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Date: July 10, 2012
Project No.:
Delivery: Courier

Re: **Re-Imagining Cardinal: The Village Streetscape Plan**

We enclose the following:

10 copies of the Streetscape Plan as requested

Best Regards,

ECOPLANS, A MEMBER OF MMM GROUP LTD.

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c:

For your approval	<input type="checkbox"/>	For your use	<input type="checkbox"/>
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Per: _____

2012

Re-Imagining Cardinal: The Village Streetscape Plan



Ecoplans, a member of the MMM Group Limited
6/25/2012

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1 Introduction

The historic industrial Village of Cardinal sits on the St. Lawrence Seaway just east of Prescott. Surrounded by water on nearly three sides, the northern boundary of the village bleeds out into the sprawling agricultural fields of the Township of Edwardsburgh-Cardinal. The Village itself is bisected by the Old Galop Canal, as well as County Road 2, an early and important road in the colonization of Ontario.

Although Cardinal has changed significantly over the years, many of its original buildings still remain, and its patterns of streets and open spaces remain relatively constant. According to *The History of Cardinal*, compiled by the Cardinal History Book Committee, the streets of Cardinal have always been a focus for the village, and a point of pride. The streets were gravelled in 1880 in an effort to combat mud, and plank crossings were laid at the intersection of Dundas and Henry, William and Lewis Streets in order to aid pedestrians in crossing the street. Paving of the streets south of the Galop Canal began in 1927. The Cardinal Electric Light Company reached an agreement with the Edwardsburgh Starch Company in 1891 to supply street lights to villagers¹.

These early efforts to improve the streetscapes of Cardinal reflect their importance in community life of the village, a role that continues today. Streets are often the stages upon which the life of a community are acted out; where people can meet, shop, stroll, sit, play and rest. They are vital to the character of a community.

¹ Cardinal History Book Committee. *The History of Cardinal*. St. Lawrence Printing Company Ltd; Prescott. 1999.

2 Background

Much of the direction for the Streetscape Plan is provided for in Revitalizing Cardinal: The Village Community Improvement Plan and the Edwardsburgh-Cardinal Economic Development Strategy.

Community Improvement Plan

Revitalizing Cardinal: The Village Community Improvement Plan was completed by MMM Group Limited and adopted by Council on January 23, 2012. The intent of the Community Improvement Plan (CIP) was to provide the necessary tool, and a visionary framework for them to fit within, in order to encourage the revitalization of Cardinal.

Through the CIP public consultation process it became clear that the community had several priority areas for revitalization including: improvement to the waterfront and the canal, in walkability and pedestrian connections, the streetscape, retail opportunities, property and building maintenance and public open space. In response to these public priorities, this Streetscape Plan follows upon recommendations of the CIP to create a guiding document that will provide a design framework and consistent vision that will inform changes to the public realm for years to come.

Focused on the revitalization of Cardinal, the CIP provides a clear vision as well as goals and objectives that support the reinvigoration of the streetscape and public realm of Cardinal. The Community Improvement activities are founded upon a spirit of community co-operation, and involve both public and private sector support. This Streetscape Plan is a major component of the Township led programs related to the CIP, and some of the recommendation of this report relate to capital projects to be undertaken as infrastructure requires upgrade and replacement. Financial incentives outlined in the CIP encourage property owners and tenants to upgrade and improve their

properties, with a particular focus on contribution to the overall streetscape character of Cardinal.

Economic Development Strategy

The Edwardsburgh-Cardinal Economic Development Strategy (ED Strategy) completed in May 2012 by McSweeney & Associates is intended to provide strategic direction and vision in terms of economic investment. As part of that plan, public consultation identified elements such as tourism and specialty shops, transportation and warehousing, expanded port services, seniors housing close to all amenities, and small and creative businesses as being key to the local economy in the next 5 to 10 years. The vision developed in the plan speaks to a united community that has many amenities, is a bridge between urban and rural, and links strongly to the community's history and sense of place.

The ED Strategy contains a number of recommendations for the Township, including the implementation of the CIP, as well as the Streetscape Plan in an effort to begin the revitalization process. A comprehensive branding exercise is now also being undertaken for the Township which will highlight the community's unique identity, a brand that should be carried throughout streetscape elements as they are defined.

2.1 Vision

It is clear that the streets of Cardinal have performed evolving functions throughout the years; however, they have always been at the centre of community life.

The vision for the streetscapes of Cardinal is to return them to the vital and thriving character that they once had. To transform the streets into vibrant and engaging places once again, respecting the function of the streets as places for business and travel and celebrating the local heritage and community identity.

In order to achieve this vision, the Streetscape Plan has developed conceptual plans for the Commercial and Gateway areas in Cardinal, design guidelines for the streetscape typologies, and a palette of coordinated materials that will help to bring visual continuity to the corridor.

2.2 Goals and Objectives

The goal and objectives of the Streetscape Plan build upon those set out in the CIP and ED Strategy. They are inspired by the comments and input received from the community and Township staff.

Goal #1: Create a unified character and streetscape theme which exemplifies the values and identity of the community.

Objectives:

- Apply a coordinated streetscape palette to the design of all streets in Cardinal
- Coordinate streetscape elements such as signage and banners with the branding exercise undertaken as part of the ED strategy
- Establish a theme that is centred around Cardinal's heritage and its historic ties to the St. Lawrence Seaway
- Use materials such as limestone that reference the defining features of Cardinal such as the Seaway and the canal
- Implement a street tree planting program that works to continuously replace and increase urban canopy coverage

Goal #2: Create a public realm that is attractive and vital.

Objectives:

- Program public open space with activities that create four season interest, such as a farmer's market in summer, and a skating rink in winter
- Allow for flexibility in streetscapes through the use of moveable furniture, temporary art installations, as well as festival and events spaces within the streetscape

Goal #3: To revitalize the community through the creation of streetscapes in which residents, businesses, and visitors thrive.

Objectives:

- Foster a village with an active public realm, a strong sense of community, and an engaging cultural and arts scene
- Contribute to the attraction of businesses and investment that will support a sustainable and inclusive community

Goal #4: Foster a sense of community pride through maintenance and beautification efforts.

Objectives:

- Through programs outlined in the CIP, encourage property owners to maintain and enhance their properties, particularly as they contribute to streetscape and public realm character
- Continue to encourage and support volunteer programs such as Cardinal in Blooms
- Adhere to the principles of Crime Prevention Through Environmental Design (CPTED)

Goal #5: Promote use of multiple modes of transit and encourage and support use by pedestrians and cyclists while and providing for the needs of all ages and abilities.

Objectives:

- Improve infrastructure by widening sidewalks, creating bike lanes and improving pavement surfacing and curb cuts
- Establish a connected network of sidewalks and trails
- Establish more signed and painted pedestrian cross walks to improve road safety
- Incorporate universal accessibility into all elements, from surfacing and connectivity to site furnishings

3 Community Dialogue

From the outset of the Streetscape Plan project it was clear that the people of Cardinal care deeply about their community, and want it to thrive. They have a clear vision for the future, and are willing to share in efforts needed to achieve it. Several public engagement activities were scheduled through the project. The first was a community walk through, organized as part of the project initiation meeting. Members of the study team, Township Staff and key stakeholders from the community including business owners and residents walked some of the streets in the downtown area to talk about the opportunities and constraints associated with revitalizing the streetscapes of Cardinal.

There were a number of key points noted during the walkabout that are summarized below. It is important to note that these points are intended to be a summary of the major themes.

Key points noted included:

- Removing commercial signage on buildings that are no longer in business is important
- Cardinal in Bloom puts together hanging baskets and decorative plantings in flower beds
- Overhead wires should be de-emphasized by bringing streetscape emphasis below wires
- Businesses affiliated with the Edwardsburgh/Cardinal Business Association (BA) are not all located downtown; there are currently approximately 8 businesses within the downtown core
- Local businesses contribute some money to community initiatives
- Current street signage and decorative lighting is over 10 years old
- Potential for a bulletin board or central kiosk for community postings at Lewis and Dundas Streets
- Cyclists are prominent within Cardinal; there are currently no amenities such as bike racks within the downtown core
- Consideration for truck traffic needs to be accommodated
- Green space across from the Legion has great opportunity; potential to create a focal point for something such as a bandstand; programming is missing in this area
- There are no current region-wide initiatives to improve trails/trail connections

A public open house was held on May 31, 2012 at St. Paul's Anglican Church in Cardinal. Those who attended the open house circulated around presentation boards, which detailed the streetscape typologies, concept plans, and materials, and directing questions towards the consulting and Township staff. Most attendees completed a

questionnaire, providing valuable feedback regarding the preliminary streetscape plans, concepts and details. The following summarizes the feedback received through the questionnaires, as well as that provided verbally at the meeting:

- Signage needs to be upgraded; current signage is poorly maintained and aging
- Sidewalks are in poor condition
- Hydro poles should be clad in a decorative material to improve their appearance
- More businesses are required to encourage people to come downtown
- Remove curb bump outs that impede traffic
- Cardinal is a river community and the canal heritage should be incorporated into the streetscape theme
- The thoroughfare is the most important streetscape in Cardinal because it captures your attention
- Accessibility is important
- Facilities for tourists may encourage them to stay or come back
- An outdoor market would be great, elements are required to activate the streetscape
- Ensure that curbs are rolled to avoid damage from snow plows
- The canal could be made more appealing

The key points heard throughout the public consultation process have informed the streetscape design plans.

