



Versa | real estate

INNOVATION INTERCHANGE

PUD DESIGN GUIDELINES

GENOA TOWNSHIP, MICHIGAN

UPDATED SEPTEMBER 14, 2020

OVERVIEW

Generally, the design of the Innovation Interchange Planned Unit Development will follow the standards described in the Genoa Township Zoning Ordinance and the applicable specifications of other agencies involved in the approval process. These guidelines are considered as a supplement to those standards. Generally, the more restrictive standard between the Zoning Ordinance and these guidelines will apply. These guidelines may be modified as the specific types of uses and site plans are developed for each development or PUD phase.

Some of the standards herein are more restrictive than is typically required by the zoning ordinance, such as certain landscape and lighting specifications. In other cases, the dimensional standards in the guidelines are more generous than the ordinance would otherwise allow, as permitted by the “Flexibility in Design” provisions in Section 10.01.03 of the Genoa Township’s PUD Article, in the Zoning Ordinance.

A general comparison of existing zoning ordinance standards to the PUD is shown on the table on the next page. In addition, the architectural standards herein vary somewhat from the Township's standards, specifically to allow other durable materials besides brick. Standards for external building materials are based on high quality designs similar to those illustrated in these guidelines.



GENOA TOWNSHIP, MI

DESIGN GUIDELINES
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PROJECT TEAM:



INTENT

These guidelines are intended to illustrate the design quality anticipated with the commercial and light industrial portions of the PUD. The "Owner" of the PUD or subsequent purchaser of land will be responsible for providing these guidelines to design professionals who will be involved in the preparation of site plans. Specific compliance will be described in more detail with a site plan that will be submitted to the Township for approval.

In general these guidelines include the following components:

1. A description of architecture supplemented with photographs from similar developments to illustrate the general outcomes expected consistent with the standards to support a deviation from the Township's standards that would otherwise apply.
2. Specific parking requirements associated with the intended uses along with a provision to permit a reduction for shared parking when uses have different peak parking occupancy hours.
3. Efforts to share access to reduce the number of driveways and provide good traffic operations along Latson Road.
4. Provision of additional height for modern-style light industrial and R+D buildings, and a hotel, up to 4 stories or 5 stories as a Special Land Use (in conjunction with setbacks from existing single family homes as illustrated on an exhibit).
5. Some flexibility in the building setbacks.
6. An overall open space concept plan with representative amenities.
7. A greenbelt along Latson Road that exceeds Genoa Township requirements and plant sizes that are larger than required at installation.
8. A reduction in street trees along the internal industrial streets, but provisions for a variety of street tree species.
9. Additional lighting standards to reduce lighting impacts on adjacent homes to the west.
10. Provision for three project entry signs, one at each entrance. These signs may include name plates for major buildings or businesses in the PUD.
11. Allowance for a project identification sign visible to traffic along I-96. The height and design shall be negotiated with Genoa Township.

The following table provides a comparison summary between the zoning requirements of the Genoa Township Zoning Ordinance and the proposed Versa PUD standards. The standards listed here provide a snapshot of where there are differences between the Township's standards and the PUD standards, including for setbacks, height, and landscaping requirements.

ZONING COMPARISON TABLE		
Existing Zoning Requirements		PUD Standards:
Commercial	Setbacks	
	Regional Commercial Side Yard: 20 feet	Side Yard: 20 feet for each side plus an additional 0.5 feet per foot of height over 45 feet tall
	Maximum Height	
	Regional Commercial: 45 feet or 3 stories	All other uses in commercial: 45 feet, 3 stories Hotel: 57 feet or 4 stories, whichever is less*
Industrial	Existing Zoning Requirements	
	PUD Standards:	
	Setbacks	
	Front Yard: 85 feet if parking is located in the front yard; 50 feet if no parking is located in the front yard	Front Yard: 85 feet (50 feet if no parking is located in the front yard and/or building height is 30 feet or less)
	Side Yard: 25 feet (or 50 feet if adjacent to residential)	Side Yard: 25 feet (or 50 feet if adjacent to residential) & 25 plus an additional 0.5 feet per foot of height over 30 feet (if not adjacent to residential)
	Maximum Height	
	30 feet or 2 stories	All other uses in industrial: 55 feet or 3 stories, whichever is less Hotel: 57 feet or 4 stories, whichever is less*
Landscaping	Existing Zoning Requirements	
	PUD Standards:	
	Frontage- Greenbelt along Latson Road	
	Minimum Width of Greenbelt: 20 feet with one canopy tree planted every 40 feet of frontage	Minimum width of Greenbelt: 30 feet with one canopy tree planted for every 40 feet of frontage
	Frontage - Tree Sizes	
	Minimum Required Plant Sizes: Deciduous Canopy Tree: 2.5" caliper Deciduous Ornamental Tree: 2" caliper Evergreen Tree: 6' height Deciduous Shrub: 2' height Upright Evergreen Shrub: 2' height Spreading Evergreen Shrub: 18" - 24" spread	Minimum Required Plant Sizes (along Latson Road only): Deciduous Tree: 3-4 inch caliper (with minimum average size of 3.5 inches) Ornamental Tree: 2.5 - 3.5 inch caliper Evergreen Tree: 10 - 14 feet tall (with minimum average size of 12 feet tall) Shrubs and Hedges: 30-36 inches tall Canopy Tree: 2.5 inch caliper Deciduous Ornamental Tree: 2 inch caliper Evergreen Tree: 6 feet height Deciduous Shrub: 2 feet height Upright Evergreen Shrub: 2 feet height Spreading Evergreen Shrub: 18 inch - 24 inch spread
Other	Existing Zoning Requirements	
		PUD Standards: See Design Guidelines for additional standards related to: Parking Lighting Architecture Signs (currently no off-premise signs are permitted, this PUD proposes some with specific guidelines)

*The Hotel may be increased to 65 feet or 5 stories, provided minimal distance from adjacent residential home is 500 feet and the Township determines the design is compatible with residential in the area in terms of views and lighting

HIGH TECH/LIGHT INDUSTRIAL DESIGN GUIDELINES

The primary purpose of the building design standards is to promote and enforce high-quality architectural design for building sides visible from Latson Road to enhance the Township’s entryway from the I-96 interchange. The design and materials on building sides visible from the interior roads are not required to meet the more stringent standards but should still utilize some of these elements to promote an attractive appearance. Building along the "north edge" shall also meet the guidelines described on page 10.

