and historical reference. The overriding goal is to create a downtown that embodies the ideals of new architecture while referencing the success of the past.



*North side of East Livingston Road - Complementary Buildings Study Sketch
(proposed buildings and modification to existing are colored)*

Attributes and Desirable Features of Commercial Complementary Structures

- Decorative front parapet
- Canopies and awnings
- Historically accurate store fronts
- Street level arcades
- Maximum two story building heights



Late 1800's to Early 1900's

- Simple Cornice
- Transom windows
- Recessed Entrance

Early 1900's to 1930's

- Metal window Frames
- Structural Glass
- Recessed entrance



*Mixed- Use Commercial
Building Example*

Residential:

Residential homes in the Highland Station area have the opportunity to be in many ways a modern complement to the Folk Victorian Architecture. The same simplistic design of the Folk Architecture can be recreated to form a more contemporary home that embodies today's 21st century design. Using simplistic facades that are similar in form, however different in design, will create harmonious design that shows a community that has evolved over time.



BUILDINGS & STRUCTURES

Nonconforming Structures:

These structures do not compliment the character of Highland Station. Improvements should be considered if possible to reduce the nonconformity of their visual appearance or the structures should be replaced with buildings that contribute to the Highland Station architectural precedent.



Nonconforming Uncomplementary



Nonconforming "slightly more" Complementary

Commercial nonconforming structures are often pre-existing structures that a business has chosen to occupy that meets their functional needs, yet do not fit the mold of Highland Station. Although these buildings may be structurally sound, they often lack a complementary appeal to the surrounding settings. These structures can often be slightly altered by using a variety of materials and or colors that are more harmonious to the overall design goals of Highland Station.



Nonconforming Building Materials



Often nonconforming structures stem from the development of franchise stores where a standardized design is in place. Many of these retailers have adapted their commercial prototype buildings to fit within the context of a community.



Franchise drug store examples of building architecture not typical of their prototype structures

Additionally, ancillary structures including sheds and free standing garages can also be deemed as nonconforming structures. Although these types of structures are often pre-manufactured or pre-designed they should still be held to the same standards emphasized within these guidelines.

FUTURE BUILDINGS & CHANGE

Preservation:

The preservation of existing historic structures is essential to the development of both the commercial and residential sector. It is important that these attractive buildings first be looked at with an eye for preservation and restoration. These historic buildings can be adapted into functional buildings with 21st century amenities while continuing to speak to the practical rural history of Highland Station.

Residential:

The Highland Station residential district has become very eclectic in its development. One of the district's assets centers on the Historic Folk Victorian homes that are scattered throughout the area. This type of architecture reveals a pattern language about the town of Highland. These homes should retain their original architectural character but could be adapted for other uses in the future.



Examples of Highland Station Historical Preservation

Commercial:

East Livingston Road formed the commercial and civic core of Highland Station. The Town Hall and General Stores that still exist should be preserved, or restored to their historical original state in order to help accentuate the historical significance of this important area as well as buildings on Milford Road.



Historic Auto Dealership



Needham Building



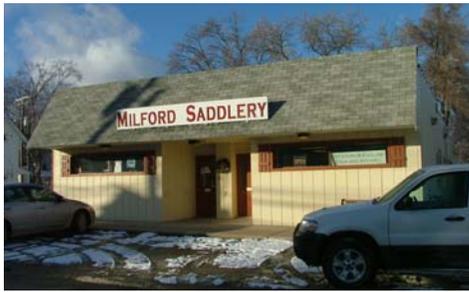
Town Hall

FUTURE BUILDINGS & CHANGE

Restoration:

Today, Highland Station is a charming hamlet of mostly residential structures, many of them built more than a century ago. Several early commercial buildings still stand, although many have additions or modifications that mask their history. A successful restoration of structures may require professional design assistance and contractors with historic restoration experience.

Architectural restoration can benefit both the building owner and the district. Restoration provides commercial and or residential structure with the historical character that Highland Station desires. Furthermore, restoration is in some cases significantly less expensive when compared to new construction. However, consideration must be given to mitigating any structural issues and/or harmful materials. Below is an exemplary example of a successful building restoration in Highland Station which now reveals its historic origins and character of the town.



Before



After

Residential / Commercial:

Restorations for residential structures serving as commercial establishments present interesting scenarios. Below is a list of recommendations that may aid in developing a functional establishment with historic character.



Office Use in Residential Structure

Attributes and Desirable Features:

- Historically accurate architecture
- Easily accessible
- Complementary signage
- Distinguished entryway
- Commercial exterior lighting



Recommendations:

- Structures should be developed to work with the existing foot print of the structure
- Street level facades should be predominately windows
- Structure's should be restored with original materials when possible
- Structure's modifications should be inline with building's original design
- All material selections should be of a hardy nature and historically accurate
- Avoid historical inaccuracies in all exterior renovations
- Avoid using colors or patterns that are inappropriate to the historical character

FUTURE BUILDINGS & CHANGE



Existing Structure



Potential Addition

Encouraged Development:

- Develop simplistic and symmetrical facades
- Porches with flat, jigsaw trim work
- A variety of spindle work and decorative millwork
- Windows should have variety
- Combine traditional and classic forms
- Cast-iron lace work that hides galvanized roofing
- Use timeless materials

Discouraged Development:

- Avoid trying to replicate historic styles
- Avoid using materials that are historically inaccurate
- Avoid overuse of decorative millwork
- Avoid poor design and lack of imagination
- Avoid exterior modernization of structure
- Avoid complete modification of foundation

Architectural Details:

All architectural detail should be historically accurate to the architecture of the structure. Furthermore, it should be a complementary addition to both the residence and its surroundings.

Recommendations:

- Restoration should retain the existing foot print of the structure
- Retail establishments should be limited to the first floor of structure
- Offices or residential should typically be located on second floor of structure
- Existing Historic Residences should be renovated with the features of Folk Victorian Architecture
- Millwork detail should be limited to historically accurate pieces
- Structural modifications to residence should be inline with homes original design
- All material selections should be of a hardy nature and historically accurate
- Avoid historical inaccuracies in all exterior renovations
- Avoid using colors or patterns that are inappropriate to the historical character
- Corner buildings are focal, two fronts are encouraged and blank walls should be avoided

Residential:

Below are recommendations that assist in historically renovating the classic Folk Victorian Architecture located around Highland Station.