4 Streetscape Typologies

For the most part, the streets of Cardinal are arranged in a modified grid pattern, responding to geography where necessary. Many of the streets terminate in long views across the Seaway or down the canal given the proximity of both. As part of the inventory process, the study team categorized the streets of Cardinal so that design principles could be applied to each. A map of the typologies can be found within Appendix A of this document.

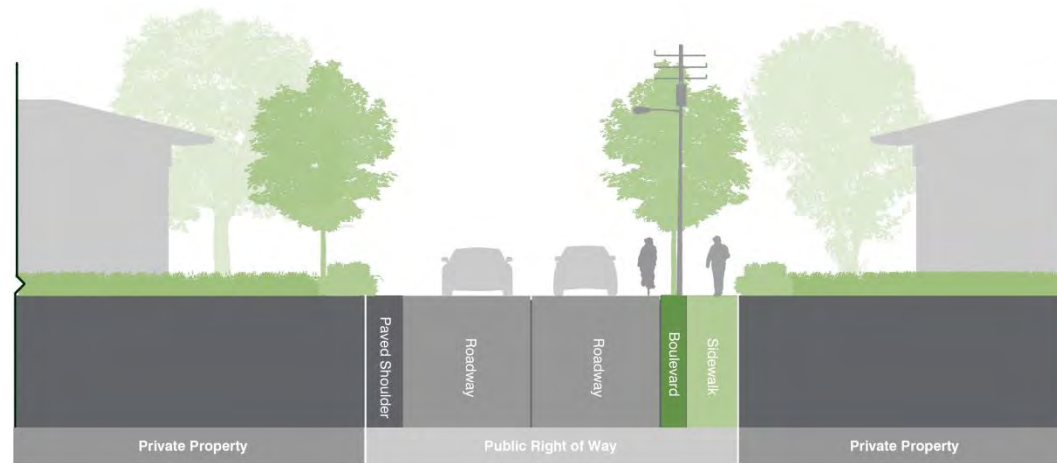
4.1 Residential Streetscape

Cardinal’s residential fabric consists primarily of single detached family dwellings which front onto relatively narrow roads. The roads typically consist of two lanes of traffic (one in each direction) and where space permits, informal on-street parking occurs along the shoulders of the roadway. Vehicular volume is generally low and slow in nature. Where sidewalks exist, they are primarily located on one side of the street and directly abut the roadway. Street lighting consists of cobra head fixtures mounted on existing hydro poles.

A significant enhancement within residential streetscape typology will include **street tree planting**. Where space permits within the public right-of-way and conflicts with utilities are limited, the Township is strongly encouraged to install street trees. Where space is limited within the right-of-way it is recommended that the Township encourage property owners to plant street trees on the private side of the property line. Incentive programs should be implemented to help support this initiative.

It is recommended that when infrastructure or utility projects occur along residential streets, that the Township review the streetscape configuration in relation to installing a turf **boulevard** between the sidewalk and the edge of the road to create a buffer between vehicles and pedestrians as well as to provide a location to install street trees.

Sidewalk improvements should also be implemented along residential streetscapes. Where space allows, sidewalks should be widened to a 1.5m width to comfortably allow two people to walk side by side.



4.2 Commercial Streetscape

The commercial streetscapes focus around Cardinal’s historic downtown core. The majority of commercial properties are located around the intersection of Bridge Street and Dundas Street and extend west and east along Dundas Street to Waddell Street and Walter Street, respectively. The building fabric primarily consists of two to three storey structures, with commercial enterprises sited at street level, with residential apartments on the upper level(s). Roads typically consist of two lanes of traffic (one in each direction) and on-street parking is provided on either one or both sides of the street. Along the Bridge Street corridor, the road is heavily used by cars and trucks as this is a key corridor between County Road 2 and the CASCO industrial complex. The existing concrete sidewalks are relatively narrow and directly abut the existing on-street parking. Hydro poles are located adjacent to the sidewalks, within the parking lane. Decorative street lighting has been mounted to the hydro poles. Hanging baskets are also hung on the poles throughout the summer months.

The existing commercial streetscape fabric suffers from narrow sidewalks and a limited pedestrian realm. It is recommended that **on-street parking** be consolidated on one side of the street to allow for increased sidewalk widths, street tree plantings, and enhanced landscaping within commercial corridors. On-street parking should be visually separated through paving materials and bump-outs to create a defined realm which transitions from moving vehicular traffic to the pedestrian environment.

Sidewalks should be widened to a minimum of 2.5m, where space allows and a **boulevard** area should be designated between the street edge and sidewalk to accommodate elements such as site furnishings, enhanced planting, and street trees. Boulevards within the commercial streetscape should be paved with unit paving materials.

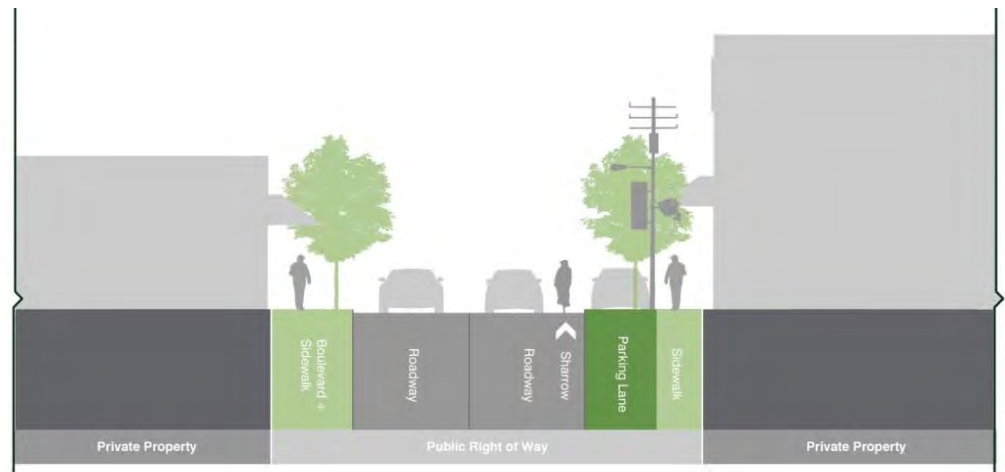
Street trees should also be incorporated into the streetscape, where space permits. Trees within the commercial realm should be planted in a

tree pit or ideally, a continuous trench with structural soils, and a tree grate over top to create a flush surface with the sidewalk.

Decorative luminaires should be installed on the existing hydro poles.

The Township should continue to pair with Cardinal in Bloom in the installation of hanging baskets in the summer months. Opportunities for the inclusion of removable **planters** along the streetscape could also be explored. The installation of **banners** on the existing hydro poles is also recommended.

Opportunities for the inclusion of shared-lane markings or **sharrows** could also be explored for inclusion within commercial streetscapes. A sharrow is a street marking placed in the center of a travel lane to indicate that a cyclist may use the full lane.