A. Facade Plane and Material Delineation

- **Horizontal delineation.** Long lengths of building facade wall planes shall be broken up using different materials and offset of planes, to serve as a visual breakup of long exterior walls. The following criteria shall be applied to the horizontal plane of walls with a minimum building length of 100 feet:
 - » Buildings with frontages 100 feet to 500 feet in length
 - Require a major material change at a rate of 1.5 times the height of the building.
 - Require a shift in wall façade a minimum of 2 feet in dimension every 40 feet.
 - » Buildings with frontages over 500 feet in length
 - Require a major material change at a rate of 1.75 times the height of the building.
 - Require a shift in wall façade a minimum of 2 feet in dimension every 40 feet and a shift in wall façade a minimum of 4 feet in dimension every 80 feet.
 - If side and/or rear building walls face primary roadways, the same regulations as the guidelines apply to the secondary facades. If the building’s side and/or rear walls face internal lots, rates for planar variation can double guidelines.
- **Vertical delineation.** To create visual interest and encourage an active street frontage, interruption in the vertical plane should be prevalent on tall buildings. Primary entrances and exits should be highlighted through planar variation and/or difference in height.
 - » Buildings up to 30 feet in height
 - Require a change in material color or texture in a minimum of 3 locations. Height of change is required to be a minimum of 5 feet.
 - Require a shift in wall façade or provide a visual break in wall façade at a minimum of two locations.
 - » Buildings over 30 feet in height
 - Require a change in material color or texture in a minimum of 5 locations. Height of change is required to be a minimum of 10 feet.

- Require a shift in wall façade or provide a visual break in wall façade (through canopies or accent bands/recesses) at a minimum of four locations.
- **Corner Articulation.** To ensure that building corners that face or can be viewed from public or private roads shall be distinctive in the use of architectural elements, materials, and design.
 - » The continuation of architectural elements that are required for horizontal and vertical material delineation shall also wrap the corners of the building extending at least 50 feet around the corner of the building.
 - » Corner articulation may be provided in the form of glass or other types transparent materials.

EXTERIOR BUILDING MATERIALS

- Exterior façade materials shall consist of high quality, durable products on any side visible from a public or private roads. Materials are not limited to the brick requirements that typically applies in the Township. Appropriate building materials includes combinations of: brick, flush metal/aluminum panels, concrete block, and pre-cast concrete.
- Varying patterns and textures shall be introduced to give the building smaller scale relationships of materials vs. monotonous and large surfaces without visual variations.
- Glass shall be used on primary facades to provide transparency.

SIGHTLINE REQUIREMENTS AND DOCK DOORS

- All mechanical installations and/or features shall be adequately screened from street view or view from nearby public space. The choice of screening shall complement or enhance the building’s dominant color and overall character.
- Dock doors must be located in the side or rear yard and have appropriate buffers to minimize impacts from abutting residential and commercial uses. In order to limit uses with higher truck volumes, up to one truck dock door per 4,000 square feet is permitted for building footprints that are up to 100,000 square feet. One truck dock door per 8,000 square feet of building footprint is permitted over 100,000 square foot. These standards may be relaxed for sites within the interior for walls not visible from a public street or I-96. Dock doors shall be set back at least 50 feet from the lot line (or 75 feet from the lot line if adjacent to residential). Buffer Zone Type A is required for any dock doors located adjacent to residential, and Buffer Zone Type B is required for any dock doors located adjacent to commercial.
- Accessory uses that include outdoor storage (including for trucks and trailers and loading areas) shall indicate the location of such areas

on the site plan. These areas shall not be located in the front yard and shall be no larger than 40% of the total square footage of the building on site. Sites shall also not have outdoor storage visible from I-96. Outdoor storage must have appropriate buffering between adjacent residential and commercial areas; Buffer Zone Type A is required for any outdoor storage area located adjacent to residential, and Buffer Zone Type B is required for any outdoor storage area located adjacent to commercial.

INDUSTRIAL DESIGN GUIDELINES

Examples of building that meet the Industrial Building Design Standards are shown on pages 5 and 6.

INDUSTRIAL DESIGN DIMENSIONAL STANDARDS	
Minimum setbacks:	
Front Yard	85 feet (or 50 feet if no parking is located in the front yard and/or building height is 30 feet or less) ¹
Side Yard	25 feet (or 50 feet if adjacent to residential) 25 feet plus an additional 0.5 feet per foot of height over 30 feet (if not adjacent to residential) ²
Rear Yard	40 feet (or 80 feet if adjacent to residential)
Parking Lot	20 feet front, 10 feet side and rear
Maximum Height	55 feet or 3 stories, whichever is less ³
Maximum Height of Hotel	57 feet or 4 stories ⁴

1 Proposed addition to front yard setback with lesser building height.
2 Proposed standard to provide for a greater side yard set back for taller buildings.
3 Existing maximum height in the Zoning Ordinance is 30 feet or 2 stories
4 As a Special Land Use, the Hotel may be increased to 65 feet or 5 stories, provided minimal distance from adjacent residential home is 500 feet and the Township determines the design is compatible with residential in the area in terms of views and lighting.

MINIMUM PARKING REQUIREMENTS	
Light Industrial	1.5 spaces per 1,500 square feet of gross floor area or 1.2 spaces per employee at peak shift, whichever is greater; plus 1 for each corporate vehicle, with the ability to reduce the amount of parking required to “bank” an area for future parking, as permitted in the Township’s Zoning Ordinance.

INDUSTRIAL BUSINESS PARK OUTDOOR LIGHTING STANDARDS

The purpose and intent of the Outdoor Lighting standards is to:

- Minimize light trespass onto adjacent properties
- Help eliminate artificial lighting that contributes to “sky glow “and disrupts the natural quality of the nighttime sky
- Provide a safe nighttime environment

Any future site plan within the PUD shall be required to submit an outdoor lighting plan to abide by the standards set forth in this section. The site plan shall contain a photometric layout for the exterior lighting which may subsequently waived if there is no parking area present on the site. These standards generally apply throughout the PUD, but flexibility may be allowed when the development is not adjacent to residential areas, and for the commercial area.

