Huntley, Illinois Transit-Oriented Development Guidelines



Prepared for Village of Huntley THE LAKOTA GROUP CIVILTECH ENGINEERING

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Report Contents



Section 1: Introduction

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Project Mission

In the summer of 2008, the Village of Huntley initiated a planning process to create a transit-oriented development plan and design guidelines for a future transit station location within the community. The planning mission focused on evaluating two greenfield sites -- Coyne Station Road and Kreutzer Road -- regarding their development potential related to new transit service being considered for Huntley.

The project was funded and coordinated through the Regional Transportation Authority's (RTA) Community Planning program, which encourages municipalities to create station area transit-oriented development (TOD) plans that address existing or future bus and rail service. The RTA's program principles include:

- Plan for increased transit usage.
- Plan for access and circulation improvements in and around transit facilities.
- Plan for improved mobility for seniors and people with disabilities.
- Plan for multimodal improvements.
- Plan for enhanced or expanded transit service.
- Develop transit-oriented plans or principles.

The Village engaged the planning/design team of The Lakota Group (city planners and landscape architects) and Civiltech Engineering (civil engineers and transportation planners) to conduct the study, facilitate the process, and address the following goals:

- Create a clear, documented vision of the community's transportation future, including the potential for a transit station and development around it.
- Create a circulation and access plan along with design guidelines for development around a potential transit station site.
- Optimize the Village's short and long-range development framework for the selected station area.
- Recommend appropriate land uses and site planning configurations for the potential station areas.
- "Set the stage" for future development of the area that supports potential transit service.
- Select a preferred location for a future transit station.
- Determine an optimal location for a new town center for Huntley.

Planning Process

Lakota and Civiltech worked closely with the Village throughout the planning process to garner input from community leaders and residents, including an area/site tour, focus group, participatory workshops, and staff reviews.

To help guide this process, the Village established a Steering Committee comprised of: Village staff, Plan Commissioners, Zoning Board of Appeals members and Trustees; and representatives of RTA, Metra, Pace, McHenry County, and Kane County.

The role of the Steering Committee was to guide the planning process, provide technical input and information, analyze development strategies and concepts, and provide direction for the selection of a transit station site and potential TOD. The Team met with the Steering Committee on a regular basis to present concepts and receive feedback regarding land use and transportation issues.

New Transit Service

Metra is currently conducting an initial study to determine the feasibility of extending commuter rail service along the Union Pacific Railroad (UPRR) Belvidere Subdivision, which runs through parts of Kane and McHenry Counties, including the Village of Huntley and the City of Marengo (see Figure 1.1: Area Metra Station Locations). Should the results of Metra's study indicate that commuter rail service along the UPRR Belvidere Subdivision is feasible, further study would be necessary to evaluate the most effective transit alternative through the corridor. As Metra's feasibility study began, RTA and the Village initiated the TOD assessment of two potential transit locations at Coyne Station Road and Kreutzer Road, which is summarized in this report.

Due to the high capital costs associated with a large transit investment, funding through the highly competitive Federal Transit Administration's New Starts program will likely be sought to initiate either bus or rail service to the Huntley/ Marengo area. The New Starts program includes a multistep process that begins with analysis of all potential transit alternatives (modes, alignments, operating plans, etc.) within a corridor based on projected ridership, costs, land use benefits, and other projections.

Should a project advance out of the Alternatives Analysis phase, the Preliminary Engineering and Final Design phases would follow, before construction could begin. It generally takes projects between 8 to 10 years to complete the New Starts program. The Village of Huntley TOD study will be incorporated into the future planning phases.

If future planning studies determine that commuter rail is the most effective transit alternative for the study area, it is important to note that the Village will need to fund the land acquisition and construction for the proposed station and parking.







Overview

Huntley has had tremendous growth in recent years. Its population increased approximately 50% between 1980 and 1990 from 1,646 to 2,453. Between 1990 and 2000, the population increased 133% from 2,453 to 5,730. The majority of the Village's growth has occurred since 2000 as the US Census Bureau's population estimate in 2007 was 21,935. The Chicago Metropolitan Agency for Planning (CMAP) projected Huntley's population to be 44,435 in 2030.

Growth projections for Huntley, Marengo, and unincorporated areas of Kane and McHenry Counties could be used to assess potential ridership for new transit service to the area when they are conducted in future planning studies. Huntley's Future Land Use Plan has identified two sites as potential transit stations if transit service is extended to the community. The Kreutzer Road site is on the southeast side of the Village, east of Route 47, and adjacent to the Union Pacific Railroad Belvidere Subdivision line (UPRR). The Coyne Station Road site area is on the western edge of the Village, north of Main Street, also on the UPRR.

Existing site conditions and surrounding context were analyzed within 1/4 to 1/2 mile zones around each potential station. Road network, transit network, infrastructure, environment, and land use were addressed. The 1/4 to 1/2 mile zones equate to 5 to 10 minute walks, respectively, which are the distances people would consider walking to a station on a regular basis.

Road Network

The following network of expressways, arterial roadways, collector streets, and local neighborhood streets serve Huntley (see also Figure 2.1: Area Transportation Network):

- Interstate 90/Jane Addams Memorial Tollway is an east-west expressway south of Huntley that connects the Village to the Chicago region and to Rockford to the west.
- Illinois Route 47 is the only major north-south arterial serving the Village. It is designated as a Strategic Regional Arterial (SRA) by Illinois Department of Transportation. Daily traffic along Route 47 through Huntley is 21,000 vehicles per day (2007).
- Algonquin Road is a major east-west arterial that originates just west of Route 47. Current daily traffic within Village limits is 9,800 vehicles per day (2007). East of Lakewood Avenue in the Village of Lake in the Hills, traffic on Algonquin Road grows to over 21,000 vehicles per day.
- Harmony Road/Main Street is the only existing eastwest arterial in the Village west of Route 47. Current daily traffic on Main Street is 10,200 vehicles per day (2007).

The Village's roadway system shows significant levels of congestion, with the highest along Route 47 near Main Street and the railroad tracks. Main Street through Downtown Huntley also experiences congestion during peak travel periods as traffic tries to make its way to and from the east and west. To a lesser extent, Algonquin Road is also beginning to show signs of congestion within the Village.

Planned projects in the CMAP Transportation Improvement Program (TIP) will increase the capacity of the system by widening Route 47, Algonquin Road, and Kreutzer Road, as well as extending or realigning existing roadways to create a more complete and efficient roadway network. These projects should significantly improve traffic access and circulation within and near Huntley.

Projects recently completed for the area in the TIP are:

- Extending Haligus Road from Main Street to Dundee Road and from Reed Road to Kreutzer Road.(Completed)
- Extending Ackman Road west of Route 47, extending Reed Road west of Route 47 and constructing Founders Field Boulevard between the extensions. (Completed)
- Adding lanes to Algonquin Road from Route 47 to Randall Road. (Completed)
- Adding a signal at the Huntley Road and Kreutzer Road intersection. (Completed)

Projects currently scheduled for the area in the TIP are:

- Expanding the Route 47/Interstate 90 interchange, which currently serves traffic only to/from the east, to full east-west access.
- Adding lanes to Interstate 90 from Sandwald Road in Huntley to Plaza 9 in Elgin.
- Adding lanes to Route 47 from US Route 14 in Woodstock to Reed Road in Huntley.
- Adding lanes to Route 47 from Reed Road to Kreutzer Road.
- Extending Algonquin Road west of Route 47 to Marengo Road.
- Adding lanes to Kreutzer Road from Route 47 to Dundee Road.
- Extending Kreutzer Road west from Route 47 to Main Street.

In addition to these improvements, an additional east bound only interchange with Interstate 90 is recommended at Brier Hill Road west of the Village.

Kreutzer Road

Kreutzer Road and an east extension of Regency Parkway will primarily serve the potential Kreutzer Road transit site from Route 47. Currently, Kreutzer Road east of Route 47 is a two-lane road carrying approximately 6,000 vehicles per day.

As noted above, Kreutzer Road will be widened to a 5-lane section to reduce congestion along Main Street/Dundee Road through Downtown Huntley across the UPRR tracks. A realignment of Kreutzer Road across the tracks is also planned between Route 47 and Haligus Road (see Figure 2.2: Kreutzer Road Site Context).

The planned expansion of Kreutzer Road and its realignment at the UPRR tracks will improve traffic movement and safety along this roadway as well as accessibility to the potential Kreutzer Road transit station site. Collector street connections to the development areas west and south of the Kreutzer Road site will be needed to make it more accessible to a larger portion of the surrounding community.

Coyne Station Road

Two arterial roads, neither of which currently exists, will primarily serve the Coyne Station Road site. Algonquin Road will be extended westward from Route 47 as a fivelane road with a 140-foot to 200-foot right-of-way and grade separation over the UPRR tracks to connect to Harmony Road between Brier Hill and Hemmer Roads. Kreutzer Road will be extended north from Main Street to connect to a realigned Coyne Station Road south of the UPRR tracks.

The future intersection of Algonquin Road, Coyne Station Road, and Kreutzer Road will likely be signalized and potentially utilized by most of the vehicular traffic traveling to and from a future transit station. The alignment of the Algonquin Road extension currently being considered by McHenry County is shown in Figure 2.1: Area Transportation Network and Figure 2.3: Coyne Station Road Site Context.

These planned roadway improvements will significantly increase access to the potential Coyne Station site. As noted above, the Algonquin Road extension will require an overpass that will be a bridge structure located approximately 1,000 feet long within the center of the Coyne Station development site with a height of 30 feet above the UPRR tracks.