4.3 Civic Streetscape

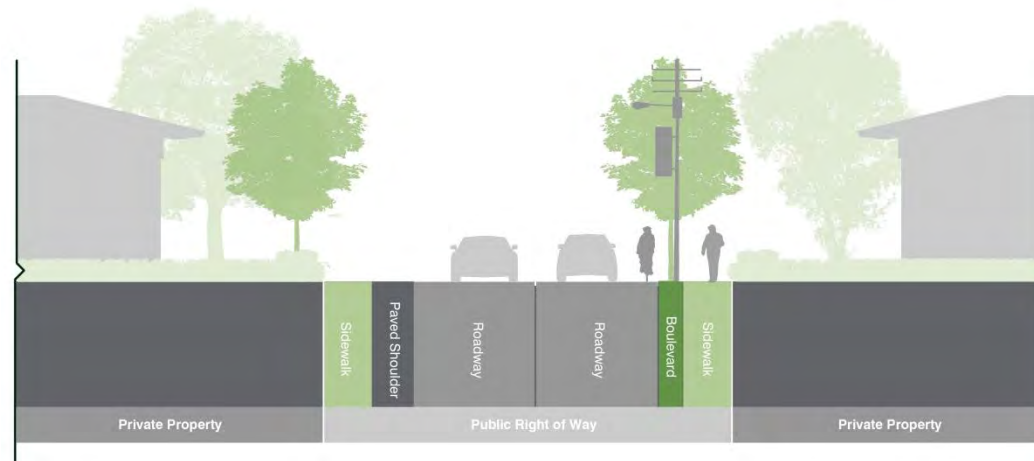
The civic streetscape is perhaps the most varied typology in terms of the character of the built environment which defines these corridors. The civic streetscapes are identified by the destinations to which they lead, which include the community recreation centre, the library, the elementary school, and waterfront open space. Civic corridors exist within residential neighbourhoods, but have increased traffic levels and use as they are primary routes to key facilities throughout the community. Civic streetscapes are typically two lanes of traffic (one in each direction) with informal on-street parking. Traffic volumes are moderate. Sidewalks are generally narrow and directly abut the roadway.

Because the civic streetscapes connect to significant facilities within the village, it is recommended that enhanced features such as **banners** and **decorative lighting** be incorporated within streets of this type.

As with the **street trees** within residential streetscapes, where space permits, trees should be planted by the Township within the public right-of-way. Where space is limited it is recommended that the Township encourage property owners to plant street trees on the private side of the property line. Incentive programs should be implemented to help support this initiative.

Sidewalks should be widened to a minimum of 1.5m. If space allows, a turf or landscaped **boulevard** should be incorporated between the sidewalk and roadway to provide a physical and visual buffer from moving vehicles.

Opportunities for the inclusion of shared-lane markings or **sharrows** could also be explored for inclusion within civic streetscapes as these streets provide primary connections to community facilities.



4.4 Thoroughfare Streetscape

County Road 2, or what is locally referred to as Highway 2, has been identified as a thoroughfare streetscape. This corridor is typified by two lanes of traffic (one in each direction), as well as right turning lanes at key locations. Traffic speeds are higher in nature, with a posted speed limit of 60km/h. The highway is heavily used by both trucks and cars and is a key thoroughfare between communities to the east and west of Cardinal. A concrete sidewalk can be found along the north west side of the street, from the train tracks west beyond Shanley Road; the sidewalk is directly adjacent to the roadway.

The thoroughfare streetscape is a highly travelled route and subsequently provides a great deal of opportunity for streetscape enhancements that will be viewed, appreciated, and remembered by those passing through. As such, it is recommended that **banners** and **decorative lighting** be installed on the existing infrastructure of hydro poles found along the highway. **Street trees** should also be installed to create a unified visual environment and help create a sense of scale along the streetscape.



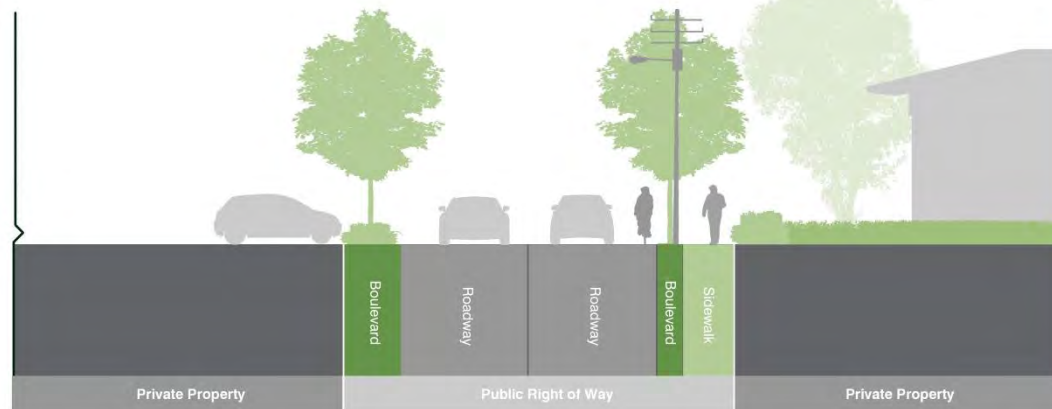
4.5 Industrial Streetscape

Roadways that are directly adjacent to the CASCO plant have been identified as industrial streetscapes. Primarily these streetscapes are bordered by industrial lands on one side and comprised of residential properties on the other. Like the other streets in Cardinal, the corridor is typified by two lanes of traffic (one in each direction). Much of the traffic that travels the industrial corridors is comprised of large trucks.

Little visual or physical delineation exists between the existing expanses of asphalt associated with the private industrial lands and the realm of the public streetscape. Creating clear boundaries and defining edges between the industrial lands and the streetscape will help to visually order the corridor and the streetscape will begin to serve as a buffer between residential and industrial lands, rather than an extension of the industrial environment.

Parking areas and other open land associated with the industrial lands should be visually separated through a **planted boulevard** where space permits. Where space is restricted, it is recommended that paving materials, such as unit pavers, be installed to define the street edge from the parking area.

Where space is adequate for a boulevard, low-growing ground covers or shrubs should be installed to ensure sight lines are preserved. **Street trees** should also be incorporated into boulevards where space allows and conflicts with the industrial use are limited.



5 Streetscape Plans

5.1 Commercial Node

The intersection of Dundas Street and Bridge/Lewis Street should be enhanced to create a pedestrian node within the downtown. Embracing this intersection as a central outdoor meeting place and working towards creating a vibrant community hub should be a priority for the Township of Cardinal. The introduction of a variety of streetscape elements at a pedestrian scale will aid in creating a sense of place and will contribute to the overall definition of a community identity.

Creating a ‘people space’ can be achieved through the introduction of unified **street furnishings** such as benches, where people can meet and talk. Garbage receptacles should also be installed near to benches to encourage users to dispose of their litter appropriately. The additional space afforded within the pedestrian realm of this intersection provides an opportunity for the inclusion of **bicycle racks**, an amenity that is lacking within downtown Cardinal.

A **community kiosk** or sign board should be installed to advertise community events, with postings from the Township as well as local residents. **Wayfinding signage** that caters to both vehicular and pedestrian traffic should also be installed to direct visitors to key locations within the community, such as parks and community facilities.

Where space allows, **street trees** should be installed along the street edge to create a continuous canopy and sense of enclosure to the pedestrian spaces of the streetscape. Large **planting beds** should also be installed at the corners of the intersections to create seasonal interest. Raised beds that allow an informal seating edge should also be considered to provide additional places to sit. The siting of street trees, planting beds, street furniture and signage must all be place to ensure that the visibility of vehicular traffic is not impeded or obstructed.

Because of its high visibility by vehicular and pedestrian traffic, this intersection is an excellent location for the installation of **public art**. Not only does art help contribute to the overall community identity, it provides a point of reference for mental mapping and a memorable point of recognition that visitors and residents can associate with Cardinal.

Other elements integral to the commercial streetscape such as decorative **banners** and **decorative light standards** should also be incorporated into this node.

Paving improvements should also be undertaken within the pedestrian realm of the intersection. Plaza areas should be paved with decorative unit pavers.

Reclaiming this intersection as a welcoming people space means the creation of **cross walks** that are highly visible to both vehicular and pedestrian traffic. Crosswalks in this location should be a minimum of 3m in width.



While the above elements help to enhance the feeling of comfort and safety to pedestrians and provide a venue for community gathering and interaction, much of the life of the streetscape comes from the **programming** that takes place in the space. The space could be used to host annual community events or seasonal, weekly events such as a local farmer's market. To increase the pedestrian activity within this community hub, it is recommended that where building opportunities exist adjacent to the plaza areas, the Township should encourage new use/development to activate street edge through sidewalk cafes or patios. In the interim, prior to development, these spaces provide the community with essentially blank canvases in which to host events or festivals or incorporate temporary public art installations.

New development should have its façade on the street edge to ensure the pedestrian scale of the intersection is maintained. There should be no off-street parking visible from the street.