Features:

- Symmetrical facades
- Variety of patterns & millwork
- Porches with spindles
- Front gable and side wings



FUTURE BUILDINGS & CHANGE

Adaptive Reuse:

By retaining and using existing structures, Highland Station could become the town into which it was meant to evolve. By making renovation to an existing structure that is both structurally sound and functional, the new business can create a space that is both satisfying to their needs as well as enriched in Highland character. Furthermore, by adapting an existing space the integrity of Highland Station is preserved.

Commercial:

The existing Highland Feed Store on East Livingston Road is already an important center for the town. Eventually, it could also feature a bed & breakfast on the second floor. It has been considered that Genson's plumbing building on the railroad tracks could be renovated to serve as a cider mill or restaurant with outdoor dining. Attracting other interesting businesses that serve residents and visitors from the recreation area will make Livingston Road a shopping area with unique small-town character.



***Genson's Plumbing Store
(Potential Cider Mill or Restaurant)***



***Old Road Commission Building
(Potential Restaurant)***

Residential:

Existing residential structures should not solely be considered as future homes. These residences offer the unique opportunity to serve as Live / Work establishments. In addition there are varieties of businesses that look for a residential structure to serve as their place of business: law offices, medical, architectural, salons, boutiques, etc. These types of establishments would give Highland a unique and dynamic character. Furthermore, it would attract many small businesses to the area to help stimulate the downtown district.



***Example of Highland Station Adaptive Reuse
(This is an existing residential structure
currently used for office and residential above)***

FUTURE BUILDINGS & CHANGE

New Construction:

Like any established town undergoing the pressure of change, new construction is a factor. Highland Station has the unique opportunity to create a downtown district that is filled with historic significance as well as contemporary materials.

In developing new structures for the downtown district it is important to embrace the existing structures in a way that complements the Highland Station character. The benefits of harmonious 21st century design allows for a seamless transition from the past to the present. These future designs should also embrace the scale, massing and proportion that are currently present in the downtown district.



Architectural Details illustrated below will help in developing a successful and historically accurate renovation and or new construction.

Encouraged Development:

- Pedestrian scaled openings
- Interesting and special building entries
- Windows should be vertically oriented
- Combine traditional and 21st Century forms
- Decorative exterior millwork

Discouraged Development:

- Avoid trying to modernize historic styles
- Avoid trying to apply faux building slip covers
- Avoid excessive themed style Architecture
- Avoid poor design and lack of imagination

Pedestrian Accessibility:

- Provide overhead protection such as awnings
- Provide entryways that encourage window shopping
- Provide attractive rear and front entryways
- Provide appropriate façade and eave lighting
- Develop interactive storefronts that allow for exterior dining and sidewalk sales

FUTURE BUILDINGS & CHANGE

Accessory and Ancillary Structures:

Ancillary structures are often put in place to create additional storage or work space. Often times these structures are put in place well after the completion of construction. Although these structures do not serve as a primary residence or as a direct connection to the home, they should be treated as a complementary structure. The design of these structures should model similar characteristics of the surrounding structures.



Uncomplimentary

Pre-manufactured structures should be utilized only if they fit the architectural vernacular or if are fully screened from public view



Complimentary



*Avoid open air
exterior stairwells*

LANDSCAPE



Purpose / Intent:

The intent of this section is to promote the use of quality landscaping that lends itself to the informal rural characteristics of Highland Station. Buffer treatments, use of open space and tree plantings are all components that should be considered carefully and utilized to further enhance the quality of life in Highland Station. The attached plant material palette promoting the use of natives or plants common to historic times will be one method used to preserve the feel of Highland Station.

Guidelines:

Landscape Design Principles:

Landscaping can mitigate the visual intensities of developments in a manner that is consistent with the low intensity and casual nature of the Highland Downtown District. Plant species diversity is encouraged as well as the use of native species, which have existed in Highland Station historically.



- Landscaping shall be used to complement principal structures rather than mask or deter from them.
- Landscape plans should be considered and designed in conjunction with the architecture and overall site plan and not as an afterthought.
- Low maintenance and drought tolerant plantings should be considered in keeping with Highland Station’s Green Design Initiatives (see appendix).



Seasonal Interest

Color, Texture and Scale

Maintain Tree Canopy

Layering Plantings



Significant Trees:

Significant trees and plant material are recommended to be preserved to the greatest extent possible. This includes plants that are focal or functionally valuable to a site, healthy and pose no threat or danger to the site or significant buildings. Landmark or Heritage trees are those which are considered high quality species and which measure at least 16” in diameter at 48” high above the ground.

LANDSCAPE

Commercial, Office and Mixed-Use Landscape:

Landscaping adjacent to buildings should further enhance the architecture and functionality of the site uses. The landscape should extend from the building out, keeping the entire site and surrounding uses in mind.



Recommended locations for landscape include:

- At the entries of buildings
- Along long runs of walls and edges or corners
- Defined outdoor spaces or special use areas
- Along pedestrian connections and thoroughfares
- Screening of utilities and trash enclosures
- Adjacent to vehicular circulation and parking

Street Yards:

Street Trees shall be planted in natural groupings or clusters at varied distances along thoroughfares where possible. The use of layering and hierarchy of landscape is encouraged to break up pedestrian and vehicular circulation as well as calm traffic.



Street Trees:

- Varieties can vary and should consider overstory and understory tree canopy plantings.
- Wherever possible, trees should be planted in green space between the sidewalk and curb as to separate vehicular and pedestrian traffic.
- Spaces in which trees are located should be of adequate size to promote good root structure and tree health.

Landscape Buffers:

The use of hedges and decorative fencing are encouraged to separate sites with differing land uses. There are a variety of appropriate ways in which to buffer adjacent sites or uses within a site, which are situation dependent as well as utility specific.



- Adjacent to vehicular parking
- Between different land uses
- Screening of utilities
- Screening of service areas
- Define outdoor spaces or special use areas
- Along pedestrian connections and thoroughfares

LANDSCAPE

Hedges:

Landscape intended to be used for hedges are to be of high quality and dense foliage. Plants should be of appropriate size and spacing to ensure adequate buffer from the time of planting. Recommended species shall provide screening year round. In addition hedges shall be maintained and clipped at an appropriate height annually.



Vehicular Separation

Utility Screening

Adjacent to Parking

Define Spaces

Fencing:

Fencing shall be high quality and maintain the vernacular landscape of Highland Station while being of appropriate size and scale for the desired screening application.