The following outdoor lighting types shall be exempt from the provisions of this section:

- Emergency lighting
- Temporary lighting for performance areas, construction sites and community festivals.
- Seasonal and holiday lighting provided that the lighting does not create direct glare onto other properties or upon the public rights-of-way.

The following outdoor lighting types shall be prohibited:

- Floodlights or swivel luminaires designed to light a scene or object to a level greater than its surroundings unless aimed downward. No fixtures may be positioned at an angle to permit light to be emitted horizontally or above the horizontal plane.
- Unshielded lights that are more intense than 2,250 lumens or a 150 watt incandescent bulb.
- Search lights and any other device designed solely to light the night sky except those used by law enforcement authorities and civil authorities.
- Laser source light or any similar high intensity light when projected above the horizontal plane.
- Mercury vapor lights.
- Metal halide lights, unless used for outdoor sport facilities.
- Quartz lights.

Outdoor Lighting Design Standards – Internal to the Site:

- Direct or reflected outdoor lighting shall be designed and located to be confined to the site for which it is accessory. The maximum lighting levels at the property lines of any other property shall not exceed 0.2 footcandles.
- Lighting of building facades shall be from the top and directed downward with full cut-off shielding.
- The average lighting values for areas intended to be lit on commercial and industrial parcels shall not exceed 1.0 footcandles on average. The uniformity ratio (maximum to minimum) for all parking lots shall not exceed the current IESNA RP-20 uniformity ratio guideline. (Note: Current guideline is 15:1)
- Lighting fixtures for industrial properties shall meet the township maximum height of 30 feet and 10 footcandles with the following exceptions:
 1. The Township may permit maximum light levels of 12 footcandles on average (common with new LED lighting systems), designed to have no spillover onto adjacent properties and a maximum pole height of 35 feet to reduce the umber of poles upon a finding that the result will provide more efficient lighting and aesthetics throughout the day.
 2. Provided that when lighting is adjacent to, and visible from, abutting residential properties, the maximum height of lighting poles shall be 20 feet unless the Township approves taller poles with a demonstration that it is an overall better lighting design in terms of aesthetics.
 3. Site lighting for non-residential uses shall not exceed 1.0 footcandles on average when a use is not open for business.

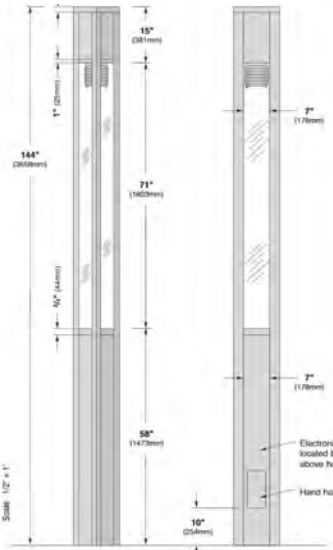
Outdoor Lighting Design Standards – Public Street Lighting:

- Streetlights in the public rights-of-way shall be the minimum necessary to provide adequate illumination for public safety and be designed to direct lighting downward onto the public rights-of-way.
- Luminaires installed up to the edge of any bordering property are permitted.
- Ornamental lighting will be installed as part of the northern entry features will be included (see bottom right for representative types of light fixtures). The fixtures will be selected during the design of the entry feature. The lighting could potentially also be installed along the Latson Road frontage along the right-of-way in the future as part of a corridor wide urban design project (see language in the PUD Agreement).
- Public street illumination shall use the most current American National Standard Practice for Roadway Lighting ANSI/IESNA RP-08 for all public street lighting.

HIGH TECH/LIGHT INDUSTRIAL OUTDOOR LIGHTING STANDARDS



12 ft “Triangular Column” by Selux



Recommended ornamental pedestrian-scale lighting for northern entry on Latson Rd.



Mando, Novi



BLM Group, Novi

HIGH TECH/LIGHT INDUSTRIAL
 REPRESENTATIVE PHOTOGRAPHS THAT MEET INDUSTRIAL BUILDING DESIGN STANDARDS



Rapid Packaging, Grand Rapids



EPIC Equipment and Engineering, Shelby Parkway Corporate Park



AEV, Lyon Township



Kawasaki Robotics, Lyon Township



Martinrea International, Auburn Hills
**Image from Faudie Architecture*



Harman International, Novi

HIGH TECH/LIGHT INDUSTRIAL
 REPRESENTATIVE PHOTOGRAPHS THAT MEET INDUSTRIAL BUILDING DESIGN STANDARDS



SW Technology People



Visioneering, Auburn Hills



TI Automotive Headquarters, Auburn Hills



Magna

COMMERCIAL DESIGN GUIDELINES

A. Setbacks

- Design for development needs to ensure that building placement is generally oriented towards the street to encourage walkability and a pedestrian-friendly environment.

B. Parking and Access

- Development within such areas should occur within a planned, integrated commercial setting. Site design for parking areas and access points will promote safe and efficient circulation throughout the site.
- The access shall be aligned with the access drive for the industrial business park on the west side. The location shown may be shifted south to increase spacing from the rail crossing, at the site plan review phase with input from the Livingston County Road Commission.

- The amount of parking required for individual uses may be reduced to be efficient so that the peak parking demand is accommodated.
- Parking lots should be connected to promote shared parking and reduce the overall amount of impervious surface area.