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Figure 2.1: Area Transportation Network



Transit

There are limited public transit services in the Village of Huntley. Grafton Township offers transportation services for seniors and disabled residents to various shopping destinations, as well as the Centegra Hospital in Woodstock and Crystal Lake Metra station. The nearest Pace bus routes are in Crystal Lake and Elgin. The nearest Pace Dial-a-Ride services are in surrounding communities such as Lake in the Hills, Algonquin, Crystal Lake, and Marengo. As residential developments continue to take place in Huntley and density increases, Pace service may be established to provide access to transit stations as well as shopping areas.

A recent Metra survey shows 57 transit riders originating in Huntley currently using several different train stations (see Table 1). Pace indicated that there is a high number of mobility disabled residents traveling to workshops and McHenry County Community College.

Station Riders Originating in Huntley	Station Used	Distance to Station
28	Big Timber (MD-W)	11 Miles Away
7	Pingree Road (UP-NW)	11 Miles Away
8	Crystal Lake (UP-NW)	10 Miles Away
3	Cary (UP-NW)	14 Miles Away
11	Other	Unknown
Total: 57		
Riders For All Stations	Mode of Access for Metra Riders Originating in Huntley	
45	Drive Alone	
4	Dropped Off	
5	Carpool	
	Qui	

Continued residential growth within and near the Village and the presence of a new transit station in the community will likely increase the number of transit riders originating in Huntley. If either bus or train service is introduced to Huntley in the future, the area's commuters will have a choice between the stations they currently use and a new Huntley Transit Station. Some of the factors that may affect station choice include:

- The connectivity of the transportation network and access to the station from Huntley and surrounding communities.
- Proximity to population centers within Huntley.
- Total travel time, including time spent getting to a station and on-board travel time.
- Level of service, including number and frequency of trains or buses serving the transit station.
- Price and availability of parking.

<u>Infrastructure</u>

The Village's Public Works Department indicated that the community's stormwater, sanitary sewer, and water distribution systems have the capacity to accommodate new development at either the Coyne Station Road or Kreutzer Road sites.

The Village's Planning and Zoning Department indicated that a regional ComEd high power line is planned west and north of the Kreutzer Road site (see Figure 2.2).

Environment

McHenry County Conservation District

The McHenry County Conservation District (MCCD) has conservation open space totaling 500 acres along the south side of the railroad west of Coyne Station Road at the intersection of Hensel Road and Mensching Road. Also, MCCD owns a 25-foot wide parcel on both sides of the 50-foot UPRR right-of-way throughout McHenry County, with the exception of Downtown Huntley near Grove Street just east of Route 47. This MCCD property is known as the Huntley-Union-Marengo Prairie (HUM Prairie) and is maintained by MCCD.

Ideally, MCCD would use this property as the extension of the HUM Trail from the Village of Union to the Village of Huntley, though complications from environmentally sensitive lands may prohibit the construction of a bike path in this location. No alignment has been proposed for the HUM Trail extension, and MCCD intends to work with the Village of Huntley to explore possible alternative routes. Building a transit station adjacent to the UPRR tracks at the Coyne Station Road site would likely require mitigation via an agreement with MCCD.

Wetlands

Wetlands near both the Coyne Station Road and Kreutzer Road site, shown in Figures 2.2 and 2.3, were delineated based on Advanced Identification of Aquatic Resources (ADID) maps. Any significant wetland area to be impacted by the development of a transit station would require mitigation to replace the impacted wetlands.

There is a greater quantity of wetland areas within and surrounding the Kreutzer Road site; a substantial portion of which are classified as High Functional Value wetlands, meaning they are identified as providing important stormwater storage and water quality benefits. In terms of stormwater management and wetland impacts, the Coyne Station Road site appears be a more favorable location for a transit station.

Threatened/Endangered Species

According to a wetland investigation prepared in July 2004 for the proposed Algonquin Road extension, three species of plants and wildlife were observed within the MCCD property near the Coyne Station Road site. These species, Cypripedium candidum (White Lady's Slipper), Triglochin maritime (Common Bog Arrow Grass), and Grus canadensis (Sandhill Crane) are listed as threatened by the Illinois Endangered Species Protection Board, but are not

found on the United States Fish & Wildlife Service (FWS) threatened and endangered species list. Because the wetland investigation states that these species are obligate wetland species and dependent upon a persistent high water table for survival, it is recommended a similar study be performed at the Kreutzer Road site, where wetland conditions are prevalent along the north and south sides of the UPRR tracks.

Impacts to the environment on threatened and endangered species should ultimately be avoided. Should both the Coyne Station Road and Kreutzer Road sites be comparably inhabited by threatened species, mitigation of sensitive land would be required.

New development, including potential train stations, will need to carefully consider the quality level of environmentally sensitive land when planning buildings, roads, trails, sidewalks, parking lots, and station platforms. Buffers along such land areas will also be important.

Potential developers of the Coyne Station Road site will be required to notify early in the process, the MCCD, Illinois Department of Natural Resources, and U.S. Fish and Wildlife Service of potential development plans to work with the natural resources on site. Likewise, potential developers of the Kreutzer Road site will be required to notify the Kane County Forest Preserve District and the MCCD of potential development plans to coordinate with these entities regarding natural resources.

Land Use

Kreutzer Road Site

The Kreutzer Road site and surrounding properties south of Kreutzer Road are largely undeveloped and mostly in agricultural use (see Figure 2.2). The Village has given preliminary zoning approval for a portion of the site west of the UPRR tracks for a mixed-use development with 410 residential units and 8 acres of retail uses. The area immediately east of the site as well as along Powers Road to the south is currently unincorporated Kane County.

South of the station site, along the railroad, is the Landings Airport, a privately owned facility for small aircraft. The maximum height for buildings within proximity of the airport is regulated by FAA design standards for approach zones and runway protection zones. The approach zone is a trapezoidal plane, inclining upwards at a 5% slope, that is 250 feet wide at the beginning of the approach zone at the end of the runway and 1,250 feet wide where it terminates after 5,000 feet. The runway protection zone is the first 1,000 feet of the approach zone. Structures are prohibited in the runway protection zone and building height is restricted between 1,000 feet and 5,000 feet within the zone.

There is an existing subdivision south of the airport along Powers Road with 56 single-family lots. Further west along Powers Road toward Route 47, there are two recently approved subdivisions with approximately 45 single-family units.

East of the railroad tracks and south of the airport is the Kane County Freeman Kame-Meagher Forest Preserve. Further to the east there is an approved plan for a residential subdivision with 965 single-family homes in the Village of Gilberts. Kreutzer Road, Huntley-Dundee Road, and Freeman Road generally bound this large planned subdivision.

The area north of Kreutzer Road is mostly developed. There is a small light industrial/business park on the west side of the UPRR tracks. East of the railroad is Wing Pointe, a residential subdivision with 608 single-family and townhome units, and a church. The parcel at the northwest corner of Kreutzer Road and Huntley-Dundee Road is currently undeveloped.

For the area immediately around the potential station site, west of the UPRR tracks, the Village's Future Land Use Plan shows mostly commercial uses and a business park, in addition to the potential transit facility. East of the tracks, a residential subdivision with mostly quarter acre lots is recommended.

The Kreutzer Road site is zoned RE-1 Residential Estate District Planned Unit Development and has preliminary approval for 410 residential units. A small portion of the potential station site as well as the parcel directly to the north on the other side of Kreutzer Road have not been annexed, but are entirely surrounded by the Village of Huntley. The adjacent properties to the east, west and south of the station site are also unincorporated Kane County, but are within the Village's Facility Planning Area (FPA) for sewer service.

The area further west of the potential station site was recently annexed and zoned for commercial and multi-family residential. The properties fronting Route 47 are zoned B3

Shopping Center Business Planned Unit Development, and adjoining properties to the east toward the potential station site are zoned R4 Townhomes and Condominiums Planned Unit Development.

North of the transit station site on both sides of the UPRR tracks, the area is zoned M Manufacturing District. Further east of the railroad and north of Kreutzer Road is a single-family residential subdivision and church, which are both zoned R-1 Single-Family Residence District Planned Unit Development.

The planned multi-family development west of the potential transit station site is appropriately zoned for TOD development. The commercial zoning along Route 47 is appropriate given that the roadway is a major regional arterial.

The Future Land Use Plan recommends open space for the area to the south due to the large wetlands that exist there. South of Powers Road the Land Use Plan recommends large estate residential development. Commercial development is planned for the parcels along Route 47.

A big box retail store is under construction at Route 47 and Kreutzer Road. A retail center is located at the southeast corner of Route 47 and Oak Creek Parkway. It includes a commercial center with a grocery store as well as several outlots, including a gas station and fast food restaurant. The parcels to the north and east of this retail center have been recently developed as a business park. Most of the area west of Route 47 is Del Webb's Sun City, an active adult living community with over 5,700 homes.

Residential development is planned for the area east of the commercial development along Route 47 and south of Kreutzer Road. Preliminary approval is in place for two multi-family developments with 430 units and 180 units, in addition to the 410 units approved for the Kreutzer Road site nearest the potential station. Based on an annexation agreement, the commercial and industrial uses shown near the site in the Village's Land Use Plan have been changed to residential uses.

The Forest Preserve south and east of the potential transit station site, while decreasing the amount of buildable land near the station, could provide recreation opportunities for a denser, more compact TOD.