Services Screening

Utility Screening

Accent Fencing

Character Fencing

- Wood, masonry, or metal fencing should be maintained and protected appropriately
- Fences should be decorative in nature and designed to coincide with the architecture by way of material, color, and structural design

Discouraged fencing - includes that which is out of character or poor quality including chain link fencing, vinyl or other such materials, which are not in keeping with the rural character of Highland Station.

Openspace:

Within Highland Station, openspace will consist of smaller spaces on both public and private properties rather than large active recreation sites, which surround the town. These smaller spaces shall be utilized to the best of their ability to promote passive recreation where residents can interact creating a stronger community. These spaces shall include landscape plantings to provide a natural setting as well as shade and comfort.

Perceived Locations - these spaces may include but are not limited to:

Gateways, Courtyard Gardens, Public Spaces, Patios, Outdoor Cafés, Intersections, Plazas, Between Buildings, Street Yards and Storm Water/Rain Gardens.

LANDSCAPE



Landscape Décor:

Additional Landscape, which provides visual cues, shall be considered in planters, landscape beds, window boxes or flowerpots. This plant material is recommended to be of seasonal interest and maintained on a regular basis.



Desired locations of additional landscape include:

- At the entries of buildings
- Along long runs of walls and edges or corners
- Defined outdoor spaces or special use areas
- Along pedestrian connections and thoroughfares
- Adjacent to vehicular circulation



Hanging Pots

Window Boxes

Railing Boxes

Decorative Pots

Undesired Locations – Landscape situations should be avoided which may cause a safety hazard or hardship for Highland Station or its people. Potential situations to avoid include interference with visibility at intersections, blocking visibility of signage or prominent architectural features, interference with pedestrian circulation or safety, as well as the placement of large trees under overhead utility lines.

LIGHTING

Purpose / Intent:

The intent of this section is to promote quality lighting that provides safety and aesthetics while maintaining the casual quality of Highland Station.

Guidelines:

Lighting Design:

Plans should be designed and planned in conjunction with the landscape, architecture, and overall site plan. Lighting should be located and designed to minimize glare and spillage onto adjacent properties. Each situation is different as the effect of accent lighting may be minimized due to the existing built environment.

Decorative Lighting:

Illuminate and highlight walkways, sidewalks, businesses, office, and residential style architecture, including areas adjacent to developments which are intended to be used as pedestrian pathways or thoroughfares.



Lighting fixtures:

Fixtures should be compatible and architecturally integrated to the design. They should also serve to accentuate the landscape and architectural features. Lighting such as pedestrian, vehicular and wall lighting shall complement each other and serve as a subtle illumination. All light fixtures shall be of high quality and accommodate outlets for decorative seasonal lighting.

Post Lamps:

Post lamps have the ability to create a desired ambiance for a streetscape or landscape feature. They provide architectural support as well as safety to the community. There are several features that provide aesthetic appeal.

- LED Lamps
- Gas Lamps
- Post with Flower Holder
- Signage with Banners
- Post Cadence
- Compatible Colors



PEDESTRIAN ORIENTATION



Purpose / Intent:

The intent of this section is to exhibit development that promotes the uses of practical features that make up the pedestrian experience: access, green space, outdoor cafes, potential crosswalk treatments, pavement materials & patterns, street trees/landscaping, benches, trash receptacles, bike racks and other amenities. The design guidelines will begin to consider traffic calming strategies that will further enhance safe pedestrian experiences.

Guidelines:

Circulation Design Principles:

Pedestrian access throughout Highland Station on both public and private sites will help ensure the functionality and success of this community and its businesses.

- Promote walking while providing safety and enhancing the pedestrian experience
- Provide pedestrian access between buildings, public sidewalks, trail systems and parking
- Building accessibility shall be ADA compliant
- Separate pedestrians from vehicular traffic by various means including landscape, greenbelts, and bump outs.
- Improve connectivity for a safe and interconnected town for residents, businesses and visitors



Existing Conditions



Potential Improvements

Sidewalks and Pathways:

The walkways, which connect circulation throughout Highland Station, shall be located appropriately. They should be built of high quality materials and sound construction to ensure the safety of its users and longevity. The walkways layouts and materials shall change based on the situation at hand and it is recommended that they follow these general guidelines.

PEDESTRIAN ORIENTATION



Appropriate Walk Size and Dimensions:

- Minimum 5' walks within residential districts
- 5-8' walks are recommended adjacent to businesses on Milford Road
- 10-12' walks are recommended on E. Livingston Road



Recommended Locations of Sidewalks:

- Sidewalks should be incorporated on both sides of drives or streets and carried through driveway access
- Walks shall provide direct access from businesses to public sidewalks
- Buildings should have direct access to parking lots, on street parking and drop off areas
- Walkways shall provide open or covered passageways through long buildings to rear parking by way of building breaks or arcades

Paving Types and Materials Recommended:

- Simple paving materials should be used in main sidewalk areas as to not distract from enhanced areas of Highland Station
- Decorative paving should be used to enhance the character and safety
- Differing materials are recommended to separate and direct pedestrians as well as vehicular traffic
- Decorative materials shall act as a visual cue to slow traffic at pedestrian crossings and intersections as well as entry's



Pavers

Stamped Concrete

Brushed Concrete

Colored Concrete

Striping/Thermal

PEDESTRIAN ORIENTATION

Outdoor Seating and Furnishings:

Providing amenities such as seating and furnishings are critical to the character and overall feel of Highland Station. Furnishings help create individualized spaces and offer opportunities for social interaction as well as promote site use.



Outdoor Cafés - Provide seating and gathering spaces adjacent to businesses in public spaces. Ensuring high visibility for outdoor uses is critical. Provide additional amenities within streetscape where buildings are set back.

Site Furnishings and Amenities - Furnishings shall be chosen to reflect individual sites in mind and overall character and aesthetics of Highland Station. All site furnishings shall be of high quality and maintained to ensure safety of users. Businesses are encouraged to highlight entrances to storefronts and provide pedestrian scale open spaces which include unique amenities and vegetation.



- Public and private furnishings are recommended to be black and of metal construction.
- These furnishings shall include benches, trash receptacles, drinking fountains, bike racks, tables and chairs.
- Bicycle parking shall be provided at businesses and offices in safe secure and convenient locations, where appropriate hitching posts shall be considered for equestrian enthusiasts.
- Amenities may also include accessories such as decorations, decorative pots and window boxes.
- Consider artistic or unique objects that may be used as site furnishings



Wayfinding:

Wayfinding includes visual cues that help direct people to or from locations throughout Historic Highland Station. These may be in the form of signage, kiosks, or common elements, which visually link the town together. Monuments such as historic and civic structures may also act as landmarks and anchors by becoming reference points.