C. Pedestrian Amenities

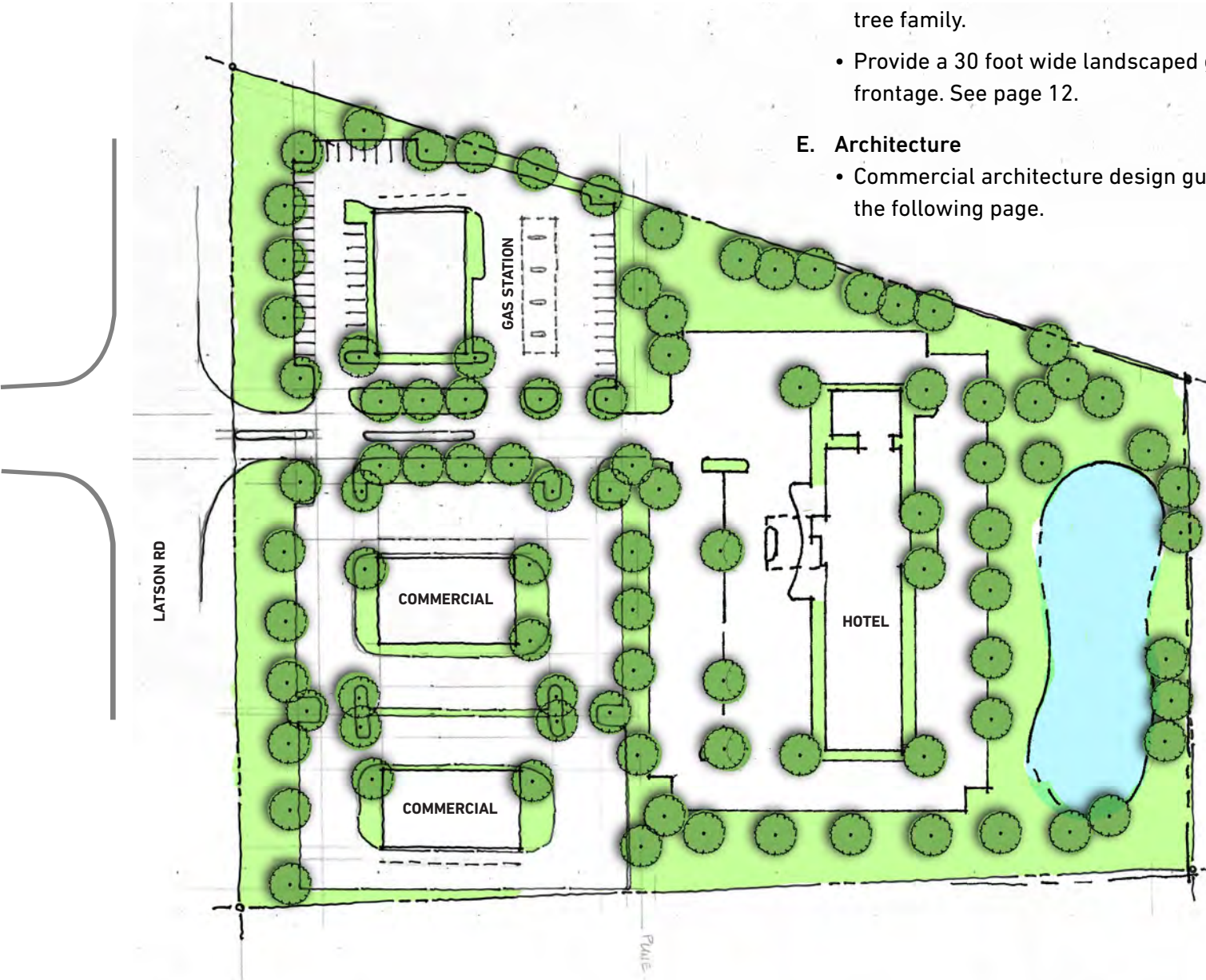
- Uses shall be connected with an interior sidewalk system so that pedestrians can walk between the uses, and to the crossing at the intersection with Latson Road.

D. Landscaping

- Plant consistent and plentiful native vegetation to provide an attractive entry into the southern part of Genoa Township and provide generous interior landscape that serves as a buffer between the buildings and parking lots as well as adjacent land uses.
- Street trees planted shall consist of no more than 10% of a single species, no more than 20% of any genus, and no more than 30% of any tree family.
- Provide a 30 foot wide landscaped greenbelt along the Latson Road frontage. See page 12.

E. Architecture

- Commercial architecture design guidelines are described in detail on the following page.



Commercial concept illustrates a potential layout and access configuration.

COMMERCIAL DESIGN GUIDELINES

COMMERCIAL DIMENSIONAL STANDARDS	
<i>Minimum setbacks:</i>	
Front Yard	70 feet (or 35 feet if no parking is located in the front yard)
Side Yard	20 feet for each side plus an additional 0.5 feet per foot of height over 45 feet tall ¹
Rear Yard	50 feet
Parking Lot	20 feet front, 10 feet side and rear
Maximum Height	45 feet or 3 stories
Maximum Height of Hotel	57 feet or 4 stories ²

1 Proposed new standard to provide greater side setbacks for taller buildings.
2 As a Special Land Use, the Hotel may be increased to 65 feet or 5 stories, provided minimal distance from adjacent residential home is 500 feet and the Township determines the design is compatible with residential in the area in terms of views and lighting.

MINIMUM PARKING REQUIREMENTS	
Retail Stores	1 space per 250 square feet
Gas Station	2 spaces per service bay, plus 2 spaces per employee, plus 1 space per tow truck, plus 1 space per 500 square feet designated for sale items
Hotel	1 space per guest room, plus 1 space per 100 square feet of lounge, restaurants, conference or banquet rooms

*Cumulative parking may be shared to reduce overall parking provided

COMMERCIAL ARCHITECTURAL DESIGN GUIDELINES

The following guidelines apply to all commercial types within the Innovation Exchange PUD to promote and enforce high-quality architectural design for building sides, including gas stations (see precedent photo), visible from a road or parking lot. Retail uses are anticipated to be predominantly 1 to 2 story flat roofed buildings.

A. General Design Theme.

- These architectural requirements are generally intended to provide consistent architectural quality among buildings and other improvements within the Latson Road corridor and Innovation Exchange.
- These guidelines are intended to generate architectural cohesion, however some architectural variation is allowed that is consistent with the overall design theme.
- All structures shall be thoughtfully designed in a manner that visually and functionally complements the existing context.