The Village's Future Land Use Plan defined mostly a commercial approach to land use west of the Kreutzer Road station site and quarter-acre lots east of the UPRR tracks. It is highly unlikely that significant commercial development would occur in the immediate vicinity of the station site due to:

- its distance from Route 47....retailers would be concerned about major road access and visibility.
- the large amount of commercial development that already exists, is under construction or planned for the Route 47 corridor.

• the lower residential density of the overall Village and surrounding area.

The residential and commercial development planned for the larger area west of the site, could establish this zone as mixed-use. The planned multi-family development west of the potential transit station sets a precedent for a denser TOD environment. The planned development along Route 47, which will be mostly large commercial uses, could draw activity closer to the station.

The small business park on the north side of Kreutzer Road, west of the UPRR tracks lacks the density and level of activity that is ideal for transit-oriented development. Industrial and business parks are typically not ideal uses for transit-oriented development unless they are considered large employment centers. However, due to the airport this use would allow more of the area south of Kreutzer Road, west of the tracks, to be developed.

The large amount of undeveloped land surrounding the Kreutzer Road station site to the east, west, and south provide opportunities for transit-oriented development. However, as discussed earlier in this summary, there are several large wetlands within this zone and floodplain along the UPRR tracks that significantly decrease the amount of buildable land and decrease the potential walkability of the immediate site area for TOD. Also, the airport is located immediately south of the potential transit station location. FAA regulations will impact the location and height of new development near the airport, which along with the

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Figure 2.2: Kreutzer Road Site Context



wetlands and floodplain will significantly reduce the amount of buildable land available for this site.

To accommodate a TOD approach for the Kreutzer Road station site, annexation of the remaining unincorporated parcels west of the tracks and large land area east of the tracks would need to be considered, including establishing a denser residential zoning designation.

Due to the impacts the airport would have on residential uses, a business park use appears to be a more feasible option for development west of the UPRR tracks. Such a use would require a change to the current development agreement for the property. East of the tracks, the Kreutzer Road station site appears to have potential for a neighborhood TOD, as it has less restrictions and more buildable land. Zoning for the site would need to accommodate a denser residential development use with single-family and multi-family housing.

Coyne Station Road

The Coyne Station Road site is mostly in agricultural use with a portion in conservation open space (see Figure 2.3). There is a small business park east of the tracks and north of Main Street. North of the business park is a small residential subdivision with 42 single-family lots. Approximately 25% of the lots are undeveloped. The site area south of the tracks and west of Coyne Station Road is unincorporated McHenry County. Beyond the half-mile walking zone around the potential transit station site, the community is in primarily singlefamily residential use, including the older traditional center of Huntley to the east, recently established Del Webb Sun City active adult residential development to the south, and new Talamore subdivision to the north. West of Coyne Station Road is a mostly rural area with farms, large tracts of wetlands and floodplain, and a McHenry County Conservation District. Huntley High School is located southwest of the transit station site, west of Marengo Road and south of Main.

The Village's Future Land Use Plan recommends that the site area immediately south of the railroad be developed with a single-family residential/open space neighborhood. North of the railroad, the Land Use Plan accommodates additional phases of Talamore as well as single-family residential use further north along Coyne Station Road. These developments have an approximate density of quarter acre lots.

The Future Land Use Plan recommends large estate residential use for the area west of Coyne Station Road, except for the large natural areas, which are recommended for conservation open space. These environmentally sensitive lands contain wetlands, floodplain, and some endangered plant species.

The Coyne Station Road site is currently within unincorporated McHenry County. The area west of the station site is unincorporated and outside Huntley's Facility Planning Area as Coyne Station Road represents its general western boundary. Most of the site's buildable land is within a half mile of the potential transit station and is within the Facility Planning Area.

The narrow conservation lands along the UPRR tracks (25 feet on either side of the 50 foot rail right-of-way) as well as the large wetlands immediately northeast of the potential transit station location constrain buildable land northeast of the station.

The area south of the potential transit station site is generally zoned for single-family and multi-family residential. Del Webb includes property zoned SF-2 Garden Residential, MF-1 Villa Residential, MF-2 Multi-family, and P Parks and Open Space. The subdivisions to the west of Del Webb are zoned RE-1 Residential Estate District PUD. The property located at the southeast corner of Main Street and Kreutzer Road is zoned B2 Highway Service PUD.

The area east of the railroad is primarily zoned M Manufacturing District with the exception of the singlefamily homes along Oakcrest Drive, which are zoned R2 Single Family Residence District PUD.

The property south of Reed Road will likely be rezoned to residential, as there are plans to include this tract of land as a future phase of the Talamore subdivision. The portion of Talamore north of Reed Road is zoned RE-1 Residential Estate District PUD.

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Figure 2.3: Coyne Station Road Site Context



With the exception of Del Webb, the single-family residential zoning classifications for the areas surrounding the potential transit station site do not allow for higher densities more typical of a compact TOD. The zoning for the Talamore subdivision to the north of the transit station site does allow for a maximum density of 3.98 dwelling units per acre. Portions of the Del Webb development are zoned for small lot single-family residential and multi-family housing, which are more suitable for TOD. Higher density residential zoning should be considered for both the north and south sides of the potential transit station site.

There is very little commercially zoned land within proximity of the transit station site. Mixed-use and commercial zoning would also need to be considered for the area to incorporate the land uses that would contribute to an active mixed-use TOD and town center.

As noted earlier, the larger community area surrounding the potential transit station site is mostly developed to the north (Talamore), south (Del Webb), and east (older residential neighborhoods). While Talamore includes some townhomes, the majority of the single-family lots are greater than 9,000 square feet. Del Webb has a mix of cluster homes, villas, and townhomes with smaller lot sizes suitable for TOD, but its large open space areas account for a gross density of only 2.89 units per acre. As with the Kreutzer Road site, the small industrial/business park immediately east of the railroad is not a large enough employment center for a TOD environment. The Future Land Use Plan defines a mostly low-density residential approach to land use south, north, and west of the potential transit station. A recent concept submitted to the Village by a developer for the land south of the potential station location included denser residential home sites and larger commercial uses along Main Street.

It is highly unlikely that significant commercial development (big box stores) would occur in the immediate vicinity of the Coyne Station Road site due to:

- its distance from Route 47....retailers would be concerned about major road access and visibility.
- the large amount of commercial development that already exists, is under construction or planned for the Route 47 corridor.
- the lower residential density of the overall Village and surrounding area, especially the current and future plans for conservation open space and estate homes west of Coyne Station Road.

As the Village grows westward toward the high school, there may be potential for neighborhood or community level commercial development in the Coyne Station Road area that would include small convenience shops, a drug store, and possibly a grocery store.

To accommodate a TOD approach for the site, the following changes to the Future Land Use Plan, including property annexation, would need to be considered:

- Increase the density of residential zones south and north of the UPRR tracks.
- Add community or neighborhood level commercial uses to the area.
- Add "mixed-use" to the goals and policies of the Plan.
- Add creation of a town center to the goals and policies of the plan.

The large area of mostly undeveloped land south and north of the potential Coyne Station Road transit site along with major changes to the area's roadways, provides significant opportunities for transit-oriented development and possibly a town center for the community.

The key factor affecting the significant potential of the Coyne Station Road site will be the proposed location of the Algonquin Road overpass. Its height and placement will impact buildable area, aesthetics, and local access to the immediate station location. If this site is to be considered as a potential town center location for Huntley, the bridge location will also affect where such a development could be located and how large in scale it might be.

The Village Board recently approved the conceptual alignment for the Algonquin Road extension shown in Figure 2.3. The extension, including the overpass, is currently in Phase 1 engineering and it is anticipated that construction would be completed in 2011 depending on funding availability.

Preferred Transit Site

Based on the Site Analysis, Community Visioning Workshop input, and subsequent Steering Committee technical reviews, the Coyne Station Road site was considered the preferred location for a potential transit station that could include large scale transit-oriented development. This site has fewer obstacles and provides significant opportunities for a larger development that could function as a town center for the community.

Locating a transit station south of the approved Algonquin Road extension does not appear feasible due to the presence of large wetlands and nearby residential and business park development. A station would need to be located north of the extension, where there are less wetlands and more vacant land within a quarter mile of a potential transit station. However, a town center with commercial uses would need to be located south of the extension to place it closer to the core of the community in a more visible and accessible location near the intersection of Algonquin/Coyne Station Roads and Kreutzer Road/Main Street. It was determined that the Kreutzer Road site is not the optimal location for transit-oriented development based on less developed street system/site access, limited buildable land, environmental issues, and the existing airport. However, Kreutzer Road could function as a basic transit station site with commuter parking along with a business park west of the tracks and a smaller TOD neighborhood east of the tracks.

As Metra continues its initial feasibility study for potential commuter rail service in the greater Huntley area, both sites could be considered as "potential transit station sites," with Coyne Station Road considered the better location for more intensive, mixed-use transit-oriented development. For operational reasons Metra desires that all future commuter rail stations be placed at least 3 to 5 miles apart.

As noted earlier, new development and potential transit stations in either location need to be carefully planned regarding environmentally sensitive areas as well as transit operations.



Overview

A range of land planning concepts was prepared for each station location to test alternative approaches to transitoriented development and to help select a preferred site for the transit station, based on access and potential for TOD. The concepts addressed land use mix, road and street networks, building massing, development densities, and open space.

A preferred concept was then refined for each potential station location to provide an illustrative framework for how each area could be developed in the future. Actual building locations, heights, and densities as well as landscaping/ parking layouts will vary as property owners, businesses, and developers generate more detailed site plans. The overall goal was "to set the stage" so that each station area will develop in a transit supportive manner.