LIGHTING

Façade Lights:

Façade lights are an excellent way to highlight both signage and architectural features on a structure. Façade lights can also add historic character to a structure in a way that subtly combines 21st century design.

- Architectural Lamps
- Gas Lamps
- Simplistic Forms
- Adequate Wall Separation
- Balanced Placement
- Compatible Colors



Parking Lot Lights:

Parking Lot lights serve a simple purpose to the community. They are in place to provide security and safety to patrons using local establishments. However, they should still provide architectural character to the Highland Station community.

- Security and Safety
- Simplistic Forms
- Proportion to Structure
- Balanced Placement
- Compatible Colors



Landscape Lights:

Landscape lights have the ability to add another dimension to the sites aesthetics. By introducing landscape lights a much more dynamic space is created that allows for patron interaction throughout the evening.

- Solar Lamps
- LED Lamps
- Simplistic Forms
- Accentuating Characteristics
- Balanced Placement
- Compatible Colors



Discourage:

- Avoid using bollard lights.
- Avoid using colored floodlights outside of holiday season.
- Avoid using tree lights outside of holiday season.
- Avoid using lights as an attracting feature on the structure



SIGNAGE & HISTORIC INTERPRETIVE PLAQUES

Purpose / Intent:

Highland Station's Sign Ordinance relates primarily to business signage throughout the town. These design guidelines are intended to complement the sign ordinance with more emphasis on public signage and signage in the form of historic interpretive plaques and wayfinding.

Guidelines:

Signage shall be in keeping with the overall character of Highland Station. The scale should be considered as it relates to its context. Wood, metal and foam panels are construction materials to consider for fabrication. There are various types of signage throughout Highland Station to fulfill different needs. Signage shall be designed to meet the specific needs of the situation at hand and overall design principles shall be used as guidelines.

Contrast – between text or images on the signage and the background is critical for legibility of the sign

Color – of signage shall be neutral colors with light and dark contrast between text and the background

Legibility – of text is critical and shall be of appropriate scale in a font that is simple and easy to read

Compatibility – design of the signage shall fit with the overall character of Highland Station and fit appropriately with the site in mind

Recognizable – signage should be visible and read as part of a traditional style while keeping the individuality Highland Station portrays

Historic Interpretive Plaques:

The intention of Historic signage is to denote the history of a particular site or building. Historic signage is encouraged for structures and sites throughout Highland Station which are of historic significance. These shall be human scale in nature and designed with pedestrians in mind as the main users.



SIGNAGE & HISTORIC INTERPRETIVE PLAQUES

Wayfinding Signs:

Informational in nature, these signs are encouraged to inform and direct people throughout Highland Station to special events and locations. These add to the overall personal character and individual theme while promoting local programmed events. These are intended and should be designed with both pedestrian and vehicular users in mind.



Traffic & Street Signage:

Traffic and Street Signage shall help to ensure the safety and welfare of the people in Highland Station and its visitors. It is encouraged to safely direct pedestrian and vehicular traffic flow through streets and make people aware of their surroundings.



PARKING



Purpose / Intent:

The intent of this section will be to promote parking that achieves safety, pedestrian friendliness, and accessibility to the variety of uses within Highland Station. Parking standards will be carefully considered for all distinct areas of Highland Station as different land uses will require different parking levels and needs. Parking guidelines to be considered include, parking dimensions, buffers, setbacks, shared parking, and on-street parking.

Guidelines:

Location:

Wherever possible, parking shall be located in the rear of buildings to be less visible. Parking should be located as close and convenient as possible to the building it is servicing for accessibility.

Layout and Design:

Although parking is a critical component of a development it is often ignored from an aesthetic standpoint. There are many strategies which can help reduce the negative impacts and aesthetics of a typical parking lot.



- Openings for pedestrian connections should be incorporated to promote pedestrian travel
- Access points/connections to streets should be minimized for vehicles
- Shared access points for neighboring land uses which are compatible are recommended
- Entrance drive widths shall be minimized where possible
- Parking aisles are encouraged to be orientated perpendicular to the building entrance.
- Plan for opportunities to share parking with nearby uses

Materials:

Materials shall be of high quality and constructed to minimize maintenance and repairs. The use of differing material colors and finishes are encouraged and will increase the visual appearance as well as safety of a parking lot.

- Sidewalks crossing parking drive isles can be a different color and or material
- Pedestrian crosswalks and striping help users safely circulate though parking
- Pervious surfaces are encouraged

PARKING



Interior Landscape:

Landscape within a parking lot is intended to soften and break up extensive amounts of hard space. The plants located in these harsh environments are to be hearty and resistant to drought and salt exposure while providing color, texture and shade.



- Canopy trees should be planted to help reduce the heat island effect and provide an overhead plane
- Large parking lots shall be split up by large landscape islands which break up significant expanses of pavement.
- Trees and landscape should be planted to avoid any interference with vehicles overhang and door swing
- Landscape islands should be a minimum of 4' wide to accommodate trees root systems
- End rows of parking shall be protected and screened for vehicular traffic with curbed landscape areas
- Parking lots should drain to landscape islands or rain gardens which increase infiltration and filter contaminants

Buffer:

Parking should be buffered from differing land uses and properties to break up visual sightlines and maintain the rural character of Highland Station.

- Parking adjacent to residential areas shall be buffered with a solid screen utilizing one of the following methods:
 - Evergreen landscape hedge
 - Decorative masonry wall
 - Wood decorative fencing
- Where parking is not located in the rear of the building a greenbelt including landscape is encouraged



PARKING

On Street Parking:

It is encouraged that angled or parallel parking in the public ROW be counted towards parking requirements.



COMMUNITY ART & HISTORICAL ENRICHMENT



Purpose / Intent:

The intent of this section is to promote the arts as they relate to nature and the environment that surrounds Highland Station. It can also be of a more personal expression that relates to individual residents and business owners personal interests and tastes. Additionally, historic interpretive plaques and mementos should be integrated throughout the community to tell the story about Historic Highland Station and to enrich the community. Art may be expressed in many forms including but not limited to; sculpture, statuary, fountains and water features, pavement inlays, custom gates, murals, and custom architectural details, just to name a few.