B. Building Elevations.

- If more than one story, a different architectural treatment may be employed on the ground floor facade than on the upper floors to enhance the experience of visitors/patrons.
- All building facades shall have a defined base or foundation, a middle or modulated wall, and a top formed by a pitched roof or three-dimensional cornice.
- Excluding windows, doorways, and associated decorative trim, 75% of the total area (square feet) of the front facade of commercial buildings, excluding hotels, shall be brick. This also includes facades visible from Latson Road and the site parking lots.
- Excluding windows, doorways, and associated decorative trim, 50% of the total area (square feet) of the side facades of commercial buildings, excluding hotels, shall be brick. This also includes facades visible from Latson Road and the site parking lots.
- Hotel building materials will be similar to the existing hotel in Genoa Township on the north side of the Latson Road interchange as well as other newer hotels along I-96 (see example precedent photo).
- The following items are prohibited: Texture 1-11, aluminum siding or asbestos or asphalt shingles shall not be used on the exterior walls.
- Building facades, which are ninety (90) feet or greater in length, shall be designed with offsets (projecting or recessed) at intervals of not greater than sixty (60) feet.
- Offsets may be met with setbacks of the Building Facade and/or with architectural elements (i.e. arcades, columns, piers, and pilasters), if such architectural elements meet the minimum offset requirements of this requirement.

C. Roofs.

1. Pitched Roofs:
 - Shall be simply and symmetrically pitched and only in the configuration of gables and hips, with pitches ranging from 4:12 to 14:12.
 - If standing seam panels are used then they shall be: 1) gray, black, dark blue, dark green, barn red or dark brown; and 2) made of a non-reflective material.
 - Modulation of the roofs and/or roof lines shall be required in order to eliminate the appearance of box-shaped buildings.
2. Flat Roofs
 - Flat roofs are permitted if edged by a parapet wall on the front and side facades with an articulated, three dimensional cornice.
 - Parapet walls shall be fully integrated into the architectural design of the building to create seamless design transitions between the main building mass and roof-mounted architectural elements (which may include screening elements for roof-mounted equipment).

D. Lighting and Signs

1. Site Lighting
 - Site lighting, within the commercial area, shall be LED based, consistent in style, color, and design and in accordance with the Township Zoning Ordinance standards.
 - All site lighting fixtures shall have a maximum height of twenty (20) feet. The maximum light levels on these properties shall not exceed 10 footcandles on average (common with new LED lighting systems), except the fueling area for a gas station is allowed an average of 12.4 foot candles. Lighting will otherwise be in accordance with the Township Zoning Ordinance lighting standards.
 - With the exception of low intensity architectural lighting, exterior wall mounted lights and pole mounted lights shall incorporate overhead cutoffs or fixtures that direct the light downward.
2. Retail signs and other signs shall conform with the Township Ordinances.



Building Design Precedents demonstrating the design guidelines.

COMMERCIAL DESIGN GUIDELINES
BUILDING DESIGN PRECEDENTS



Example of a gas station adhering to greater design standards.



Newer hotels along the I-96 corridor that demonstrate higher quality building design.

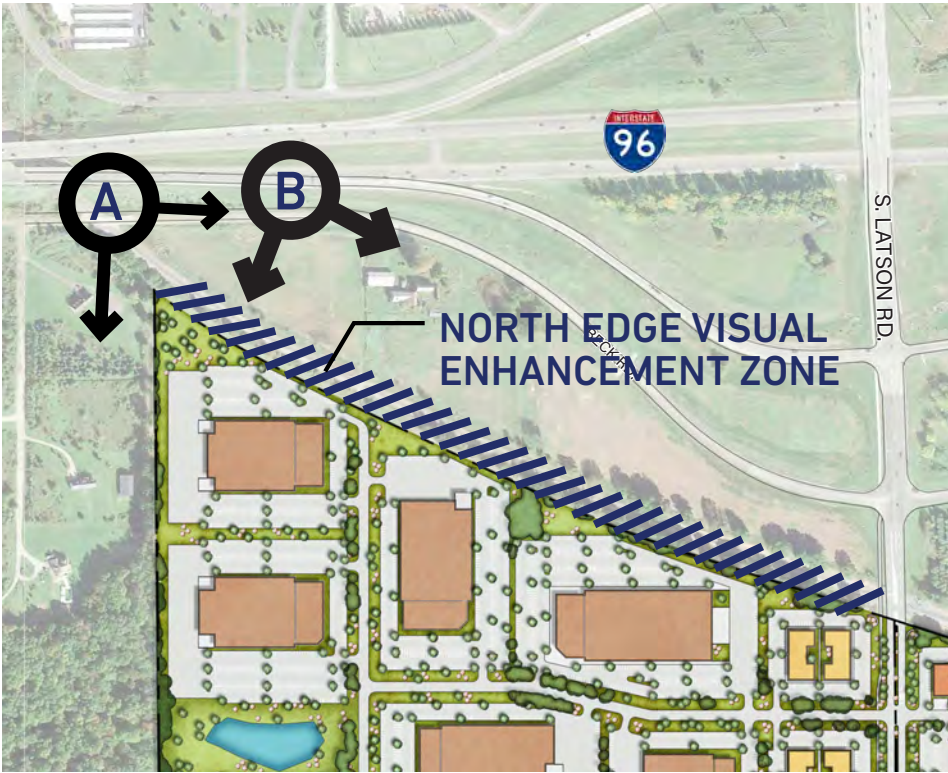


NORTH EDGE VISUAL ENHANCEMENT ZONE DESIGN GUIDELINES

The following guidelines apply to the North edge. The intent is to provide "front door" type views for building facades and areas that can be seen from traffic along I-96 or Beck Road. The area where this additional design requirement may apply is illustrated on the sight line study (right). As site plans are submitted, the Township will consider the size of the building, its height, setbacks, presence of loading docks, parking, and other activities. Those factors will be used to determine the extent that the following may be necessary to meet the intent:

EXTERIOR BUILDING MATERIALS AND LAYOUT

- Exterior building walls visible from I-96 or Beck Road shall be similar to building materials used on the front facade, and/or additional landscape will be provided to screen views, or fill in gaps in views.
- Dock doors shall be located on the building walls that are not directly visible or shall be screened with landscaping along the site boundary.
- Buffers and landscaping may be reduced or modified in consideration of the distance from the interchange or if woodlands are preserved to achieve the intent of these guidelines.