The Kreutzer Road site envisions a modern business park south of Kreutzer Road and west of the UPRR tracks. East of the tracks, the concept illustrates higher density housing in a neighborhood TOD pattern (see Figure 3.1).

The preferred development direction for the Coyne Station Road site is a mixed-use town center with buildings organized around a "village green." South of the Algonquin Road extension and residential neighborhoods north of the extension, the town center would serve as a commercial and social center for Huntley surrounded by attractive neighborhoods oriented towards central parks. The following illustrative planning concepts are based on the community's desire to improve its quality of life by taking advantage of Huntley's positive attributes, planning ahead of potential area development and transit service. By taking the initiative and creating these concepts and design guidelines, the Village strives to:

- Foster awareness among landowners and developers of high-quality building, site and sustainable design principles that emphasize energy conservation, healthy buildings, resource reuse, and transit use.
- Create an efficient roadway network to provide for safe movement of vehicles, pedestrians, and bicyclists throughout the Village.

It is important to note that the potential station locations shown in the illustrative plans and guidelines for each site are conceptual locations. If transit service is deemed feasible for Huntley pending further studies as previously discussed, RTA, Metra, and/or Pace will work closely with the Village to more specifically locate and place a transit station.

It should be noted that Metra has typically asked communities to reserve 20 acres for potential stations and parking to accommodate potential full-build-out. In each illustrative plan, the potential transit station sites reserve enough space for parking approximately 2,000 cars at each station, meeting Metra's guidelines. Actual commuter parking needs, including phasing of commuter parking, will vary depending upon ridership and parking projections for the most effective transit mode that would be determined in future studies. Generally, railroads prefer that pedestrians not cross at grade at a transit station, but at a road/street crossing with safety gates and a sidewalk. In some cases, direct pedestrian crossings at a transit station may work operationally, while in some locations, a pedestrian tunnel or pedestrian bridge may be feasible to directly access both sides of the tracks.

Kreutzer Road Station Illustrative Concept

As previously noted, the Kreutzer Road site was not an optimal location for transit-oriented development due to the existing airport, wetlands, floodplain, and ComEd easement as well as less developed street grid/vehicular access. However, this location still has potential for a transit station parking location with limited transit-oriented development.

Business Park

With limited opportunities for housing west of the tracks, the concept for Kreutzer Road incorporates a modern business park near the potential transit station along Kreutzer Road (see Figure 3.1). To connect to the existing business park north of Kreutzer Road, Smith Drive is extended to create a loop road through the site. Regency Parkway provides a direct link from Route 47 to the new business park and potential station location.

The highly visible business park's location along the tracks, Kreutzer Road, and Regency Parkway could feature small low-rise research, office, and light industrial buildings with glassy, front facades. The park should have a modern, green appearance with adequate building setbacks, landscape buffers, and screening of loading and parking areas. Its location adjacent to a transit station would allow people to commute to work. Businesses that employ a higher number of people would be encouraged to locate closer to the station (i.e. an office/research assembly operation versus a warehouse operation). The Regency Parkway extension would become a second vehicular access point from Route 47, linking the business park to the large commercial developments to the west and reducing traffic on Kreutzer Road.

The loop road system would provide connections to the surrounding residential areas and allow local residents to bike or walk to work and the transit station. With all business park uses concentrated toward the north, larger vehicle and truck traffic would be restricted to those roads between Kreutzer Road and Regency Parkway.

Modern business park with landscaping and high-quality architecture.

Residential

Residential uses are recommended west and south of the business park and east of the tracks (see Figure 3.1). With multi-family residential development already proposed west along Regency Parkway, the illustrative concept envisions an extension of this land use to Smith Drive. To the south, along Powers Road, new single-family homes would link to the existing neighborhood around the large wetlands. The wetlands could become an open space system with trails for the neighborhood.

East of the tracks, the existing conditions provide more flexibility for development and land use mix. Two alternative concepts are present in Figures 3.1 and 3.2. These illustrative concepts envision a residential neighborhood with a variety of housing products that are centered around boulevard streets and open spaces. Green "fingers" would allow for a trail system that links the residential areas to a transit station and the Forest Preserve.



Rowhomes and townhomes near transit station.

Village of Huntley TOD Guidelines

Section 3: Station Area Concepts

Figure 3.1: Kreutzer Road Illustrative Site Concept



Residential densities would be higher closer to the transit station and would include condominiums, apartments, and rowhomes. Adjacent to this core would be small lot single-family homes. An interconnected street system would maximize access to the neighborhood for local residents as well as future commuters. See Figure 3.2 for an alternate illustrative area concept layout to the east of the tracks.

Retail

There may be potential for a limited amount of neighborhood service retail fronting Kreutzer Road west or east of the tracks supported by the daytime population of the business park as well as local residents living east of Route 47.

Open Space

As previously mentioned in the Site Analysis, the Kreutzer Road site has an abundance of wetlands, flood plain and natural open space areas, as well as the adjacent Freeman Kame-Meagher Forest Preserve. This natural system provides opportunities for incorporating biking /hiking trails that are linked to park and recreation facilities.

Figure 3.2: Kreutzer Road Illustrative Site Concept (Alternate)



Coyne Station Illustrative Concept

The illustrative concept and design guidelines for development of the Coyne Station Road area has several components (see Figure 3.3).

Station Location

As noted earlier, a transit station will need to be located between Coyne Station Road and the Algonquin Road extension due to the area's physical constraints. An elevation difference from Coyne Station Road to the site's large vacant properties may allow for a pedestrian tunnel under the tracks, with open views to both sides. If a pedestrian tunnel or atgrade crossing is not feasible, ideally the station would be located closer to Coyne Station Road to allow pedestrians and bicyclists to cross the tracks at grade to reach the facility. Future planning for a transit station in this location should also consider realigning Coyne Station Road to the east to place the roadway crossing closer to a more centrally located station. As previously discussed, the station location will also need to carefully consider the quality level of environmentally sensitive land along the tracks.



Public green space or plaza near transit station.

Figure 3.3: Coyne Station Road Illustrative Site Concept



Residential

The large vacant area between the south end of the Talamore subdivision and the future Algonquin Road extension is delineated for expanded residential use. Multi-family housing with increased density would be located near the potential station location (see Figure 3.4).

Central greens surrounded by a higher-density core of condominiums/apartments, townhomes, and rowhomes are envisioned near the station. Depending on future density and ridership, there maybe potential for a small service retail component in this location, such as a coffee shop, dry cleaner or small cafe.

Commuter parking areas for the transit station are shown as long, narrow lots adjacent to the tracks on both sides of the station. These lots would be buffered from the adjacent residential uses with landscaping and screening and broken up with green islands and trees.

North of the Reed Road extension, bordering the existing Talamore Subdivision, would be a single-family residential neighborhood west to Coyne Station Road and north to Ernesti/Ackman Road. Lot sizes would be larger than those closer to the transit station, blending in with the existing character of the Village. The new neighborhoods shown in the Coyne Station Road concept would have distinct identities and feature landscaped entrances, sidewalks, and street trees to provide a unified look and an attractive, walkable environment. Residential areas would be buffered from other land uses and from the existing and planned roads.



Figure 3.4: Coyne Station Road (Station Area Enlargement)

Town Center

The undeveloped area located at the highly visible confluence of the planned Algonquin Road extension, planned realigned Coyne Station Road, Kreutzer Road, and Main Street is envisioned as Huntley's future town center. Near the core of the community and the high school, the town center is sized to accommodate neighborhood or community level shopping, and depending on future population growth, professional offices and multi-family housing, surrounded by small lot single-family residences.

Figure 3.5: Coyne Station Road (Town Center Enlargement)



The planned changes to Algonquin Road, Kreutzer Road, and Coyne Station Road, will create new "key corners," including at least two signalized intersections. The town center is placed between Main Street and Algonquin Road to be visible and accessible from both roadways. This new district would include mixed-use buildings with first-floor retail shops with residences and offices above.

This walkable, pedestrian-friendly environment with a large "village green" in its center would provide a new social center for Huntley as well as a residential and commercial hub for the west side of the Village.

Depending on future market conditions, the retail anchors of the town center may include a grocery store and drug store at the new intersections with the Algonquin Road extension. East of the grocery store would be additional retail opportunities centered on the "village green" with onstreet diagonal parking and small parking lots behind the buildings (see Figure 3.5).



Buildings in the town center should "hold the corners" and create a "streetwall" with parking in the rear and along streets.

The town center concept also includes a significant residential component to add vitality to the district and provide new housing products for the Village. Townhomes, rowhomes, and condominiums/apartments are placed around the main commercial core, along with small lot single-family neighborhoods to the north, south, and east. Residents in the area would enjoy proximity to the mix of uses and new "village green," while also being a short walk or drive to the new transit station.

Open Space

Any new development of the Coyne Station Road site should incorporate open spaces as organizing elements. The "village green" idea is intended to be a passive open space during the day for walking, socializing, and dining. It is also intended to be a large social gathering place for the Village's special events, markets, and other activities. The illustrative site concept demonstrates how a village green could be the centerpiece of the mixed-use town center to serve residents, visitors, commuters, and shoppers. As with the Kreutzer Road site, there are large wetlands north of the planned Algonquin Road extension and south of Reed Road. The illustrative site concept shows the potential to create a shared biking/hiking trail system throughout the area.



A town center with a central gathering place for special events, markets, and other activities.



Section 4: Design Guidelines

Street System

The layout of streets in a neighborhood or commercial district is a key factor affecting the success of a transit station, transit-oriented development, and mixed-use development. Within a TOD, an easy-to-understand, interconnected, street system is important for facilitating access and travel throughout the area.