Guidelines:

Spaces should be considered for the display of both public and private art and should be considered for permanent and/or temporary display. While art can come in many forms of expression and is highly subjective, it is suggested that works be considered that relate to the history of Highland Station, as well as nature and recreational activities which surround Highland Township and the region.

Recommended art locations:

- Pocket parks
- On front lawns of private property
- Gateways and key intersections
- Train bridge overpass on M-59
- Civic Art on public properties
- In walks
- Custom gates



SUSTAINABILITY & GREEN DESIGN

Purpose / Intent:

One of the purest forms of sustainability and green building is historic preservation of our buildings and cultural landscape. Highland Station endorses green building practices to further enhance the quality of life and our environment. Environmental consciousness is necessary to provide more energy efficient buildings, reduce waste through recycling of materials, and the construction of sustainable landscapes that require less water consumption.

Guidelines:

Many green building methods are available and should be considered for implementation in Highland Station. Although these practices present challenges it is important to remember that sustainable design will provide benefits for many years to come. Some of these practices include:



Sustainable Construction



Green Roof



Rain Gardens



Rainwater Cisterns



Pervious Pavements



Native Plantings

Development Strategies:

- Passive Solar
- Native Plantings
- Storm water Management BMP's (best management practices)
- Geothermal heating and cooling systems.
- Advanced irrigation design such as drip irrigation for less water consumption.
- Use recycled supplies and building materials.
- Use local construction suppliers to reduce transport.

RESOURCES

"Design Standards." Published: Village of Sussex, 2004.

"Downtown Master Plan and Design Guidelines." Adopted by the City of Fenton, MI Published:
Fenton City Council, 2007.

"Non-Residential City Wide Design Guidelines." City of Pleasant Hill City Council Published:
City of Pleasant Hill, 2008.

The American Institute Of Architects, *Affordable Green Guidelines*. Retrieved 7 July 2008, from
Website:http://www.designadvisor.org/green_criteria.html.

GLOSSARY OF TERMS

Accentuate: To give emphasis or prominence to.

Active and Passive Parks: Active parks have higher intensity uses like softball, playgrounds, soccer, etc. Passive parks have low intensity uses like walking, sitting, nature walking, etc.

ADA: American Disabilities Act.

Adaptive Use: Converting a building to a new use other than that for which it was built.

Addition: New construction added to an existing building or structure.

Aesthetic: Pertaining to a sense of beauty.

Alteration: Any action that impacts exterior architectural features including construction, reconstruction, repair or the removal of any building element.

Ambiance: The mood, character, quality, tone, atmosphere, etc. particularly of an environment.

Amenities: Any feature that provides comfort, convenience, or pleasure.

Ancillary Structure: A subordinate building that is located on the same property as the principle building.

Arborist: A person skilled and trained in the arts and sciences of municipal arboriculture, and shall hold a college degree or its equivalent in arboriculture, horticulture, forestry, or other closely related field.

Arcades: A roofed passageway or lane, especially one with shops on one or both sides.

Awning: A roof like shelter extending out over a storefront, building entrance or window opening to provide protection from inclement weather and to reduce solar gain.

Balustrade: A series of balusters connected by a handrail, used on staircases, balconies, porches, etc.

Bay Window: A projecting window with an angular plan.

Bracket: Support members found under eaves or other overhangs, which may be plain or decorated.

Building Scale: To adjust proportionately and match or relate to the adjacent and surrounding buildings and the relative size to humans.

Cast Iron: Iron, shaped in a mold, that is brittle, hard, and cannot be welded; often used in late 19th century commercial facades.

Character: The qualities and attributes of any element, structure, site, street or district.

Clapboard: Horizontal wooden boards used as a siding material that are tapered at the top and laid so that the thin edge is overlapped by the thick edge of the board above.

Clusters: A group of the same or similar elements gathered or occurring closely together; a bunch.

Coincide: To correspond exactly, as in nature, character, etc.

Column: A pillar, usually circular in plan.

Compatibility: Design characteristics (size, color, materials, proportion, opening, setbacks, etc.) that relate with one another or are congruent.

Configuration: The arrangement of elements and details on a building or structure, which help to define its character.

Context: The environment in which a historic building, element, site or structure exists.

Contrast: The use of opposing elements, such as colors, forms, or lines, in proximity to produce an intensified effect in a work of art.

Corbel: A projecting architectural element that acts as a means of support for a roof beam.

Cornerboards: Narrow vertical boards at the corner of exterior walls, which protect the ends of clapboards.

Cornice: Any projecting molding along the top of a wall or building.

Cupola: A small structure or vault on top of a roof which is often spherical or square in shape.

Demolition: Any act which destroys, in whole or in part, a building or structure.

Dormer Window: A window that projects from a roof.

Double-Hung Window: A window with two moveable sashes.

Downspout: A pipe that carries water from the gutters to the ground or a sewer system.

Drip Line: Means an imaginary vertical line extending downward from the outermost tips of the tree branches to the ground.

Eaves: The edge of a roof that projects over an exterior wall.

Elevation: Any one of the external faces of a building.

Enhance: To make greater, as in value, beauty, or effectiveness.

Façade: The front or main elevation of a building.

Fascia: A flat board that forms the trim along the edge of a roof which covers the ends of roof rafters.

Form: External appearance of a clearly defined area, or building shape.

Foundation: The part of a structure that is in direct contact with the ground and serves to transmit the load of the structure to the earth.

Frame (window): A fixed frame which is set into a wall to receive and hold a window.

Gable: The triangular end of an exterior wall in a building with a ridged roof.

Gable Roof: A sloping roof that terminates in a gable.

Gateways: An opening or a structure framing an opening, such as an arch. Gateways also mark the point of transition.

Grading: Means earth stripping, cutting, filling, excavating or stockpiling or any combination thereof.

Groupings: A collection of people or things united into a group.

Gutter: A channel of wood or metal running along the eaves of a building used for catching and carrying off water.

Hardship: A condition that is difficult to endure; suffering; deprivation; oppression.

Harmony: A consistent, orderly, or pleasing arrangement of parts.

Hazardous Tree: Means a tree that is likely to cause injury to person or property as determined by the criteria established by the International Society of Arboriculture.

Heat Island Effect: Large masses of pavement lacking shade which adds to the overall increase in temperature in that specific area due to heat retained in the pavement surfaces.