Appendix B – Gateway and Commercial Node Plans contains concept plans for the treatment of the Commercial Node.

5.2 Gateway

The intersection of County Road 2 and Bridge Street is a significant gateway to the community of Cardinal and the downtown core. This intersection is also a primary pedestrian crossing point and is an important link between the community facilities such as the recreation hall and library to the north and the downtown core and waterfront open space to the south. As such, this intersection should also be considered a high priority for streetscape enhancements.

The Pedestrian Environment

Creating a safe and highly visible **pedestrian crossing** across County Road 2 will be a significant aspect of the gateway plan improvements. In addition to the installation of crosswalk markings, it is recommended that a bumpout be created on the south side of County Road 2 to narrow the road to two lanes of traffic (one in each direction) and reduce the width of road that a pedestrian needs to cross. A pedestrian refuge should be installed between the two lanes of traffic. A pedestrian refuge is *a small section of pavement or sidewalk, completely surrounded by asphalt or other road materials, where pedestrians can stop before finishing crossing a road.*² Pedestrian refuges provide a safe harbour for pedestrians to cross one lane of traffic before commencing crossing the second lane of traffic. The consolidation of the existing pedestrian network is also recommended to redirect pedestrians and cyclists to an off-street trail connection between Bridge Street and County Road 2 and convey them to the improved crossing point. This reconfiguration will eliminate foot traffic from the uncomfortable pedestrian environment along Bridge Street and County Road 2 and move them through the underutilized green space adjacent to the Cenotaph. Consolidating the existing asphalt trail and sidewalk within the Cenotaph grounds will also increase the green space in this area, providing an increased opportunity for site programming.

² http://en.wikipedia.org/wiki/Refuge_island



Gateway Features

As part of the gateway improvement, a number of streetscape elements should be incorporated to define and enhance this important entry to Cardinal. **Gateway signage** should be installed at the south west corner of the intersection, between Bridge Street and the rail line; signage materials and themes should be in keeping with those identified within this Streetscape Plan. The Township is strongly encouraged to explore opportunities to involve a local artist into the design and/or production of the sign. The existing gateway sign located along Bridge Street should be removed.

Wayfinding signage that caters to both vehicular and pedestrian traffic should also be installed to direct visitors to key locations within the community, such as parks and community facilities. Signage should be located adjacent to the pedestrian crossing along County Road 2.

The inclusion of large, bold pieces of **public art** within the triangle of land between Bridge Street and the rail line will help to visually define this gateway and create a draw to the downtown core. Public art provides another opportunity to express the themes identified as part of the Streetscape Plan and bolster community pride and identity.

Street trees and enhanced landscape planting will help to define the intersection and provide a visual unity to the streetscape of Bridge Street and County Road 2.

As noted in the Commercial Streetscape and Thoroughfare Streetscape sections of this report, it is recommended that decorative light standards be installed on the existing hydro and light poles. On Bridge Street it is recommended that light standards, including a decorative pole, be installed on the west side of the street from County Road 2 to the rail line to mirror the standards on the opposite side of the street and create a visually unified corridor.

With respect to the establishment of traffic islands and pedestrian refuges within the streetscape, truck turning radii and lane width requirements should be taken into consideration. All work should comply with the Transportation Association of Canada (TAC) Geometric Design Guidelines and all applicable municipal standards and guidelines.

Appendix B – Gateway and Commercial Node Plans contains concept plans for the treatment of the Gateway.



6 Streetscape Details

6.1 Street Furniture

Well designed and placed street furniture can make the pedestrian environment more inviting, comfortable and convenient. Street furniture should

- a) Be located in the commercial corridor and focused specifically around the Commercial Node
- b) Based on the furnishings selected for the Streetscape Plan, become standard furnishings for Cardinal

Benches

Benches provide a place for pedestrians to rest, wait, and gather and can serve as meeting points within the streetscape. It is important that benches are accessible to all uses and subsequently backed benches with arm rests have been selected. While the *Accessibility for Ontarians with Disabilities Act* (AODA) does not set out guidelines for the placement and dimensions of benches in public spaces, the *American with Disabilities Act* (ADA) provides a comprehensive set of guidelines. The following ADA clear widths should be followed when installing benches³:

- 1m minimum on either side of bench
- 1.5m minimum from fire hydrants
- 0.3m from any other amenity, utility, or fixture
- 1.5m minimum pedestrian path in front of bench
- 0.3m clear width where back of the bench abuts a building, or wall
- 1.2m minimum pedestrian path must be provided behind a bench when located at the front of the sidewalk facing the curb



Recommended Bench:

Manufacturer: Maglin

Style: MB300M Bench

Colour: Bronze

³ Adapted from Boston Complete Streets Guidelines Draft July 2011

Garbage Receptacles

Providing garbage receptacles throughout the sidewalk environment encourages users to dispose of litter appropriately and keep the streets clean and tidy. Garbage receptacles should

- a) Be located in Commercial Streetscapes
- b) Be sited in the vicinity of other street furnishings such as benches (keeping a minimum 1m buffer between them) and in areas of higher pedestrian traffic, such as near intersections/ pedestrian crossings
- c) Where space allows, be located outside of restaurants
- d) Be sited in consultation with Township staff, with the following clear widths in mind:
 - 0.5m minimum clear width surrounding receptacle
 - 1.5m minimum from fire hydrants
 - 1.0m minimum from other furniture
 - 1.2m minimum pedestrian pathway by the receptacle



Recommended Receptacle:

Manufacturer: Maglin

Style: MLWR250-32 Trash Container

Colour: Bronze

Bicycle Racks

Bicycle racks are a necessary amenity for a community that encourages multiple modes of transit. Bicycle racks should:

- a) Be installed within the plaza spaces of the Commercial Node and in other areas along the Commercial Streetscape, where space allows
- b) Be considered for installation adjacent to community facilities such as the library, recreation centre and public school, though these racks would likely be installed within the 'private realm', adjacent to the buildings
- c) Be sited parallel with the street edge, near to the curb so as not to impede pedestrian walkways
- d) Be spaced per manufacturer's recommendations
- e) Be located a minimum of 1m from other street furnishings, light standards, street trees, buildings, etc.



Recommended Bicycle Rack:

Manufacturer: Maglin

Style: MBR970 Bike Rack

Colour: Bronze

Tree Grates

Trees in hardscaped areas, such as the Commercial Corridor and Node should be installed with a tree grate to maximize the pedestrian environment. Tree grates should:

- a) Be flush with surrounding paving materials



Recommended Tree Grate:

Distributor: Trystan Site Furnishings

Style: TR48

Size: 48" x 48" x 1"; Tree Opening 16"; Slot size 3/8"

Colour/Finish: Cast iron, as cast

6.2 Decorative Lighting

Street lighting fulfills a functional need of allowing for the safe movement of vehicles and pedestrians during night-time hours. It is also another opportunity to enhance and unify the streetscape, through the inclusion of decorative luminaires and brackets. Streetscape lighting should:

- Be located within Thoroughfare, Civic, and Commercial Streets
- Include the installation of decorative luminaires and brackets on existing hydro poles and concrete light standards
- Meet requirements and standards of the Township and Counties in relation to illumination needs as identified by a qualified electrical engineer
- Be selected to be 'dark sky' friendly
- Utilize energy efficient luminaires

Decorative Additions to Light Standards

Light poles can also incorporate additional decorative elements such as hanging baskets and banners. Recommendations relating to **hanging baskets** include:

- The Township should continue to partner with Cardinal in Bloom to plant and care for hanging baskets
- Hanging baskets should continue to be located within the commercial and civic streetscapes
- Baskets should be located so as not to visually or physically impede pedestrian or vehicular traffic
- Baskets should not block or obstruct banners where both are included on one light standard

Banners provide a decorative element to the streetscape and offer the opportunity to advertise community events such as a farmers market, an art fair, or a holiday parade.

Banners should:

- Be installed on light standards/hydro poles within the Thoroughfare, Civic, and Commercial Streetscapes of Cardinal
- Not to visually/physically impede pedestrian or vehicular traffic

Recommended Light Fixtures:

Luminaire Style: Domus 55 - DMS55-SMB

Bracket Style: PC4/PC6/PC8 (dependent on lighting requirements/streetscape typology)

Pole Style: SM6 or SM8 (dependent on height requirements)

Colour: Textured Bronze



6.3 Sidewalks and Boulevards

Sidewalks

The sidewalks that weave throughout Cardinal provide an important pedestrian network and connections within the community. As such, they should be maintained and enhanced to ensure the longevity of this important piece of pedestrian infrastructure.