Interconnection between a station, neighborhoods, and districts should be the prime consideration in street/ block designs. Such connections should serve pedestrians, bicyclists, vehicles, and buses with emphasis on providing safe and direct routes. Pedestrian access should especially be considered within a half-mile radius from an existing or potential transit center site.

New developments should incorporate the following design guidelines (see also Figure 4.1 and Figure 4.2).

- Future roadway designs must conform to Village standards.
- Future arterial road improvements/extensions should be considered "front doors" and "gateways" into specific development sites. The character of these roads should include wide setback buffers, ample landscaping and green space, and distinct signage. Where appropriate, they should include pedestrian paths and bicycle trails to/from a transit station.

- Main entry streets/drives should be planned with open views into a site and adequate stacking room for vehicles waiting to exit or enter the site. Main access points/entry drives should not be oriented toward the backs of buildings, rear driveways, or alleys.
- Street designs for residential areas should generally be a network of narrow, interconnected streets and defined blocks that respect the natural features found throughout the Village.
- Block distances of 300 to 500 feet are encouraged for both residential and commercial areas to help keep walking distances short and provide alternative route options.
- A grid-based street network is encouraged, offering multiple access points to a neighborhood, district, or station.
- Rear-loaded residential alleys for both single-family and multi-family housing should be considered where feasible to enhance streetscapes and increase densities near stations.
- The street system should be designed to balance the distribution of traffic onto a variety of streets so that no one street becomes overburdened and/or solely relied upon for large amounts of traffic.
- Wherever feasible, diagonal parking should be incorporated along commercial streets to provide

easy short term parking, reduce the size of area parking lots, and provide more of a "Main Street" character for the district.

- Driveway curb cuts should be minimized whenever possible.
- Rights-of-way should be preserved along and within development sites to accommodate future development and projected traffic.
- Access/circulation plans should consider the potential of multi-modal transportation.
- Streets within a TOD should be designed to minimize pavement widths and include sidewalks and convenient street crossings for pedestrians. Lawn parkways, wide sidewalks, trees, planters, bicycle lanes and/or on-street parking should be considered where feasible to buffer pedestrians from traffic.
- Streets near transit stations should provide clear, understandable routes that provide safe, fluid, and efficient movement of pedestrian and vehicular traffic. They should facilitate access for buses and autos dropping off/picking up transit users.
- A coordinated directional signage system should be incorporated to guide motorists, bicyclists, and pedestrians to key destinations.

Pace Development Guidelines

As discussed previously, further studies will determine the most effective transit alternative for the study area. It should be noted that bus service and train service are not mutually exclusive and can work together. For instance, Pace can make immediate inroads to startup service at a relatively low cost, which can make a logical progression to park-n-ride service and/or connections to a train station that is developed at a later date.

Within the TOD study area any roadway planned as a bus route should incorporate the Pace Development Guidelines to accommodate future bus transportation. These guidelines include design standards for:

- Lane widths:
- For any roadway to accommodate transit vehicles, 12 foot lanes are recommended.
- Roadway grade:
- Roads serviced by Pace vehicles should be grades of 6% or less.
- Curb height:
- 6 inch curb heights are recommended for vehicle clearance, wheelchair lift platforms, and better rider access.

- Intersection radii:
 - Intersection designs should facilitate bus turning movements and minimize lane encroachment.
 - Intersection radii should be determined by intersection angle, on-street parking configurations, transit vehicle turning radii, width of lanes, and traffic speeds.
- Bus turnouts:
- Minimum standards/dimensions are identified for bus bays, tapers, and acceleration/deceleration lanes.
- Bus berths:
- Bus berths should be clearly marked and identified with signs.
- Berths should be 15 feet wide.
- Bus turnarounds:
- Turnarounds should be designed for the bus to be turned in a counter-clockwise direction to maximize the driver's vision.
- "Jug handle" turnarounds are appropriate for midblock terminal locations.
- Roadway pavement.

- Bus stop spacing is based on population density and land use characteristics.
- Bus stop location:
 - Stops are located either before intersections, after intersections or mid-block, depending on ease of operation, space availability, transfer situations, and traffic volumes.
- Passenger waiting area:
- All corner curbs should have an access ramp for accessibility.
- Passenger shelters are recommended in areas with high volumes of riders.
- Benches, lighting, and landscaping should all be incorporated to increase security and comfort at waiting areas.
- Bicycle storage facilities are encouraged near bus stops, including bike racks and enclosed bike lockers.

For a full version of the Pace Development Guidelines, visit <u>http://www.pacebus.com/sub/guidelines/guidelines.asp</u>.

Village of Huntley TOD Guidelines

Section 4: Design Guidelines - Access & Circulation



Example of defined bus berths.



Example of bicycle parking at transit station.



Example of bus passenger waiting area.



Example of defined pedestrian crossing at transit station entrance.

Pedestrian Circulation

A successful transit-oriented and mixed-use development considers pedestrian activity and safety a top priority in the early planning stages. Within a TOD, streets should be laid out in a grid-like network with small blocks. Such layouts shorten walking distances, slow traffic, and provide a safer pedestrian environment.

New developments should consider the following guidelines:

- Establish a pattern of development with streets and pedestrian linkages that provide clear, convenient, direct, and safe linkages to transit, open spaces, schools, institutions, and commercial uses.
- Incorporate through routes with line-of-sight connections without barriers, fences, gates, or signs that imply that the route is only for use by the development's residents.
- Create a pattern of vehicular, bicycle, and pedestrian circulation that links housing with commercial and community uses to encourage multi-modal transportation.
- Lay out streets and pedestrian routes to permit continuous and multiple connections within a development. Cul-de-sacs and dead ends should be minimized.
- Provide clear directional signage from commercial blocks to open spaces, transit facilities, and streets.

- Connect streets and paths directly to abutting developments to expand access to transit, shopping, and services and to provide alternate routes for local trips. Where the new transit-oriented development abuts vacant land or property expected to be redeveloped, streets and paths should stub out at the perimeter of the property to provide opportunities for future connections.
- Orient commercial uses to the street with setbacks provided only to create a comfortable pedestrian realm. In no case should ground level uses be greater that 25 feet from the curb, unless it is demonstrated that increased setbacks will contribute to more active pedestrian environment (e.g. plazas, cafe zones, etc.).
- Provide sidewalks on both sides of streets.
- All sidewalks in residential areas should be clear and well lit, a minimum of 5 feet wide, and connected to dwelling entrances.
- All sidewalks in commercial and mixed-use areas should be clear and well lit, a minimum 15 feet wide, and connected to building entrances and associated parking areas.
- Sidewalks along commercial and mixed-use blocks should be designed to engage pedestrians with a building's activities. Sidewalk-related spaces should be open to the public, maintain proper circulation, and appear safe and welcoming.

- Provide defined pedestrian crosswalks at key intersections. Intersections should comply with ADA accessibility standards providing, at a minimum, depressed curbs and tactile warning paving.
- Pedestrian crosswalk areas should be a minimum of 10 feet wide and clearly delineated with striping or special paving.
- At main intersections, alternate pedestrian crossing opportunities should be considered, such as midstreet refuges, timed pedestrian crossing signals, curb extensions (bump-outs), median islands, and raised intersections to minimize conflicts between pedestrians and vehicles and to alert motorists.



Decorative paving can be used to clearly delineate crossings and comply with ADA accessibility standards.



Direct pedestrian routes should be provided through parking lots to building entrances.



Transit stations should connect to public walkways, parking areas, and nearby development.

Bicycle Travel

Creating a convenient and safe circulation system for bicycles is also important for transit-oriented development. The following guidelines should be considered:

- Encourage bicycle use by commuters by providing separate and continuous access routes within a two-to-four mile radius of the transit facility.
- Parking lots and garages should provide not less than 1 bicycle parking space for every 10 vehicle parking spaces.
- Incorporate bike racks at key locations within transit and mixed-use/commercial areas.
- Use the Roadway Average Daily Traffic Requirements in the Transportation Research Board <u>Highway</u> <u>Capacity Manual</u>, for determining appropriate onroad bicycle methods.
- Use American Association of State Highway and Transportation Officials design standards for shared roadways, signed shared roadways, bike lanes, and shared use paths.

Linkages to Village and regional bicycle routes such as the potential HUM trail, should also be considered when planning new developments near potential transit stations.



Bicycle routes along major roads should provide separate paths for bicycles and pedestrians.



At intersections bike lanes should be clearly marked to alert vehicular traffic.



Bridges/overpasses should accommodate bicycle and pedestrian access.



Bike racks should be provided at key locations.

Development Areas

Figures 4.1 and 4.2 provide a conceptual framework for creating an interconnected hierarchy of streets, alleys, and sidewalks for future transit-oriented and mixed-use development of the Kreutzer Road and Coyne Station Road sites. Using the framework as a guide, a more specific street system can be designed that defines development sites and blocks, linkages for all transportation modes, and the setting for an active TOD.

Kreutzer Road

Currently, Kreutzer Road east of Route 47 is a two-lane road carrying approximately 6,000 vehicles per day. It will be widened to a 5-lane section to reduce congestion along Main Street/Dundee Road through Downtown Huntley. A realignment of Kreutzer Road is also planned at the tracks between Route 47 and Haligus Road.

The planned changes to Kreutzer Road will improve traffic movement and safety along this roadway as well as accessibility to the potential Kreutzer Road transit station site. Collector street connections to the development areas west and south of the Kreutzer Road site will be needed to make it more accessible to a larger portion of the surrounding community.