Hipped Roof: A roof formed by four pitched roof surfaces.

Historic Structure: Any building 50 years old or older and found to have a special value by the local, state or federal government.

Human Scale: Proportions of objects which relate to and are compatible with the size and senses of a human being.

Iconic: Of, pertaining to, or characteristic of an icon.

Impervious Surface Ratio (ISR): The ratio of impervious surfaces like asphalt, or buildings to pervious surfaces like grass on a specific parcel.

Infiltration: The ability for water to penetrate through the ground surface to a natural drainage course or back into the natural aquifer.

Landmarks: A building or other place that is of outstanding historical, aesthetic, or cultural importance, often declared as such and given a special status (landmark designation), ordaining its preservation, by some authorizing organization.

Landscape Island: An area of greenspace dividing two sections of road. Most often found at the entryway to a development or subdivision the landscape island is an important indication of changing uses.

Legibility: Possible to read or decipher

Maintain: To keep in an existing state of preservation and repair.

Mansard Roof: Type of roof popular in French Second Empire style buildings. A version of this roof form has been used as a decorative feature on some downtown buildings. This feature looks like a solid awning with shingles and is never appropriate in the downtown district.

Massing: The bulk and form of a building or structure.

Mitigation (trees): Mitigation is the process of replanting trees to help offset the removal of existing trees.

Modern Movement: A style of architecture popular from the 1930's to the present, exemplifying the philosophy "form follows function". Characterized by the lack of decoration and the use of building technology and materials that allow shapes, forms and colors that were not previously available to architects and builders.

Molding: A decorative band used for ornamentation and finishing, generally used in cornices or as trim around openings.

Mortar: A mixture of sand, lime, cement and water used as a bonding agent in masonry construction.

Mortise and Tenon: A type of joint in which a cavity cut into a member receives a projection from the end another member.

Native Species: Plants which grow naturally in a specific region and indigenous to that area.

New Construction: The introduction of new elements, buildings, structures or additions to existing buildings and structures.

Over Story: The uppermost layer of foliage in a forest, forming the canopy.

Paneled Door: A door with one or more recessed or raised portions.

Parapet: A low wall or protective railing often used around a balcony or along the edge of a roof.

Picket: A pointed stake arranged vertically to create a fence.

Pier: Vertical supporting members that frame an opening such as a window or door.

Pillar: Upright members used for supporting superstructures.

Pitch: The degree of the slope of a roof.

Planting Areas: Areas that feature natural landscaping materials, such as vegetation (Trees, bushes, etc.) stone, brick or wood.

Portland Cement: A strong, inflexible cement used to bind mortar.

Post: A vertical isolated upright used to support a superstructure.

Preservation: Saving from destruction and deterioration.

Prominent: Leading, important, or well-known.

Proportion: Harmonious relation of parts to one another or the whole.

Rail: Horizontal member of a door or window.

Reconstruction: New construction to accurately recreate a building or architectural element as it appeared at a specific period of time.

Rehabilitation: Returning a structure to a viable use while preserving its distinctive architectural and historic character.

Reinforcing: To strengthen or support.

Recycling: To treat or process (used or waste materials) so as to make suitable for reuse.

Remodeling: Changing a building without regard to its character defining features and historic character.

Renovate: Improve, repair, or remodel a building's condition.

Repointing: Raking out deteriorated mortar joints and then replacing the surface mortar to repair the joint.

Restoration: Returning a building to a particular period of time by removing later work and replacing missing earlier work.

Restore: To bring back to a previous or original condition.

Retain: To hold in use.

Rhythm: A patterned repetition or alteration of elements or motifs in the same or modified form.

ROW: Right of Way.

Scale: The size and mass of a building's form in relation to nearby buildings or its relation in size to humans.

Siding: The exterior wall covering or sheathing of a structure.

Significant: Having particularly important associations within the context of architecture, history and/or culture.

Storm water/Rain garden: A depression in the ground with naturalized plantings which treats stormwater runoff and allows the water to recharge the groundwater aquifer.

Streetscape: All the elements that occupy and contribute to the view along a street, including buildings, trees, signage, paving, furniture, etc.

Street Wall: The building façade wall that faces the street.

Street Yard: A yard extending across the full width of the lot, the depth of which shall be the minimum horizontal distance between the existing or proposed street or highway line and a line parallel thereto through the nearest point of the principal structure. Corner lots and double frontage lots have two (2) such yards.

Sustainability: The act of building and designing with the preservation of the environment and conservation of natural resources as the primary goal.

Texture: The visual or tactile qualities of a surface or landscape.

Thoroughfares: A main road or public highway.

Threshold: A wood, metal or stone strip under a door, used for weather protection.

Trim: The decorative finish around a door or window.

Understory: The shrubs and plants growing beneath the main canopy of a forest.

Utilized: To put to use, especially to find a profitable or practical use for.

Vernacular: A style of architecture exemplifying the commonest techniques, decorative features, and materials of a particular historical period, region, or group of people.

Visibility: The relative ability to be seen under given conditions of distance, light, atmosphere, etc.:

Wrought Iron: Iron that is rolled or hammered into shape.

Zoning: Designation that specifies the uses allowed in an area of the City.

TREE ANALYSIS & RECOMMENDATIONS

Street Trees;

The existing street trees add a unique character to Highland Station and reflect the slow process of the settlement. These tree plantings established over time and aged gracefully along with the town. Perhaps it is the large existing trees between buildings that give Highland its unique charm. The rhythm of the street trees is sporadic and oftentimes-large evergreen trees fill the gaps between missing canopy trees, which in turn takes on a character of its own.

The character and charm of this street relates more to the age of the trees rather than the planting patterns and geometrics. The truth is that older trees have a character unmatched by nursery stock.

An urban forestry program for tree maintenance and preservation may be the best approach in maintaining the uniqueness of Highland Station. Tree preservation standards would enable the Township to direct future development practices.

Observations:

Mature trees hover above the rooftops within Highland Station proper. However, most of the significant trees contributing to this scenario appear to be located on private residential properties. It may be more important to promote planting new trees for future succession on such properties. Too much emphasis is often placed on street tree plantings. They are important, but in this case may not be as critical. The street tree plantings will grow over time and eventually have character inherently due to age. The geometry and layout of these trees does not seem to have as much impact as the character that naturally comes with time.