SIGHT LINE STUDY



EXISTING CONDITIONS



SIMULATED VIEW



EXISTING CONDITIONS



SIMULATED VIEW

ACCESS

Two access points are proposed along Latson Road. The northern access will align with the accessory commercial on the east side. It is anticipated that this access will be signaled as recommended in the traffic impact study. This location may be shifted slightly south during the final design phase, to increase spaing from the railroad crossing, pending a review by the Livingston County Road Commission when construction is proposed. Provisions for improvements are described in the PUD Agreement.

The southern access is shown as offset with the current Sweet Road on the east side of Latson Road (see sketch). This alignment may be modified to more closely align with Sweet Road, if approved by the Township and the Livingston County Road Commission (see overall concept). There is also a possible future road connection shown to the vacant property to the south.

TRAFFIC SIGNALS

- Two traffic signals are proposed, one at both the north and south entrances with appropriate improvements. These may initially be installed with flashing phases until the traffic counts meet the level for activation required by the Road Commission.
- It is anticipated that mast arm signals would complement the Latson Road entrance features.

LATSON ROAD FRONTAGE STREETSCAPE GUIDELINES

- Generally a 30-foot landscaped greenbelt (see illustrations labeled "Option 1" and "Option 2") shall be installed along the east and west sides of Latson Road.
- Larger trees than the minimum sizes typically required:
 - » Deciduous Tree: 3-4 inch caliper (with minimum average size of 3.5 inches)
 - » Ornamental Tree: 2.5 - 3.5 inch caliper
 - » Evergreen Tree: 10 - 14 feet tall (with minimum average size of 12 feet tall)
 - » Shrubs and Hedges: 30-36 inches tall
 - » Canopy Tree: 3 inch caliper
 - » Deciduous Ornamental Tree: 2 inch caliper
 - » Evergreen Tree: 6 foot height
 - » Deciduous Shrub: 2 foot height
 - » Upright Evergreen Shrub: 2 foot height
 - » Spreading Evergreen Shrub: 18" - 24" spread

REQUIRED GREENBELT ALONG STREET FRONTAGE

For all other public roads outside of Latson Road, a twenty (20) foot wide greenbelt shall be planted along each public street right-of-way including the equivalent of one (1) canopy tree, rounded upward, for every fifty (50) linear feet of frontage. The Planning Commission may approve clustering of trees or substitution of evergreen trees for up to fifty percent (50%) of the required trees. All greenbelt trees shall be arranged to simulate a natural setting such as staggered rows or massings.

Sweet Road offset alignment concept



LATSON ROAD STREETSCAPE AND LANDSCAPE GUIDELINES

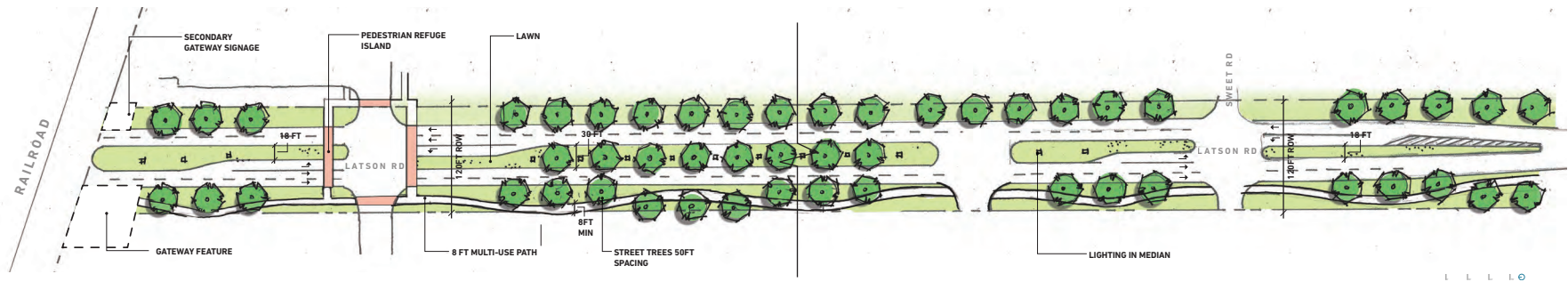
OVERALL MINIMUM STREETSCAPE SIZES

- Outside of the Latson Road Greenbelt, the minimum required plant sizes shall be as follows:
 - Deciduous Canopy Tree: 2.5" caliper
 - Deciduous Ornamental Tree: 2" caliper
 - Evergreen Tree: 6' height
 - Deciduous Shrub: 2' height
 - Upright Evergreen Shrub: 2' height
 - Spreading Evergreen Shrub: 18" - 24" spread

LATSON ROAD LANDSCAPING AND IMPROVEMENTS

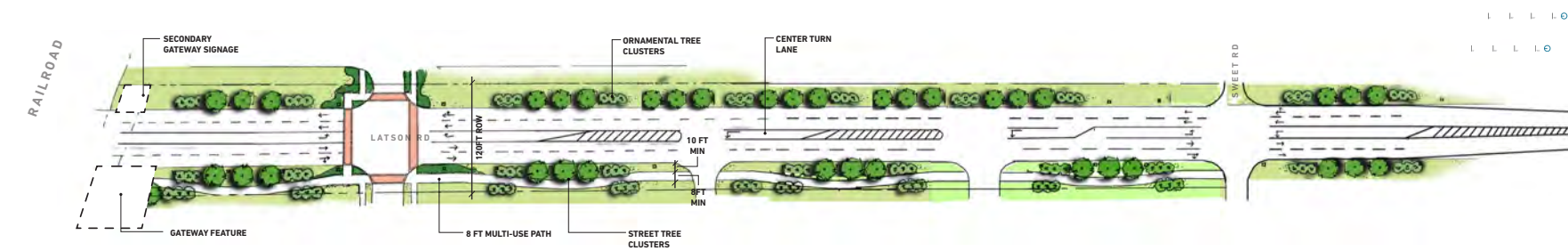
Two options for landscape design along Latson Road are shown below. The level of road improvements anticipated is described in the separate Traffic Impact Study. Versa only controls part of the Latson Road frontage shown, therefore, coordination will be needed between the County, Township, and other property owners. Right-of-way to accommodate future improvements to Latson Road is provided. See details in the PUD Agreement.