While Kreutzer Road will serve as the major arterial street connecting Route 47 to a potential transit station, Regency Parkway should also serve as a major east/west route. Local access to a potential business park west of the tracks should be connected to Smith Road north of Kreutzer Road.

Collector street connections to Oak Creek Parkway and Powers Road to the west and south should also be included to increase accessibility.

Pedestrian and bicycle routes should radiate out from the transit station location. Connections to the Freeman Kame-Meagher Forest Preserve should be considered.

Coyne Station Road

Algonquin Road will be extended westward from Route 47 as a five-lane road with a 140-foot to 200-foot right-of-way and grade separation over the UPRR tracks to connect to Harmony Road. Kreutzer Road will be extended north from Main Street to connect to a realigned Coyne Station Road south of the tracks to serve as a major connection for the community to access the potential transit station.

The future intersections of Algonquin Road, Coyne Station Road, Kreutzer Road, and Main Street will likely be signalized and utilized by most of the vehicular traffic traveling to and from a future transit station. These planned roadway improvements will significantly increase access to the potential Coyne Station site. The main access points from Algonquin Road to a transit station in this area will be at its intersections with Coyne Station Road and a potential new collector street. Eastbound traffic would use the Coyne Station Road intersection, which is anticipated to be signalized, to travel toward the station. Westbound traffic traveling over the bridge could turn at the collector street, which is anticipated to be a right in/right out intersection.

Traffic from the high school on the west and central core of the community could use Main Street and Kreutzer Road to travel to the realigned Coyne Station Road.

North of the tracks, Talamore Boulevard and Reed Road should be extended to Coyne Station Road to connect existing and new residential developments, and to serve as east/west access routes to a transit station.

Founders Boulevard should be extended from Reed Road and connect to the Algonquin Road extension to also provide access from Talamore to a future transit station.

As noted in Section 3, there may be potential to realign Coyne Station Road by moving it east closer to a transit station to facilitate access for vehicles and pedestrians to the facility.

Village of Huntley TOD Guidelines

Section 4: Design Guidelines - Access & Circulation







Figure 4.2: Coyne Station Road Site Access & Circulation



Section 4: Design Guidelines - Land Use

Overview

The illustrative station area site concepts shown in Section 3 provide a vision for how the Village can grow and develop in the future to prepare for potential transit service. The concepts and design guidelines are intended to balance land use goals with future transit possibilities. Figures 4.3 and 4.4 highlight the preferred locations for residential, commercial and mixed-use zones, and open space.

Land use principles for a successful transit-oriented development include:

- Create a mixed-use commercial district to serve the community and support transit service.
- Encourage neighborhood service uses such as day care facilities, personal services, small cafes, coffee shops, and dry cleaners near transit stations.
- Within or near a transit-oriented development, encourage a vertical mix of uses, with retail or other pedestrian-friendly uses on the first floor and multifamily residential and/or office uses on upper floors.
- Increase residential density to support transit, while preserving Huntley's green neighborhood character. Consider condominiums, apartments, and rowhomes.
- Consider small lots for single family homes in and around transit-oriented developments to increase densities, activate streets, and transition to larger home sites.

- Consider reduced parking requirements for mixed-use developments that are in close proximity to transit stations.
- Encourage shared parking between commercial and office uses, and commuter parking lots.

Table 1 provides a list of transit supportive and nonsupportive uses. These uses/facilities will vary in scale and scope, depending upon the development's constraints and real estate market.

Table 1		
Encouraged Transit Supportive Uses		
Multi-family residential	Small lot single-family	
Restaurants/coffee shops	Barber shops/hair salons	
Fast-food outlets	Banking/ATM facilities	
Outdoor cafes	Day-care centers	
Video/DVD rental stores	Dry-cleaning stores	
News Stands	Flower shops	
Entertainment facilities	Photo-finishing shops	

Disouraged Non-Transit Supportive Uses

Automotive sales	Drive-in/Drive-through service
Car washes	Outdoor storage
Large format food stores	Funeral homes
Regional parks	Large parking lots
Low density single-family	Low intensity industrial uses
Warehouse distribution	Large format/warehouse retail



Mixed-use buildings with transit supportive uses are encouraged near the transit stations.



Mixed housing options such as small lot single-family, townhomes, and condominiums are encouraged.

Section 4: Design Guidelines - Land Use



Figure 4.3: Kreutzer Road Station Area Land Use Diagram

Village of Huntley TOD Guidelines

Section 4: Design Guidelines - Land Use



Figure 4.4: Coyne Station Area Land Use Diagram

Mixed-Use & Commercial Buildings

New developments around or near transit stations are encouraged to include mixed-use, multi-story buildings as well as single-story commercial structures. Buildings should hold key corners and line streets with storefronts to create a town center, "main street" setting. Buildings should have active first-floor, neighborhood-oriented commercial space. Following are design guidelines for mixed-use and commercial buildings:

- Upper floors of multi-story buildings should include residential or office uses that contribute to pedestrian activity on the street.
- Mixed-use and commercial buildings should seek to maintain or create a consistent but varied "streetwall" and be planned within a larger context, rather than on a site-by-site basis.
- Buildings should be oriented towards the street with main entrances and/or windows facing the primary or secondary street frontages. They should be sited close to the street right-of-way to reinforce a walking pedestrian environment.
- New development should be designed to provide a transition between differing uses and adjacent buildings through the use of step backs, building massing, facade articulation and style variation, and landscaping.

- Secondary retail and second floor office/residential entries should be designed and articulated similar to the main building entries from the primary or secondary street.
- Mixed-use and commercial developments should not exceed 4 stories in height. The buildings should maintain a commercial facade height for the first floor retail of 15 feet. Floors above grade level retail should generally be massed and scaled to maintain a 12 foot floor-to-floor height.
- Minor setbacks for landscaping or outdoor cafes can be considered based on a building's location within the overall development.



Mixed-use buildings should express a clear defined retail base.

• Gaps between buildings that interrupt the streetwall are strongly discouraged except for pedestrian pathways and service alleys within long blocks. Such paths should link the primary streets to parking areas and public spaces located behind buildings, and be no greater than 15 feet wide.



Buildings on corner sites should be located close to both street frontages to "hold" or "frame" the corner.

- Free-standing, single-story commercial "outlot" buildings should be used sparingly. If such a building is envisioned, the building should have high ceilings that create a greater feeling of enclosure along the street. Single-story commercial buildings should be at least 22 feet in height.
- Free-standing, single-story commercial buildings should be placed close to streets and other buildings. Pedestrians should be able to easily travel between buildings on clearly defined pedestrian paths, not parking lot driveways.
- All sides of "outlot" retail buildings should be designed to the same level as the front facade materials and details.

- Large, multi-story buildings should incorporate varied roof forms, articulation, and individual facades to accentuate a smaller unit/building massing.
- Multi-story, mixed-use buildings should not have continuous uninterrupted facade greater than 60 feet.
- Terraces and balconies are encouraged on upper residential floors. These elements should be designed to not protrude beyond the primary building facade. Balconies should be covered and recessed where possible.

- Commercial buildings located far from the street/ sidewalk are strongly discouraged. Parking areas should not be located between the building and street.
- Corner buildings should have interesting architectural elements or features to emphasize them as focal elements.
- Pedestrian areas between buildings are discouraged unless necessary for access to/from rear parking areas or strategically placed plazas. Such areas should be designed with decorative fencing, arches, seating, and street lights.



Freestanding, single-story commercial buildings should have high ceilings that create a greater feeling of enclosure along the street.



Large or long buildings should be designed as a series of smaller storefronts to reinforce a pedestrian-friendly streetscape.



Mixed-use and commercial buildings should seek to maintain or create a consistent but varied "streetwall."

- Primary store entrances should be located along the primary street frontage, with secondary entrances located behind buildings or along a secondary street.
- Outdoor cafes and seating areas are encouraged throughout a mixed-use TOD area to make streets more active and enhance their overall pedestrian-oriented character.



Outdoor cafes and seatings areas are encouraged to activate the streetscape and enhance pedestrian character.



Multi-story, mixed-use buildings should consider incorporating foundation landscaping where appropriate.



Building separations should be wide enough to provide a safe pedestrian environment while narrow enough to maintain the streetwall.



Village of Huntley TOD Guidelines

Section 4: Design Guidelines - Building Massing & Design

Character Image - Gateway Building

- A. As more specific plans for each potential transit station site are prepared, consideration should be given to placing "gateway" or "focal" buildings on key corners. Such buildings add to the character, visibility, and recognition of mixeduse districts and town centers.
- **B.** Enhance corner with plaza, landscaping, and focal element.
- C. Provide outdoor seating opportunities.
- **D.** Facilitate circulation with unique kiosks/ directories and other wayfinding elements.
- E. Provide pedestrian-scale decorative streetlights with unique, custom-designed street signs or banners.
- F. Where appropriate, provide decorative streetscape furnishings and paving materials. Define pedestrian crossings with decorative paving.



Residential Buildings

Housing near transit stations can increase ridership and activity throughout the day and on weekends, making an area more inviting to residents and visitors. Higher densities near transit can help generate the riders needed to sustain highquality service at a low cost, while allowing more residents direct access to transit. A variety of housing types and styles should be considered in a transit-oriented development to provide residents with a range of housing options and to avoid visual monotony. Following are design guidelines for residential buildings:

- Single family homes should include porches, stoops, and clearly defined entryways.
- Residential street frontages should be attractive and encourage pedestrians to "walk their neighborhood."
- Special attention should be given to the transition between large and small lot homes and multi-family housing and mixed-use/commercial areas. Building step backs, setbacks, varied massing, landscaping, and articulation should be considered.
- Consideration should be given to mixing housing products from block to block to accommodate a variety of income levels and architectural styles.