Suggestions/ Recommendations:

Plant the street trees in natural groupings and clusters as found throughout Highland Station. Encourage homeowners to invest in planting climax tree species (provide list to select from) that will eventually replace existing trees that will eventually die. This could be done in conjunction with Arbor Day newsletters and/or during community events (200 saplings for \$50). Having a very detailed tree protection program and preservation oriented language in the Township Ordinance is recommended. A forestry program considering various development guidelines for tree protection, preservation, and replanting may also be a good long-term solution.

Canopy Tree Species Preferred But Not Limited To (Avoid Monoculture)

RED MAPLES

SUGAR MAPLES- Great Canopy Tree that is consistent with charm of Highland

OAKS

ELMS

BEECH

HICKORY

HORSECHESTNUT

Evergreens (For side and rear yards)

WHITE PINES- native & climax species that can tolerate poor soils and low light. May want to consider planting now as for transition when existing trees die. (Give to homeowners to be planted on their properties) Earth Day Specials!

HEMLOCK

Other Possibilities

Fruit Trees / Orchards

CHERRIES

APPLES

Ornamentals

EASTERN REDBUD

FLOWERING CRABAPPLES

SERVICEBERRY



BRINGING THE POWER
OF DESIGN TO
AFFORDABLE HOUSING



Affordable Green Guidelines

The following are guidelines designed to help you review Green Building practices for inclusion in your housing designs. Not all items are practical in all circumstances depending on climate and availability of systems or materials. Initial costs vary and often can be made up over time by energy cost savings. These are options the developer and design team should consider in the beginning of the design process.

For help with some of these terms, go to the [GREEN GLOSSARY](#)

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1. Community Context

- a. Encourage infill and avoid greenfield (undeveloped land) development by building within existing cities or within urban growth boundaries. Try to use one of the following:
 - i. Infill parcel—Surrounded on all sides by development
 - ii. Urban renewal areas—usually in redevelopment districts
 - iii. Mixed-use developments—mix of retail, offices, commercial, and housing
 - iv. Adaptive reuse—recycle existing buildings for new uses
 - v. Compact development—higher density than surroundings or attached housing
 - vi. **Brownfields**—sites that have been cleaned of hazardous contamination to make usable for construction
- b. Locate near public transportation if available or request that it be extended to or near your development
- c. Use existing grid system of streets
- d. Landscaping
 - i. Use plant species that thrive in local climate with minimal irrigation
 - ii. Use efficient irrigation systems such as drip, or a measured moisture level spray system that only goes off early morning
 - iii. Mitigate wind and sun with evergreen and deciduous trees
 - iv. Minimize heat island effect at paved areas, i.e., provide a 40 percent shade coverage at tree maturity or provide alternate paving such as light color or permeable or grass-covered pavement
 - v. Save existing mature trees on site

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2. Site Design

- a. Public Open Spaces
 - i. Where possible, provide usable areas where the community can meet and gather
 - ii. Provide safe play areas for children in multifamily developments
 - iii. Provide community garden areas
- b. Semi-Public Open Spaces
 - i. Use patios, front yards, porches, or balconies to encourage community

- interaction and provide eyes-on-the-street surveillance
- c. Provide for alternative transportation, e.g., bike paths and storage, pedestrian links, car shares
- d. Provide accessible routes of travel and avoid use of stairs, wherever the terrain permits
- e. Prioritize pedestrian over vehicular traffic and use traffic calming devices. Incorporate attractive well-lit pedestrian paths wherever possible
- f. Consider outdoor spaces for urban agriculture- community gardens, planters for food, herbs, flowers
- g. Consider Internet connectivity for telecommuting

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3. **Building Design**

- a. Provide a well-insulated building that minimizes heat gain and loss
- b. Specify energy-efficient windows
- c. Orient building for passive heat gain and cooling/natural ventilation. Provide shading devices, operable windows, shutters, and thermal mass to fine-tune these strategies
- d. Provide daylighting with windows and skylights. Minimize glazing on east and especially west exposures to reduce heat gain
- e. Build cool roofs which provide low heat absorption and high reflectivity roof assembly or green roofs (vegetated)
- f. Incorporate universal design principles, and child-friendly and senior-friendly design
- g. Meet or exceed your local requirements for accessible and special needs housing

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4. **Water Conservation and Management**

- a. Make sure water meters are installed and that there is owner/tenant accountability in water use
- b. Use water-saving strategies such as
 - i. Dual-flush toilets
 - ii. Looped domestic water system with recirculating pump for immediate hot water at the tap
- c. Recycle gray water (rain water collection or bath water recapture)
 - i. Use in landscaping
 - ii. Use in toilet flushing if local code allows
 - iii. If your locality uses tertiary treated wastewater for irrigation, request a hook up for large landscape areas

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- d. Storm water management
 - i. Follow best management practices, e.g., cleanse and slow peak flow using vegetated swales or sand filter retention and cleansing systems or similar strategies
 - ii. Minimize storm water discharge using permeable paving and retention systems
 - iii. Provide mitigation during construction to avoid siltation of surrounding streams or drainage systems during heavy rains

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5. **Energy Efficiency**

- a. Assure that electric and gas meters are installed and that there is accountability by owner or tenant for use
- b. Use properly sized and designed sealed combustion boilers or furnaces and distribution systems or other low-energy use heating
- c. Use tankless water heaters, indirect water heaters, sealed combustion water heaters, or solar hot water heaters
- d. Specify compact fluorescent fixtures and educate tenants about their energy savings. Provide collection for spent bulbs to be disposed of properly.
- e. Specify Energy Star appliances throughout
- f. Avoid or minimize air-conditioning with natural ventilation or other passive cooling strategy
- g. Consider renewable energy sources such as photovoltaics (or pre-wire to be added when feasible) using research grants and rebates

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6. Reduced and Sustainable Material Use

- a. Use fewer building materials through advanced framing techniques or other systems approach to building construction.
- b. Use recycled content such as:
 - i. High fly ash content concrete in foundations, flat work, wall systems, finish floors
 - ii. Cementitious siding, or stucco with high fly ash content
 - iii. Composite framing such as engineered joists instead of dimensional lumber
 - iv. Light-gauge steel in whole house or interior walls. Verify that thermal bridging is addressed if steel is used in exterior walls.
 - v. Rapidly renewable resource materials for flooring and finishes such as wheat straw board and bamboo
 - vi. Specify insulation made of renewable, easily recyclable material or recycled content such as recycled newspaper (cellulose), soy based foam, cotton fiber, or other
- c. Use locally available (within 500 miles) building materials such as:
 - i. Locally produced masonry or other earthen system
 - ii. Recycled lumber or locally milled timber or Forest Stewardship Council (FSC) certified lumber or other recycled materials
 - iii. Recycled aggregate from demolition of existing site work or structure or nearby source