OPTION 1



This option shows a potential median along Latson road, which would need to be endorsed by the Livingston County Road Commission. This PUD reserves sufficient right-of-way to accommodate this alternative along the frontage owned by Versa.

OPTION 2



Option 2 shifts much of the median landscaping, illustrated in Option 1, to the greenbelt along each side of Latson Road.

PARKING LOT LANDSCAPING

- **Required Parking Area Landscaping** shall be in accordance with Section 12.02.04 Required Parking Area Landscaping of the Genoa Township Zoning Ordinance.
- Off-street parking areas containing ten (10) or more parking spaces shall be provided with landscaping in accordance with the following table. A minimum of one-third (1/3) of the trees shall be placed on the interior parking area and the remaining may be placed surrounding the parking lot within 18 feet.

MINIMUM TREES IN THE PARKING AREA	
10 - 100 spaces:	1 Canopy tree and 100 sq. ft. of landscaped area per 10 spaces.
101 - 200 spaces:	1 Canopy tree and 100 sq. ft. of landscaped area per 12 spaces.
201 spaces or more:	1 Canopy tree and 100 sq. ft of landscaped area per 15 spaces.

BUFFER ZONE LANDSCAPING

- Buffer Yard Standards shall be in accordance with Tables 12.02.03 A and B “Buffer Zone Requirements” and “Description of Required Buffer Zones” as required by the Genoa Township Zoning Ordinance.
- Buffers and landscaping may be reduced or waived if woodlands are preserved to achieve the intent.

Commercial Buffer Yard Requirements:

- For commercial uses adjacent to residential uses:
 - Minimum width: 20 feet
 - 6 foot high continuous wall or 3 foot high berm
 - 1 canopy tree, 1 evergreen tree and 4 shrubs per each thirty (30) linear feet along the property line, rounded upward
- For commercial uses adjacent to other commercial uses:
 - Minimum width: 10 feet
 - 1 canopy or evergreen tree or 4 shrubs per each twenty (20) linear feet along the property line, rounded upward

Buffering Between Industrial and Residential or Commercial Uses.

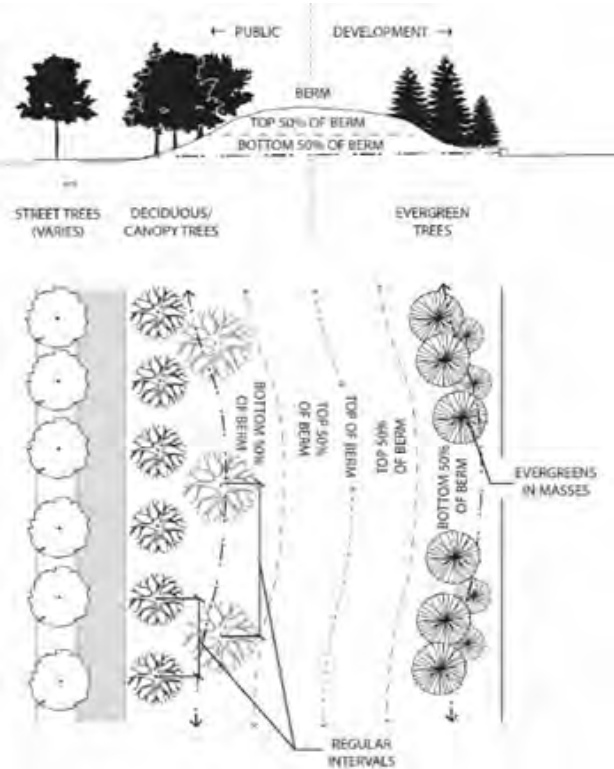
- For industrial uses adjacent to residential uses:
 - Minimum width: 50 feet
 - 6 foot high continuous wall or 4 foot high berm
 - 1 canopy tree, 2 evergreen trees and 4 shrubs per each twenty (20) linear feet along the property line, rounded upward
- For industrial uses adjacent to commercial uses:
 - Minimum width: 20 feet
 - 6 foot high continuous wall or 3 foot high berm
 - 1 canopy tree, 1 evergreen tree and 4 shrubs per each thirty (30) linear feet along the property line, rounded upward

Notes:

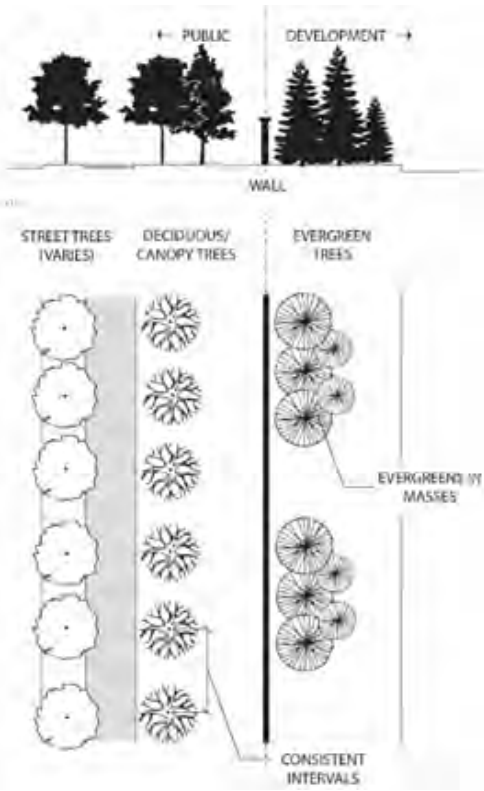
- Existing quality trees (hickory, oak, maple) with a caliper of at least eight (8) inches shall count as two (2) trees toward the buffer requirements.
- Canopy trees shall have a minimum caliper of 2.5 inches at the time of planting.
- Evergreens shall have a minimum height of six (6) feet at the time of planting.
- At least 50% of the shrubs shall be 24 inches tall at planting, with the remainder over 18 inches.