Sidewalks throughout Cardinal should:

- a) Continue to be constructed of concrete with a broom finish
- b) Be a minimum width of 1.2m and a preferred width of 1.5m
- c) Within Commercial Streetscapes, be a minimum of 2.5m wide, where space allows
- d) Be graded to avoid ponding water and ice build up
- e) Adhere to universal accessibility standards providing dropped and textured curbs at all crossing points
- f) Localized dips, hollows, and heaved paving within the pedestrian realm should be clearly marked and repaired as soon as possible to eliminate the potential for barriers or injury to pedestrians
- g) Sidewalks should be replaced as a whole as part of street infrastructure projects and improvements

Boulevards

Whether hard-surfaced, grassed, or planted boulevards provide opportunity for streetscape beautification such as tree planting, enhanced landscaping, or decorative paving. They also allow for a location for streetscape elements such as hydro poles, site furniture, and bicycle racks. Boulevards offer improved pedestrian comfort as they provide a buffer between the pedestrian environment and vehicular traffic. Boulevards should:

- a) Within Residential Streetscape Typologies, be softscaped with either turf or low-growing ground covers
- b) Be a minimum of 1m in width, where softscaped, to optimize growing conditions for turf and other vegetation

- c) Within Commercial Streetscapes, incorporate decorative unit paving into boulevard areas to create a visually distinct amenity areas, while accommodating pedestrian traffic
- d) Be a minimum of 0.5m in width, where paved
- e) Where unit pavers are implemented, boulevards should extend from the back of the curb to the edge of the sidewalk, with the sidewalk then extending to the building face
- f) Ensure landscaping, street furnishings or other amenities do not impede pedestrian or vehicular traffic, physically and visually
- g) Within the Commercial Corridor, implement parking bay bump-outs to frame parking and act as traffic calming



Recommended Boulevard Unit Pavers:

Manufacturer: Unilock

Style: Brussels Block

Colour: Limestone

Size: Half Stone (17.3 x 10.4 x 7cm)

Pattern: Running Bond – run perpendicular to road

6.4 On-Street Parking

On-street parking provides an important amenity within the commercial realm of Cardinal. On-street parking should:

- a) Be visually defined and be distinct from the pedestrian environment as well as the roadway
- b) Be surfaced with stamped asphalt to further define the parking lane
- c) Provide a minimum of two (2) accessible parking spaces which are clearly marked through signage and pavement markings and are directly adjacent to curb cuts
- d) Incorporate curb extensions or bump-outs from the pedestrian realm to help define the parking lane
- e) Incorporate enhanced landscaping, street trees, or furnishings (that does not visually or physically impede pedestrian or vehicular traffic) within bump-outs
- f) Incorporate a raised curb along bump-outs to protect features such as planters, trees, and furnishings, from damage by vehicles and maintenance equipment



6.5 Crosswalks

Crosswalks provide a literal intersection between the pedestrian and vehicular environment. Creating a safe and comfortable crossing is paramount and as such, crosswalks should:

- a) Be highly visible features of the streetscape
- b) Be universally accessible with textured curb cuts installed at all intersections to eliminate barriers to crossing the street
- c) Be marked with a Thermoprint treatment at major pedestrian crossings including County Road 2 and Bridge Street and Bridge and Dundas Street
- d) Utilize light, bright colours to provide a high visibility contrast with the existing asphalt paving where Thermoprint treatments are applied
- e) Incorporate coloured and textured concrete at the curb cut ramps to provide visual and tactile cues at all major crossings
- f) Be a minimum of 2.4m in width for standard crossings
- g) Be a minimum of 3m in width at major crossings such as within the Commercial Node and across County Road 2
- h) At any proposed and future pedestrian crossing along County Road 2, have *Courtesy Crossing* signage installed in both directions prior to the pedestrian crosswalk to alert oncoming traffic to the crossing
- i) Consider the County Road 2 pedestrian crossing which includes a pedestrian refuge and bump-outs as a pilot project
- j) Based on results of the pilot project, consideration be given to the installation of a pedestrian crossing at Shanley Road and County Road 2 to provide a safe crossing to the waterfront park and open space



6.6 Signage

Signage provides a utilitarian function in providing guidance, wayfinding, and identification to pedestrian and vehicular traffic. It also offers a significant opportunity to incorporate community identity and theming into an important feature of the streetscape.

The following general recommendations should be implemented to holistically address signage within Cardinal:

- a) Consideration should be given to implementing a Sign By-Law that would regulate materials, location, size and quantity of signage for commercial signage within the Township
- b) A comprehensive signage program should be undertaken to establish a materials and colour palate for signage within Cardinal and to identify a style in which all signage, including wayfinding and street signs, should follow
- c) All signage should be clear and legible for both pedestrians and vehicular traffic

Wayfinding Signage

The purpose of wayfinding signage is to clearly direct pedestrian and vehicular traffic to key destinations and attractions within Cardinal and the larger Township. Wayfinding signage should:

- a) Be unified in look and style throughout Cardinal, using the same materials and colours
- b) Be consistent in style and materials where wayfinding signage is desired in other communities within the Township either as part of a streetscape plan or stand-alone element
- c) Cater to both pedestrian traffic, whether it be on foot or bicycle, and vehicular traffic in terms of its visibility, legibility and destination points
- d) Include, at a minimum, the following destinations within Cardinal and the Township: the recreational facility; the library; the downtown; the waterfront trail/park; the Township offices

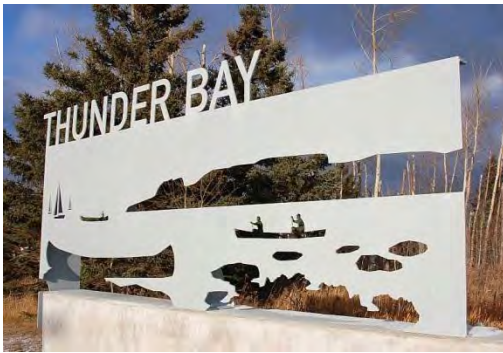


Street Signage

Street name signage is often simply a functional feature within the streetscape. However there is a great opportunity to install enhanced signage through key areas of Cardinal to enhance and unify the visual environment. New street name signage should:

- Be installed within the civic and commercial streetscape typologies
- Be integrated into the overall signage program in terms of consistency of style, colours, and materials
- Replace existing wood streetscape signs within the commercial core

Gateway Signage



Gateway signage should reflect Cardinal's pride and community values. It is a highly visible feature that will help draw people into the community and is also an opportunity to create a lasting impression on both visitors and passersby.

Gateway signage should:

- Be installed at the south west corner of the intersection, between Bridge Street and the rail line
- Incorporate themes in keeping with those identified within this Streetscape Plan
- Utilize high quality, durable materials that are locally relevant to the Township and are in keeping with the character of the community
- Involve a local artist(s) in the design process and/or production of the sign, if feasible

- Be enhanced by landscape plantings suitable for the conditions in which they are located, which complement the proposed signage, without impeding visibility
- Be sited outside of the daylight triangle and not visually impede pedestrian or vehicular traffic
- Be consistent in size, style, material, etc. should other gateway signage be installed at additional locations within Cardinal in the future

Community Kiosk

A community kiosk is recommended for installation within the Commercial Node at Bridge and Dundas Street. A community kiosk should:

- Provide a welcome to Cardinal sign as well as a community map which highlights key locations such as recreational facilities, the commercial district, and other community amenities
- Provide a bulletin board style section to allow the community to post advertisements and events
- Event advertisements should be submitted to the Township for approval and posting. Commercial advertisements are strongly discouraged



6.7 Public Art

Public art is yet another element which assists in defining community identity and deepening community pride. It presents an opportunity to incorporate the selected theming into the public realm in a very engaging and dynamic way.