- Multi-family residential is encouraged near transit stations, including urban rowhomes, suburban townhomes, condominiums, apartments, and duplexes.
- In blocks with mixed residential building types, the height and massing of buildings should generally be no more than twice the height and massing of adjacent buildings (including buildings located across the street).
- Multi-family residential buildings should not exceed 4 stories in height.
- Large residential buildings should incorporate roof forms, articulation, and facades that accentuate a smaller unit massing and appearance.
- Front doors should face the primary street. Walkways leading to the front door, separate from the driveway, are encouraged.
- Landscaped setbacks along residential streets should be a minimum of 10 feet.
- Large multi-family residential buildings on corner lots should "hold" corners and define blocks.



Example of small lot single-family home.



Example of a condominium in a town center.

Village of Huntley TOD Guidelines

Section 4: Design Guidelines - Building Massing & Design

Character Image - Rowhomes

- **A.** Enhance streetscape character with landscaped corner "bump-outs."
- **B.** Provide on-street parking for residential visitors and guests, and to calm traffic along residential streets.
- C. Provide lawn parkways and street trees.
- **D.** Define public versus private areas with decorative metal fencing or stone walls no more than 3 to 4 feet in height.
- E. Consider pedestrian-scale decorative streetlights and unique street signs.
- **F.** Define articulated streetwall with rowhomes that reflect local architectural styles.



Commuter Rail Station

As discussed earlier, Metra is currently conducting an initial study to determine the feasibility of extending commuter rail service along the Union Pacific Railroad Belvidere Subdivision which runs through parts of Kane and McHenry Counties. Should the study indicate that transit service is feasible, further study would be done to evaluate the most effective transit alternative for the corridor. If Metra rail service rather than bus service is chosen, the planning and design of a future station will follow Metra's Commuter Rail Station Guidelines and Standards.

These guidelines/standards address:

- Platform design/location/size/access/amenities.
 - Platform length is based on the current car length of 85 feet with an additional 40-foot braking margin and projected peak riderships. Actual platform length is contingent on further studies including ridership projections.
- Station construction.
 - Station design is based upon projected ridership levels. Other factors that may cause variations in the guidelines include unusual site conditions and community involvement in design.
- Station structures/size will be based upon projected peak train boardings. Structures include a shelter, warming house, depot and waiting room.

- Mechanical systems.
- Landscaping.
 - Landscape design should consider the requirement of a 500 foot clear line of sight at rail crossings.
 - Any landscaping in or near the rights-of-way need to be approved by the Union Pacific due to potential line of sight issues for trains.
- Accessibility.
- Materials and performance.

For a full version of Metra's Station Manual, visit <u>www.</u> <u>metrarr.com/techservices/guidelines.html</u>.



Example of a transit station.



Station with waiting room and canopy.



Transit station in a mixed-use/commercial area.

Overview

Parking and building service/loading within mixed-use TOD's require careful consideration. In addition to Metra and Pace guidelines related to parking at transit facilities, the following design guidelines address parking and service areas for residential and commercial use.

- Parking and service areas should incorporate attractive materials to minimize the "hard" appearance of driveways and surface parking lots. Decorative paving should be used to delineate pedestrian crossings, parking aisles, and entrances within parking lots.
- Where feasible, parking should be located behind buildings or alleys, or placed underground with access off secondary streets and/or alleys.
- On-street parallel or diagonal parking is encouraged near business fronts and mixed-use venues to promote more multiple trip shopping, provide for "quick trip" parking, and activate shopping streets.
- Parking and service areas, including alleys, should be well lit, with glare on surrounding properties minimized.
- Driveway curb-cuts should be consolidated, whenever possible, to limit excessive turning movements onto primary and secondary streets, and maximize onstreet parking. In corner lot situations, they should be located as far as possible from road intersections.

- All parking and service areas should be designed to accommodate efficient snow removal and storage.
- Off-street parking areas shall provide the required number of ADA accessible parking spaces.
- The design of off-street parking and service areas design must meet the Village's Zoning Ordinance for sizing, spacing, location, and landscaping.
- Parking and service areas should be located and designed to minimize interference with pedestrian circulation and sidewalk connections to surrounding neighborhoods.



On-street parallel and/or diagonal parking spaces are encouraged with clearly defined pedestrian crossings.

- Parking areas should be buffered with landscaping, fencing, and/or architectural elements to provide an attractive streetscape. Physical transitions between buildings and parking lots should be as "seamless" as possible.
- Service/loading areas should be located as far as possible from primary entrances to residential and office buildings.
- Trash containers should be located within enclosures that provide year-round screening or along alleys that are not visible from sidewalks.
- Where feasible, trash containers should be consolidated into shared "corrals."



Paved alleys with landscaping and lighting should be considered.

- Dedicated parking for individual businesses is discouraged. Shared parking is encouraged to reduce the amount of land devoted to parking lots.
- Parking for adjacent parcels should be physically linked with driveways and without grade separation to allow efficient circulation between properties and businesses.
- Large, expansive parking areas are strongly discouraged. Parking areas should be broken into smaller "cells" or "pods" that are defined by buildings, landscaping, and/or pedestrian paths.
- Parking areas for residential, commercial, and mixeduse buildings should be located a minimum 15 feet from all building facades to allow for car overhangs, pedestrian access and landscape buffers.
- Where feasible, single-family homes, townhomes, and rowhomes should incorporate parking and service from rear-loaded alleys. Alleys can help increase densities near a train station by decreasing lot size, as well as reduce the effects of continuous driveways along sidewalks and streets.
- If commercial/mixed-use alleys are used for access to/from parking and service areas, they should be designed in an efficient and attractive manner. Alleys should be easily recognizable by motorists as an alley and not a local street. Such alleys should be 18 feet wide. Residential alleys should be 16 feet wide.



Parking areas should be located behind buildings and at least 15 feet from any building facade.



Parking areas should be buffered with landscaping, fencing, and/or architectural elements to provide an attractive streetscape.



Where feasible and practical, permeable paving materials should be considered to reduce storm runoff and reduce the heat island effect.



Alleys should be designed in an efficient and attractive manner.

Station Parking

The illustrative concepts for the Coyne Station Road and Kreutzer Road potential transit station sites reserve enough space for parking approximately 2,000 cars at each station site to accommodate the potential full build-out, meeting Metra's guidelines. Actual commuter parking needs, including phasing of commuter parking, will vary depending on ridership and parking projections for a transit mode that would be determined in future studies.

As shown in the illustrative concepts (see Figures 3.1, 3.2, 3.3, and 3.4), the parking lots are designed as smaller, linear parking lots extended along the tracks approximately a quarter mile walking distance from the station. It is important to provide ample buffer between parking lots and any environmentally sensitive areas or wetlands at either potential TOD site.

Within transit-oriented developments commuter parking should be provided in smaller lots to allow development to be placed close to a transit station. The lots also create opportunities for shared parking with nearby residential, institutional, and commercial uses. However, commuter parking should be located within line of sight of the station and within 1,300 feet of the transit station.

Metra Guidelines

As discussed previously, further studies will determine the most effective transit alternative for the study area. If it is determined that a new commuter rail facility should be located in Huntley, Metra has standard guidelines that should be followed to more specifically address the access, circulation, and parking needs of a future station. These guidelines should be used in conjunction with Huntley's standards to ensure that parking facilities meet the objectives of Metra as well as the Village.

An important component of a station parking facility is to safely and quickly move people and vehicles. For this reason, the location access points to/from parking lots and their effect on traffic and pedestrian flow needs specific design consideration. Metra's guidelines address:

- Site utilities and geotechnical considerations.
- Parking stall dimensions and layout.
- Vehicular and pedestrian access:
- Adjacent roadway level of service
- Distance to nearest intersections
- Ingress and egress points of adjacent land uses
- Existing curb cuts
- Access points opposite the proposed facility
- Physical features of adjacent roadways

- Operating speed on adjacent roadway
- One-way streets
- Projected traffic volumes.
- Commuter parking facility size/shape/usage:
- Proposed access locations should not increase congestion on roadway network adjacent to the transit/parking site.
- Access points and at-grade railroad crossings should be at least 150 feet apart.
- Sight distances for at-grade crossings and intersections should be provided in accordance with IDOT standards, Federal Highway Authority Railroad-Highway Grade Crossing Handbook, and Federal Manual on Uniform Traffic Control Devices (MUTCD).
- Internal circulation:
- Two-way aisles with 90 degree parking are preferred.
- Pace Development Guidelines should be used when designing a commuter station/parking lot serviced by buses.
- Parking lot layout should consider snow plowing, sweeping, and maintenance.

- Pedestrian flow:
- Maximum walking distance from parking lot to station is 1,300 feet (1/4 mile).
- Pedestrian-vehicular conflicts to be considered include local pedestrian patterns, bus stops, drop-off areas and schools.
- Pedestrian crosswalks, signage, and pedestrian signals should be considered in areas with heavy pedestrian traffic areas.
- Lighting design and pedestrian flow patterns should be coordinated.
- Sidewalks should be a minimum width of 5 feet.
- Sidewalks adjacent to a bus or taxi loading zone should be a minimum width of 12 feet.
- Handicap accessibility must comply with the latest ADA Standards and Illinois Accessibility Code.
- Other facilities:
- Special use facilities to be considered include handicapped parking and access, bus drop-off and loading, kiss-n-ride areas, motorcycle parking, and bicycle parking.
- Pavement design.