BUFFER ZONE REQUIREMENTS			
Adjacent District for Use			
Proposed Use	SF	MF or MHP	Commercial
Commercial/Office	C	C	C
Industrial	A/B	A/B	B/C

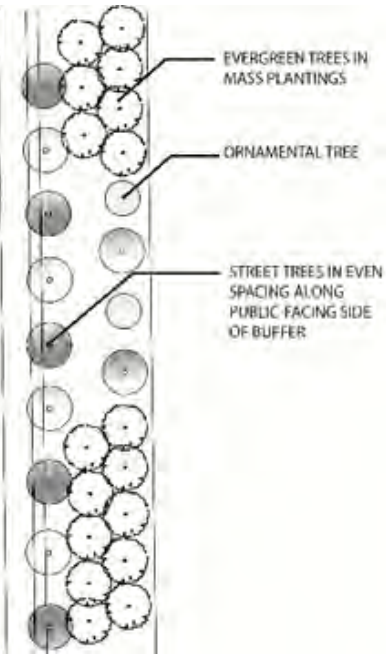
DESIGN GUIDELINES
BUFFER ZONES



TYPE A: BUFFER ZONE WITH BERM



TYPE B: BUFFER ZONE WITH WALL

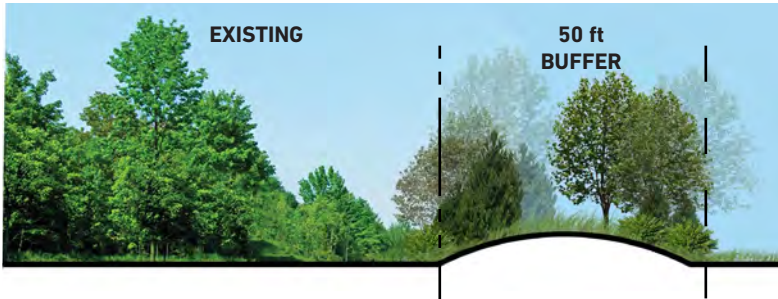


TYPE C: BUFFER ZONE BETWEEN STREET AND BUILDING

OPEN SPACE CONCEPT AND REPRESENTATIVE AMENITIES

This concept illustrates a potential layout that would be consistent with the PUD Agreement and Design Guidelines for the roads, development areas, wetlands, detention, open space, pedestrian system, entrance features and other amenities. The actual layout will vary based on more detailed site engineering evaluation, building/lot sizes, specific nature and needs of the business end users' proposed space and other building requirements, and other factors. More specific plans for the overall development, consistent with the intent will be submitted with future site plans.

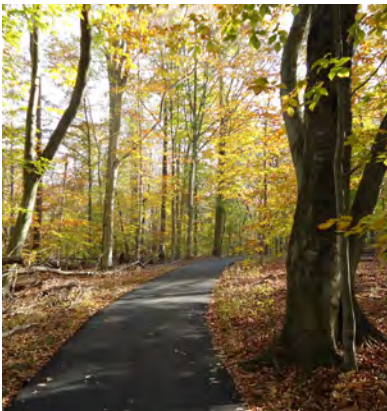
50 FT PLANTING BUFFER



DETENTION PONDS WITH OPEN SPACE AMENITIES



WETLAND OPEN SPACE



POTENTIAL TRAIL CONNECTION TO MARION GENOA DRAIN TO SOUTH



DEVELOPMENT HIGHWAY SIGNAGE

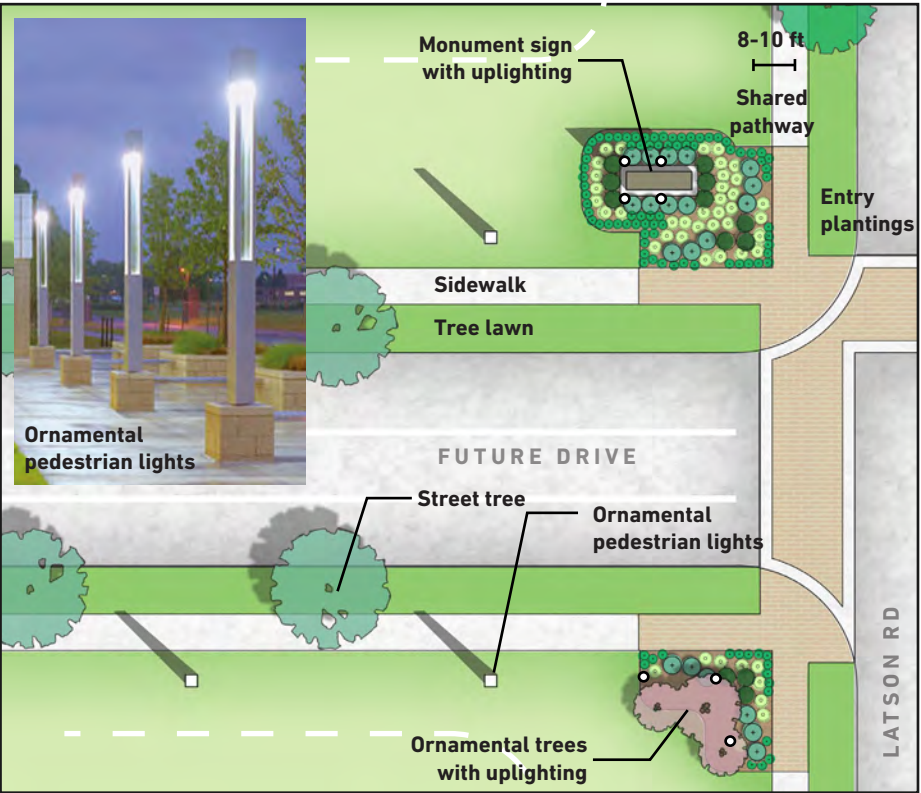


ENTRY SIGNAGE



TOWNSHIP GATEWAY SIGN AREA

ENTRY SIGNAGE LANDSCAPE PLAN



OVERALL INDUSTRIAL CAMPUS AMENITIES