The incorporation of public art into the streetscape should

- a) Involve the community through the selection of the artist through to the fruition of the piece of artwork
- b) Engage local artists or artisan groups and encourage community participation
- c) Be reflective of the themes and history of Cardinal and consider a range of different purposes from functional, to interpretive, historical or abstract; utilizing public art as a forum for commercial advertising is strongly discouraged
- d) The Township is strongly encouraged to work with local artists to develop a public art strategy or program for Cardinal that will help guide the selection, incorporation and maintenance of public art



6.8 Street Trees + Enhanced Plantings

Street trees and landscape plantings can be one of the most transformative elements of a streetscape. Trees can help define a corridor, providing scale and continuity where the built environment can be disparate and disjointed. They also provide a number of environmental benefits from improved air quality to the cooling provided through shading streets and buildings. Street trees should:

- a) Be selected based on their tolerance to urban conditions, drought and salt tolerance. A comprehensive list of candidate species is attached as Appendix D of this document
- b) Be selected to suit the planting environment, including vertical and horizontal spacing restrictions (such as overhead wires, light standards, etc.)
- c) Tree species under overhead utility wires should have a maximum mature height of 6m. Hydro Authorities should be consulted when planting in close proximity to utilities.
- d) Be spaced between 6 and 10m depending on species selection and mature size of vegetation
- e) Trees to be planted on public property or in close proximity to the sidewalk should have a minimum caliper of 60mm to reduce the ease of vandalism and breaking of the trunk
- f) A variety of species should be planted within one streetscape to avoid monocultures
- g) Where trees are planted in paving, they should maximize the growing space for the roots by planting trees in continuous trenches
- h) Trees in paving should utilize soil that will provide optimal growing conditions and is an appropriate mix of topsoil and organic matter. Consideration could be given to the utilization of a premixed soil such as Gro Bark's Boulevard Mix or an equivalent product
- i) Trees in paving should be protected by a tree grate



7 Implementation

An implementation plan that is well defined is key to the success of any guiding or strategic document. The Streetscape Plan is intended to be a flexible document in terms of its implementation, however, change will be incremental, and consistent efforts will be required to achieve the vision, goals and objectives of the plan. To this end, the following overarching recommendations are made with respect to implementation:

- An administrator who is linked to the CIP should be connected to the Streetscape Plan to ensure that both the vision of the Streetscape Plan and the CIP are being achieved through financial incentive programs
- Annual capital budgets should be established to reflect the Township’s investment in Streetscape Plan works
- A review of the Streetscape Plan should be conducted in 5 years’ time to evaluate how the guidelines are being implemented, and to identify necessary updates

7.1 Cost Estimates and Phasing

Exploring Public Private Partnerships:

It is recommended that the Township engage the community through paired implementation programs. Programs could involve:

- a street tree planting initiative, which would provide financial incentives to private home owners wishing to plant street trees on private property; conversely the Township could also pair with a local nursery or tree grower to supply home owners with street trees at a reduced rate
- a donor program which would allow private residents, community groups, or businesses within the village to provide a donation toward a specific streetscape element such as a bench,

light standard, or street tree within the commercial core. Such donations could be recognized through a plaque program mounted on the furniture

Establishment of an Annual Budget

Many of the larger improvements, such as gateway enhancements, will require significant commitment by the Township to realize the enhancements put forward by the Streetscape Plan. It is recommended that the Township establish an annual budget dedicated to improvements outlined by the streetscape plan. A phased approach as outlined in this plan is recommended to begin to implement priorities and ensure that the improvements are made and continue to be made, and maintained over the next number of years. Within the thoroughfare streetscape, opportunities to cost-share with the counties should be explored.

Preliminary Costing

The high level capital costing included in Appendix E reflects the scope of work as outlined in the conceptual designs for the Gateway and Commercial areas. Units prices for other materials and design elements have also been provided, which can be used to assemble a preliminary cost for applying the streetscape guidelines to any length of a streetscape, and can be customized to suit priorities. Detailed costing should be completed in concert with detailed design to assist in the budget process.

Phasing

Streetscape infrastructure investment can be a significant portion of capital as well as operating budgets for any municipality. In order for the Streetscape Plan to be successful, it will have to be implemented over time, allowing for annual budgets to be adjusted in anticipation of additional costs.

Priority #1: Street Tree Planting

The Streetscape Plan calls for the urban tree canopy to be increased through Cardinal along the length of many streets. This is the first step in implementation because it can be initiated early, and done as opportunities present themselves through both public and private efforts. The establishment of consistent street trees along the length of streets will provide visual continuity and draw visitors to destinations. The **Commercial** and **Civic** streets should be planted first.

Priority #2: Build out of the Gateway and Commercial Plans

The intersections of County Road 2 and Bridge Street, and Bridge and Dundas Streets are perhaps most important in terms of enhancing the public realm for both visitors and residents alike. Detailed design should be undertaken, and budgets established to complete both plans. Due to capital investment required, the build out of both plans may occur consecutively, rather than concurrently as funds are made available.

Priority #3: Implement Design Guidelines along Streetscapes

The last stage of the streetscape plan will be to connect the major destinations such as downtown, the County Road 2 gateways at Dundas and Bridge Streets and the waterfront with enhanced streetscapes. This work will be scheduled as repairs and maintenance is required for infrastructure, and as funding is made available. Detailed plans should be created for each streetscape in order to ensure that work is coordinated and properly planned.

Community Activation of the Streetscape

There are a number of ways in which the community can help to reactivate the streetscape, through volunteer efforts, participation in the CIP programs, programming space with festival and events, or becoming involved in temporary or permanent art installations. This work should be directed through the Streetscape Plan Coordinator to ensure proper coordination of all efforts. These types of community interventions

should be encourage early and often throughout the revitalization process.

7.2 Implementation through the Community Improvement Plan

It is anticipated that some of the recommendations of the Streetscape Plan will be implemented directly by the Township, through capital projects and construction. However, the private sector can and should be encouraged to participate in implementing the Streetscape Plan.

There is an opportunity to help implement the Streetscape Plan through the financial incentive programs implemented under the Community Improvement Plan for Cardinal. The Streetscape Plan is a key implementation strategy recommended through the Community Improvement Plan for Cardinal, which establishes both Township-led strategies, and a number of financial incentive programs to encourage private investment.

Interested property owners and tenants may apply for one of six types of financial incentives, as established through the Community Improvement Plan, which has been approved by the Township in accordance with the requirements of the *Planning Act*. The Community Improvement Plan establishes detailed eligibility criteria to ensure that only desirable projects which advance the Plan's goals for revitalizing the community can be approved for financial assistance. The Plan generally supports façade and building improvements related to commercial and mixed use buildings.

A typical application process consists of the following steps:

- Interested applicants must discuss their project with the assigned Community Improvement Plan Administrator(s);
- Applicants must fill out an application form (with assistance from the Town) and provide supporting materials (cost estimates, drawings, etc.);
- The application is screened by the Township for completeness;

- The Township will enter the project into a monitoring database (to assist in monitoring and evaluation of the community Improvement Plan);
- A recommendation report is prepared by the Administrator(s); and
- The application is considered by the Community Development Committee, in consideration of staff's recommendation for approval or refusal of the application.

Through this process, the Plan Administrator can identify opportunities for applicants to incorporate the recommendations of the Streetscape Plan as part of their project. For example, the Administrator may identify opportunities to plant trees or improve landscaping, in addition to the applicant's façade improvement.

Where an applicant is proposing façade or streetscape elements which are addressed by the Streetscape Plan, the Administrator should identify opportunities to coordinate with the Streetscape Plan's design recommendations. For example, where an applicant is proposing inclusion of benches as part of a property improvement project, the Administrator should refer the applicant to the recommendations regarding street furniture (Section 7.1), and make specific suggestions about how the proposal can be coordinated with the design recommendations.

Over the long term, the community will benefit greatly from a coordinated approach to streetscape improvement. Coordination between public and private investment will ultimately establish a unified theme for the Village with a clear identity.

A checklist has been prepared to assist in determining how the Streetscape Plan applies to an applicant's project, and to assist applicants in determining whether their project is eligible for incentives. The checklist is included in Appendix F.

The report to the Community Development Committee should address how the applicant has incorporated comments from staff with regard to implementing the Streetscape Plan. The Report should discuss the degree of adherence to the design recommendations of the Streetscape Plan and identify whether the applicant has considered potential opportunities to implement the Streetscape Plan's recommendations (street tree planting, design recommendations, etc.).

Section 5.0 of the Community Improvement Plan establishes tasks to monitor and evaluate the effectiveness of the Community Improvement Plan over time. Monitoring and evaluation activities for the Community Improvement Plan should also track activities related to the Streetscape Plan, including monitoring Township projects as well as identifying financial incentive projects which help implement the Streetscape Plan.

Therefore, it is recommended that:

- The Community Improvement Plan Administrator actively identify opportunities for applicants of financial incentives to implement the principles and projects of the Streetscape Plan. The attached checklist (Appendix A) should be used by the Administrator to assist in this;
- The Community Improvement Plan Administrator note whether the Applicant has considered opportunities to implement the Streetscape Plan in the recommendation report to the Community Development Committee; and
- Implementation of the Streetscape Plan, including Township-led projects and private projects, be tracked as part of the monitoring and evaluation activities of the Community Improvement Plan.