- Lighting considerations:
- When selecting a luminaire, the following should be considered: cost per luminaire and efficiency of light distribution, degree of light pollution onto adjacent properties and into the air, and mounting height combined with light distribution to avoid blinding motorists with glare.
- Pole and luminaire should follow local requirements and fit into the community's streetscape character.
- Stormwater drainage and detention:
- Stormwater detention should be provided, if required by local ordinance, including the use of separate grassed or paved basins, underground oversized pipes or chambers, and containment on the surface of the proposed lot.
- Fee collection system.
- Guidance and regulatory signage:
- Signs for commuter parking lots should conform to MUTCD as adopted by the State of Illinois, Metra Sign Specification Manual, and IDOT's Standard Specifications for Traffic Control Items.

- External signs such as at main entrances to commuter lots and internal guide signs for traffic flow and parking lot usage should be included. Different parking types include: permit parking, daily-fee (fare box) parking, handicapped parking, and motorcycle or compact cars only parking.
- Landscaping and fencing.

For a full version of Metra's Station Manual and Parking Manual, visit <u>www.metrarr.com/techservices/guidelines.</u> <u>html</u>.



Smaller, shared commuter parking lots near commercial areas and town centers are encouraged.

Section 4: Design Guidelines - Open Space

Overview

A variety of open spaces should be incorporated into mixeduse districts and residential neighborhoods around transit stations to serve the diverse needs of area residents as well as commuters and shoppers. A hierarchy of open space elements could include:

- Pocket parks and plazas.
- Central "greens" and "commons."
- Greenways and trails.
- Natural areas.

Following are design guidelines for open spaces:

- Open spaces should be designed to help create a sense of place for a district, neighborhood or station location, as focal points, activity nodes, and "identity markers."
- Open spaces should provide for passive use as well as for community events.
- Provide places and amenities for community events.
- They should be strategically located to facilitate access and use, pedestrian circulation, and social interaction.
- They should be highly-visible, well lit, and easy to use.

- They should be designed with low-maintenance elements and natural landscape plant materials.
- They should provide for functional seating and bicycle parking.
- Special features such as fountains, artwork, and gardens should be considered.
- Perimeter fences should not completely enclose an open space. If used, such fences should provide pedestrian access at regular intervals.
- Open space can be used to reduce stormwater runoff and the "heat island" effect of buildings and streets.



Neighborhood pocket parks should include low-maintenance landscaping, lawn areas, and seating opportunities.



Community open spaces should offer flexible space for events.



Neighborhood parks should include active and passive spaces.

Section 4: Design Guidelines - Open Space

- Small pocket parks and plazas should be considered at key corners, entries to mixed-use/commercial buildings, and/or between buildings. Pocket parks and plazas can provide outdoor seating areas, pedestrian pass-throughs, and/or cafe spaces.
- Pocket parks and plazas should be intimate in scale and complement the overall character and massing of a mixed-use town center setting. To the extent possible, these spaces should be framed or enclosed by buildings and open storefronts.
- The central green recommended within the town center at the Coyne Station site, should be an organizing element, gathering space, outdoor market, and setting for Village events and activities.



Neighborhood open spaces can provide residents an increased sense of community.



Plaza with landscaping, seating, and specialty paving in mixed-use/ commercial development.



A central green can be an organizing element, gathering space, outdoor market, and/or setting for events.



Multi-use trails can provide links between residential neighborhoods to mixed-use/commercial areas, and transit stations.

Streetscape

Attractive, effective streetscapes are an important component of transit-oriented development. Such physical amenities encourage people to walk to/from transit facilities as well as commercial districts and open spaces. An attractive streetscape can also be "character and identity" builders for districts, town centers, and overall communities. Future development around potential Huntley transit stations at Coyne Station Road or Kreutzer Road should carefully plan and design the following:

- Green buffers along arterial roads and collector streets, similar to Founders Way in the Talamore subdivision. Regional/community bike paths should be considered where appropriate within these buffers.
- Green parkways throughout new neighborhoods, including in front of multi-family housing.
- A "Town Center," "Main Street" type streetscape for mixed-use and commercial sites and blocks. This streetscape should have wide sidewalks with street trees, planters, and special paving where appropriate.

Streetscape elements that should be considered include:

- Streetlights.
- Street furniture.
- Landscape elements.
- Focal elements.
- Paving
- District and business signage.



Fountains can add interest to a streetscape's character.



Decorative crosswalks provide pedestrians a clearly defined route.



Decorative paving can enhance open spaces and streetscapes, and define activity areas.

Streetscape elements such as street furniture, planters, and lighting can enhance and unify an area's image and character, while improving the pedestrian experience. Within mixed-use commercial areas, streetscape elements to consider include: benches, trash receptacles, bicycle racks, bollards, decorative planters, ornamental fencing, paving materials, newspaper corrals, decorative street lighting, and other design elements. These elements provide a distinct, consistent streetscape theme for a district, reinforcing its character and enhancing its viability.

The following guidelines should be considered for streetscapes in mixed-use and commercial areas:

- Streetscape elements should be constructed of durable, vandal-resistant, low-maintenance, highquality materials and conform to ADA and local code requirements.
- Streetscape elements should especially be located and clustered in locations with high pedestrian traffic.
- Streetscape furnishings should be located where they will least impede pedestrian movement and snow removal.
- Decorative directional, identity, and informational signs should be strategically placed in mixed-use and commercial districts and near transit stations.
- Sidewalks should be a minimum of 15 feet in width with street trees in tree grates or raised planters.

- Sidewalks should have a minimum five foot unobstructed path of travel that is clear of street furniture and landscape.
- Sidewalks should be kept clear of all streetscape furnishings to maintain a minimum five foot wide consistent path of travel along residential streets.
- A minimum five foot wide lawn parkway should be established on each side of all residential streets.
- Decorative streetlights should be considered for all residential streets. Streetlights in residential areas should utilize a consistent streetscape light fixture theme and light source.





Decorative bike racks are encouraged in key seating areas, nodes, or parks.



At pedestrian crossings, visional and textural options that conform to ADA guidelines should be incorporated.

- Outdoor cafes and seating areas should be incorporated where feasible along sidewalks and plazas, and between buildings where feasible to vitalize, enhance, and activate streetscapes. They should not inhibit or impede pedestrian circulation along sidewalks. They should be placed either along the street/curb side or adjacent to the building in unobtrusive locations and in open spaces such as front setbacks and plazas.
- Outdoor cafes should be defined with temporary, seasonal, decorative fencing, pavers, walls, and/or landscaped planters.



Outdoor cafes should be defined with temporary decorative fencing, pavers, walls and/or landscaped planters.



Raised planting beds increase survivability of plant material and provide seasonal color throughout a streetscape.

Landscape

The following landscape guidelines are intended to supplement the Village's landscape requirements and the Village's Tree & Landscape Ordinance that provides a plant palette for a variety of landscape conditions. In addition to recommended species, the ordinance sets standards for material quality, digging and handling, inspection, planting details, and maintenance. Landscaping for new TOD development should meet or exceed requirements set forth in the ordinance.

- Landscaping should provide residents, visitors, commuters, and shoppers with shade and visual interest, while enhancing the area's overall quality of life.
- Open spaces, buffers, and streetscape plantings should integrate natural native landscape materials and especially consider sustainable design principles.
- Plantings in the public right-of-way and private property should complement each other in character, design, and quality.
- If tree grates are used in mixed-use commercial areas, trees should be appropriately sized with drained tree pits with a cast-iron tree grate that is flush with the sidewalk grade.

- All parkway plantings, unless otherwise noted, should maintain 9' of clearance from sidewalk to bottom of canopy at the time of planting.
- Landscaping should be layered to balance canopy, understory, shrubs/trees, and groundcover plantings.
- Landscaping should include a variety of native plant materials that will provide interest in all seasons. Plant materials should provide seasonal interest to add color, variety, and visual interest throughout the year.
- Perennial plantings that provide a variety of seasonal bloom periods should be incorporated, where feasible.
- Residential landscaping should respect and complement the architecture, especially front door, porch, windows, and steps. Plantings should not obscure architectural elements or views to and from the street.
- "Color landscape pockets," with low plantings should be considered at corners of residential streets where feasible, while maintaining five feet (5') of clear pedestrian area along the sidewalks.
- Lawn parkways should be planted with native, salttolerant, and disease-resistant tree species.



New plantings and "color pockets" should be incorporated at corners where feasible.



Parkway planting should follow requirements set by Huntley's Tree and Landscape Ordinance.



Using native plantings and integrating sustainable design principles into the overall streetscape design is encouraged.



Plant materials should provide seasonal interest to add color, variety, and visual interest to the home throughout the year.

Village of Huntley TOD Guidelines

Section 4: Design Guidelines - Streetscape & Landscape

To soften parking and service areas, any new development should include buffers, landscape islands and/or bioswales to break up large areas of paving.

Larger, more intensely planted internal parking lot islands help to create additional open space as well as:

- Reduce the "urban heat island effect."
- Reduce stormwater run-off.
- Increase plant species diversity and survivability.
- Increase space for snow storage.



Low maintenance bioswales can be used in open spaces and parking areas to reduce stormwater.

- Create opportunities for best management practices including bioswales.
- Provide additional pedestrian refuges.
- Soften hardscape appearance.
- Increase buffer yard transitional use screening.
- Create a more attractive development.