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7. Recycling During and Post Occupancy

- a. Reduction and Management of Construction Waste
 - i. Reuse form-boards, mulch waste wood on-site
 - ii. Sort construction waste and recycle applicable materials
 - iii. If remodeling, salvage reusable materials
- b. Recycling of User Waste
 - i. Mulch yard waste on site or provide recycling bins for pickup by local recycling authority
 - ii. Provide recycling bins along with trash bins for residents

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8. Indoor Environmental Quality—Healthy Buildings

- a. Detail building envelope to shed water with adequate flashing and a continuous drainage plane (rain-screen). Design walls to be able to dry to the interior, exterior, or both as appropriate to the local climate.
- b. Provide operable windows with screens and take advantage of natural cross-ventilation when possible.
- c. Provide mechanical ventilation to remove excess moisture and indoor pollutants from living spaces and to provide an adequate amount of outside air
- d. Specify sealed combustion boilers, furnaces, and water heaters
- e. Use only low volatile organic compound (VOC) paints, sealants, and finishes
- f. Use paperless gypsum board or cement board at all damp areas and exterior walls to prevent mold due to water penetration
- g. Install flooring with low or no off-gassing such as concrete, ceramic tile, FSC certified wood flooring, or bamboo with low urea formaldehyde content in its binders. If wood or bamboo flooring needs to be finished on site, use low VOC water-based polyurethane finish.
- h. Minimize the use of carpeting, which can hold dirt, mold, and other allergens. When used, specify carpet with low VOCs and recyclable fiber and backing content. If available, install carpeting that can be recycled.
- i. Install carbon monoxide detectors in living areas as well as garages
- j. Perform fresh air flushing for a week before occupancy. Do not turn up heat as that can cause new compounds to be released into the air.
- k. Educate tenants or owners by providing user manuals on use of systems, their required maintenance such as changing of filters and batteries. Use filters that remove allergens in forced-air units.
- l. Protect onsite building materials from rain during construction to prevent mold growth
- m. Design wall and ceiling assemblies to mitigate impact sound and air-borne sound transmission between units

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9. **Quality Assurance/Commissioning: Third-Party Confirmation That All Systems are Functioning As Intended and Ongoing Maintenance**
 - a. Perform blower door tests for leaks in building envelope
 - b. Perform duct testing if ducts are used in heating and or cooling system
 - c. Calibrate thermostat, carbon monoxide detectors, and any other similar systems
 - d. Generally confirm that all systems are functioning as intended and in a coordinated fashion
 - e. Have a written maintenance program in place, as part of management, for proper maintenance and functioning of the building and systems respectively

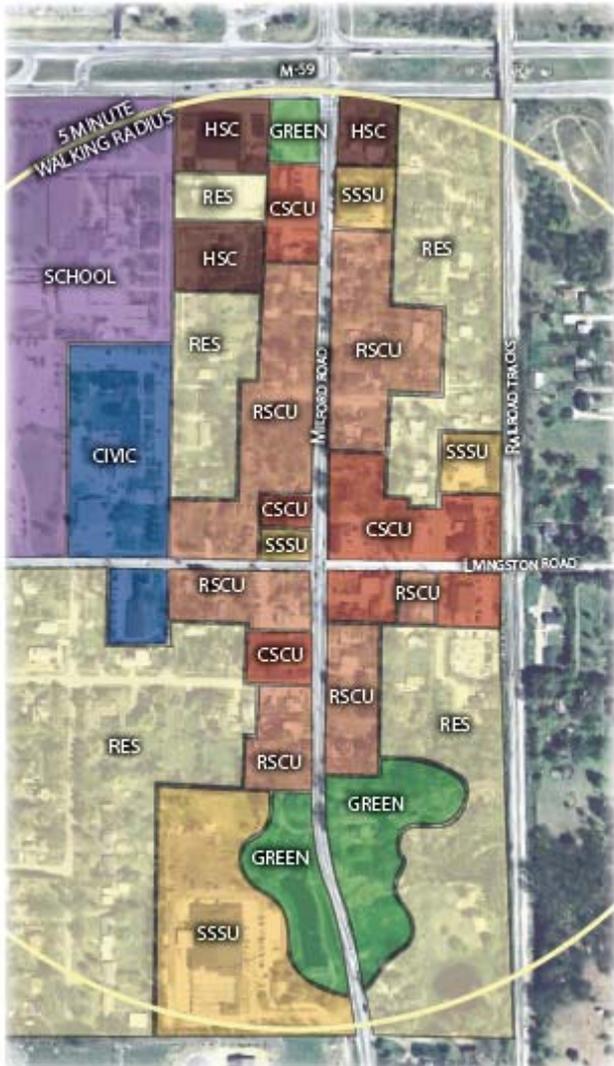
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10. **Innovative Design Strategies**
 - a. This section allows for any design innovation not covered above. It is most desirable if others can replicate this innovation.
 - b. In addition to building technology and design, innovations can include
 - i. Educational programs for visitors and occupants about green building technology
 - ii. Research that yields solutions to help provide green affordable housing.

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FRAMEWORK STYLE USE PLAN

The Framework Plan establishes patterns based on both use and style. This assures that activities are focused into certain areas in a beneficial way and styles remain stable so that the town's character is maintained.



The design team identified several distinct combinations of use and style:

- Commercial Style, Commercial Use (CSCU) includes retail and service-oriented businesses located in buildings that have a recognizably commercial form.
 - Residential (RSCU) allows existing homes to be renovated for the use of mostly service-oriented businesses and new buildings that resemble homes to be built for retail and office businesses.
 - Civic includes township buildings, police facilities, the fire station, and so on.
 - Special Style, Special Use (SSSU) is a bit of catch-all but is meant to accommodate the kinds of unique circumstances that are part of Highland Station's casual atmosphere.
 - Highland Station Commercial (HSC) refers to commercial uses oriented towards M-59 or where larger sites suggest greater parking intensity. While they will have a style distinct from that within Highland Station, they should still refer to the town's spirit and differentiate themselves from other developments along the highway.
- Residential (RES) refers to single- and multi-family homes.