8 Conclusion

Re-imagining Cardinal: The Streetscape Plan was borne out of recommendations set forth in Revitalizing Cardinal: The Village Community Improvement Plan, and the Edwardsburgh-Cardinal Economic Development Strategy. The Plan is predicated on incremental change, and draws much of its strength from community involvement. The guidelines, recommendations and conceptual plans prepared for the Plan draw on input that the study received throughout the project. It is hoped that the Plan will provide a revitalization strategy for the streetscapes of Cardinal that reflects the community and its collective identity, and will breathe new life into the public realm.

Appendix A – Streetscape Typologies Mapping

Cardinal Streetscape Plan

Ecoplans, a member of the MMM Group

6/25/2012



LEGEND

- RESIDENTIAL STREETScape
- COMMERCIAL STREETScape
- CIVIC STREETScape
- THOROUGHFARE STREETScape
- INDUSTRIAL STREETScape

GATEWAY
 NODE

Appendix B – Gateway + Commercial Node Plans

Cardinal Streetscape Plan

Ecoplans, a member of the MMM Group

6/25/2012



Pedestrian Priority
 Creating a pedestrian refuge and bump-outs on Highway 2 will provide traffic calming measures and provide a safer feeling for pedestrians crossing the road

A Programmable Space
 Consolidation of the pedestrian pathways will allow for increased usable green space in this area providing increased opportunity for site programming

Pedestrian Network
 Consolidation of the pedestrian pathways and sidewalks to one multi-purpose pathway will lead pedestrians to the marked crossing and limit unnecessary crossing of the rail line

LEGEND	
	PUBLIC ART
	WAYFINDING SIGN
	PLANTING BED
	STREET TREE
	LIGHT STANDARD
	ROADWAY
	SIDEWALK

Gateway Signage
 Signage should reflect theme and branding selected by the Township

Public Art
 The inclusion of large, bold pieces of public art in this area will help to enhance this significant gateway area and draw visitors to the downtown core

Enhanced Planting
 Enhanced planting areas between Bridge Street and the rail line will help define the intersection, while screening the adjacent rail line

Street Trees
 Including street trees along bridge street will create a visual and physical connection from Highway 2 to Dundas Street

Decorative Elements
 Continue to include hanging baskets on existing light and hydro poles. Decorative banners should also be included to unify and enhance the streetscape

Enhanced Lighting
 Update existing light standards with enhanced decorative lighting to unify the gateway area and the commercial core

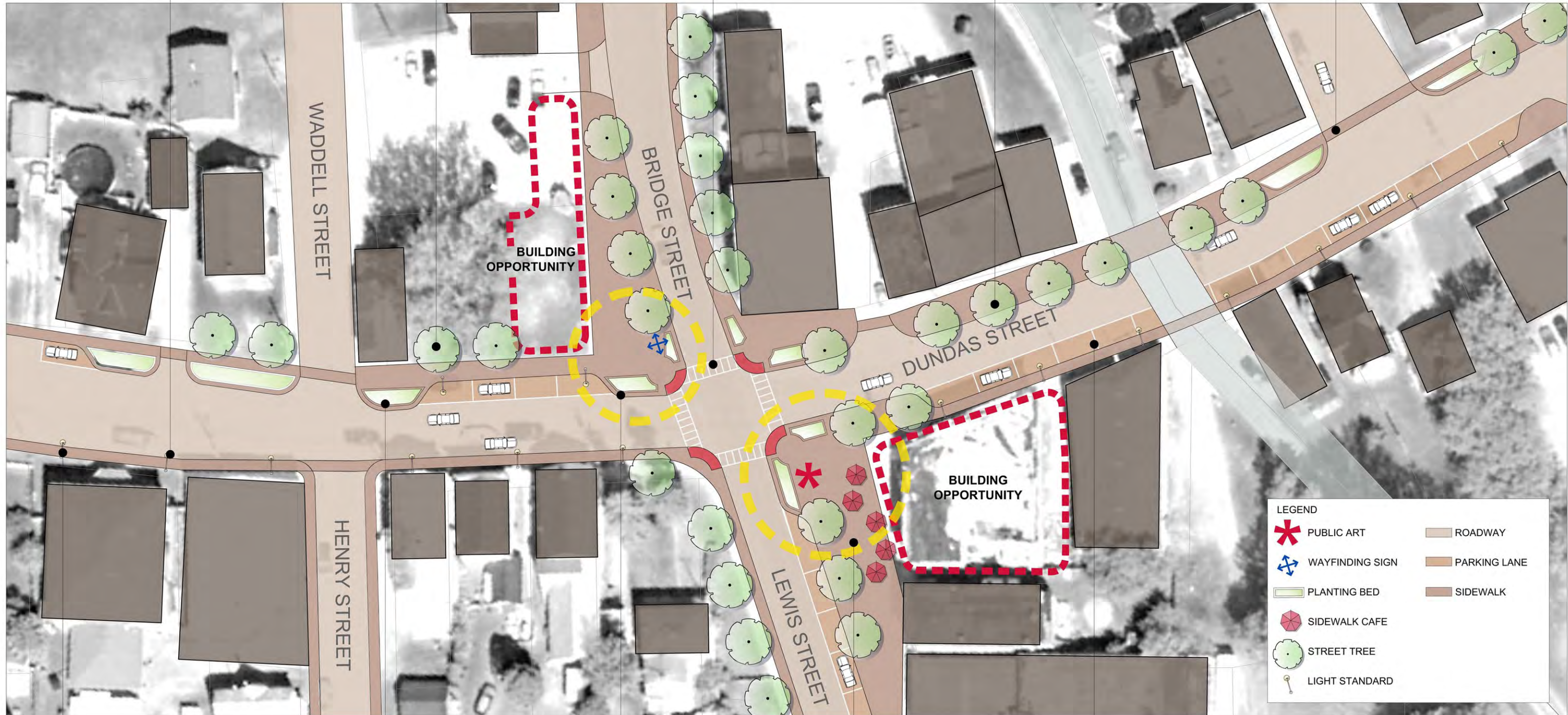
Enhanced Lighting
Update existing light standards with enhanced decorative lighting to unify the commercial core

Trees on Private Property
Where space within the right of way is limited, encourage property owners to plant street trees on private property.

Pedestrian Crossing
Create highly visible crossing points at intersections using paint, coloured and/or impressed asphalt

Street Trees
Where space allows and no conflicts with traffic standards are present, plant street trees to enhance street edge

Sidewalk Crossings
Carry the sidewalk paving treatment through intersections and across driveways and the rail line to create a unified and distinct pedestrian environment



LEGEND

	PUBLIC ART		ROADWAY
	WAYFINDING SIGN		PARKING LANE
	PLANTING BED		SIDEWALK
	SIDEWALK CAFE		
	STREET TREE		
	LIGHT STANDARD		

Decorative Elements
Continue to include hanging baskets on existing light and hydro poles. Decorative banners should also be included to unify and enhance the streetscape

Bump-Out
Bump-outs surrounding parking lanes provide an opportunity to include planting areas.

Secondary Node
Include seating, landscaping, and wayfinding signage. Encourage new development to enliven street edge

Community Hub
Include seating, landscaping, public art, and/or a community kiosk to post events. Encourage new development to enliven street edge

Parking
Parking lanes should include colour or unit paving surfaces to distinguish parking lane from roadway

Appendix C – Streetscape Renderings

Cardinal Streetscape Plan

Ecoplans, a member of the MMM Group

6/25/2012



Current Status



Proposed Streetscape



Current Status



Proposed Streetscape



Current Status



Proposed Streetscape

Appendix D – Street Tree Information

Cardinal Streetscape Plan

Ecoplans, a member of the MMM Group

6/25/2012

SMALL TREES 3.6-5m planting space (use under hydro lines)

Scientific name	Common name	Form	Comments
<i>Acer ginnala</i>	Amur maple	Round	Fast growing
<i>Amelanchier Canadensis</i>	Serviceberry	Upright/erect	Pest/diseases resistant
<i>Crataegus Crus-Galli 'Inermis'</i>	Thornless cockspur hawthorn	Oval/round	Tolerant of urban conditions
<i>Phellodendron amurense</i>	Amur cork tree	Vase	Fast growing
<i>Ginkgo biloba 'Princeton Sentry'</i>	'Princeton Sentry' ginkgo	Columnar, upright	Fastigiated, good for tree pit, parking lots, soil compaction tolerant
<i>Pyrus calleryana 'Bradford'</i>	Callery pear	Oval/round	Tree pit, parking lot islands, drought tolerant
<i>Prunus serrulata 'Kwanzan'</i>	Kwanzan cherry	Vase, upright	Recommended for above-ground planters, parking lots islands
<i>Syringa reticulata 'Ivory silk'</i>	Ivory silk lilac	vase, oval upright, round	Pest/diseases resistant, salt tolerant



Serviceberry



'Princeton Sentry' Ginkgo



Callery Pear



Kwanzan Cherry



Ivory Silk Lilac

MEDIUM TREES 5-8m spacing (size at maturity 10-20m)

Scientific name	Common name	Form	Comments
<i>Acer platanoides 'Emerald Queen'</i>	Emerald Queen Maple	oval	Tolerant of urban conditions
<i>Aesculus x carnea 'Briotii'</i>	Ruby Red Horsechestnut	Pyramidal, round	resistant to pests/diseases
<i>Celtis occidentalis</i>	Hackberry	Round, vase	Urban, pest/diseases tolerant
<i>Gleditsia triacanthos var inermis 'Shademaster'</i>	Shademaster honey locust	Vase, upright/erect	High drought/ salt tolerance
<i>Quercus macrocarpa</i>	Bur oak	Round, spreading	Does not tolerate exposed conditions
<i>Quercus rubra</i>	Redoak	Round	Tolerant of urban conditions
<i>Tilia cordata</i>	Littleleaf linden	Pyramidal, oval	Not drought tolerant
<i>Tilia americana 'Redmond'</i>	'Redmond' American linden	Pyramidal, oval	Drought, pest/diseases tolerant
<i>Tilia tomentosa</i>	Silver linden	Pyramidal, oval	Resistant to pests/diseases



Silver Linden



Hackberry



Littleleaf Linden



Bur Oak



Shademaster Honey Locust

LARGE TREES >8m spacing (size at maturity over 20m)

Scientific name	Common name	Form	Comments
<i>Acer nigrum</i>	Black maple	Oval, round	Tolerant of urban conditions
<i>Acer pseudoplatanus</i>	Sycamore maple	Round, spreading	Good salt tolerance
<i>Acer rubrum</i>	Red maple	Oval, round, upright/erect	Medium to fast growing
<i>Acer saccharum</i>	Sugar maple	Oval, round	Resistant to pests/diseases
<i>Acer x freemanii</i>	Freeman maple	Oval, round, upright/erect	Resistant to pests/diseases
<i>Aesculus hippocastanum</i>	Horsechestnut	Oval, round	Moderate salt tolerance
<i>Carya ovata</i>	Shagback hickory	Round, pyramidal	Excellent tree
<i>Ginkgo biloba</i>	Maidenhair tree	Round, pyramidal	Deep tap root
<i>Quercus palustris</i>	Pin oak	Pyramidal	Resistant to pests/diseases



Sugar Maple



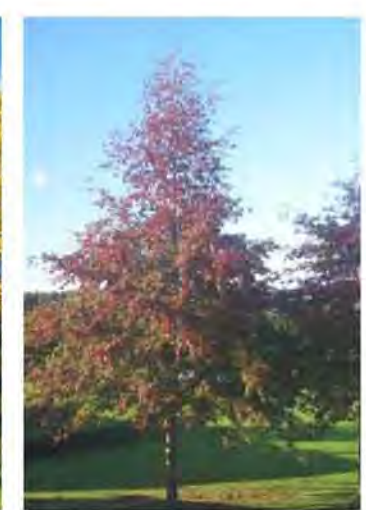
English Oak



Red Maple



Maidenhair Tree



Pin Oak

Appendix E – Phasing and Costing Chart

Cardinal Streetscape Plan

Ecoplans, a member of the MMM Group

6/25/2012

TOWNSHIP OF EDWARDSBURGH / CARDINAL STREETScape PLAN

Area 1: Gateway Streetscape

Summary of Preliminary Concept Construction Costs - June 2012

PART 1 - REMOVALS

Item No.	Item Description	Unit	Quantity	Unit Price	Total Cost
1.1	Remove and dispose existing concrete sidewalks adjacent to south side of Highway 2 and Bridge Street	m2	755	\$15	\$11,325
1.2	Remove and dispose existing asphalt pedestrian pathway across the green space	m2	194	\$15	\$2,910
SECTION SUBTOTAL					\$11,325

PART 2 - SURFACE WORKS

Item No.	Item Description	Unit	Quantity	Unit Price	Total Cost
2.1	Supply and install asphalt pedestrian pathway c/w granular base	m2	357	\$45	\$16,065
2.2	Supply and install concrete sidewalk c/w granular base	m2	56	\$65	\$3,640
2.3	Supply and install a pedestrian refuge c/w installation of Thermoprint crosswalk lines	ls	1	\$2,500	\$2,500
2.4	Supply and install concrete curb c/w rolled curb at all crosswalk locations	lin m	20	\$15	\$300
2.5	Supply and install a median at Hwy2 and Bridge St.	ls	1	\$1,500	\$1,500
SECTION SUBTOTAL					\$24,005

PART 3 - LANDSCAPE FEATURES

Item No.	Item Description	Unit	Quantity	Unit Price	Total Cost
3.1	Supply and install gateway signage (southwest corner of Hwy 2 and Bridge Street)	ls	1	\$5,000	\$5,000
3.2	Supply and install public art (southwest corner of Hwy 2 and Bridge Street)	ls	1	\$5,000	\$5,000
3.3	Supply and install wayfinding signage feature (southwest corner of Hwy 2 and Dishaw St.)	ls	1	\$3,000	\$3,000
SECTION SUBTOTAL					\$13,000

PART 4 - SITE FURNISHINGS

Item No.	Item Description	Unit	Quantity	Unit Price	Total Cost
4.1	Supply and install decorative light standards	ea	8	\$4,000	\$32,000
4.2	Supply and install decorative banner arms and hanging baskets for light standards	ea	8	\$600	\$4,800
SECTION SUBTOTAL					\$36,800

PART 5 - PLANT MATERIAL

Item No.	Item Description	Unit	Quantity	Unit Price	Total Cost
5.1	Deciduous Trees (60mm cal)	ea	20	\$450	\$9,000
5.2	Perennials within the pedestrian refuge island, median, around gateway signage, and along east side of Bridge St. (1 gal.)	ls	1	\$1,240	\$1,240
5.3	Planting soil in the pedestrian refuge and median (av. 450mm depth)	m3	8.4	\$60	\$504.00
SECTION SUBTOTAL					\$10,744

GATEWAY STREETScape ENHANCEMENT SUBTOTAL **\$95,874.00**

CONTINGENCY (10%) **\$9,587.40**

TOTAL **\$105,461.40**

TOWNSHIP OF EDWARDSBURGH / CARDINAL STREETSCAPE PLAN

Area 2: Commercial Streetscape

Summary of Preliminary Concept Construction Costs - June 2012

PART 1 - REMOVALS

Item No.	Item Description	Unit	Quantity	Unit Price	Total Cost
1.1	Remove and dispose existing asphalt parking lane	m2	438	\$15	\$6,570
1.2	Remove and dispose existing curb and gutter	lin m	170	\$9	\$1,530
1.3	Remove and dispose existing asphalt driveways/intersections	m2	54	\$15	\$810
1.4	Remove and dispose existing concrete sidewalk	m2	363	\$15	\$5,445
SECTION SUBTOTAL					\$14,355

PART 2 - SURFACE WORKS

Item No.	Item Description	Unit	Quantity	Unit Price	Total Cost
2.1	Supply and install colored concrete parking lane c/w granular base	m2	438	\$110	\$48,180
2.2	Supply and install concrete sidewalk c/w granular base	m2	386	\$65	\$25,090
2.3	Supply and install concrete curb (all types)	lin m	170	\$15	\$2,550
SECTION SUBTOTAL					\$75,820

PART 3 - LANDSCAPE FEATURES

Item No.	Item Description	Unit	Quantity	Unit Price	Total Cost
3.1	Supply and install public art (southeast corner of Dundas St. and Lewis St.)	ea	1	\$5,000	\$5,000
3.2	Supply and wayfinding features (northwest corner of Bridge St. and Dundas St.)	ls	1	\$3,000	\$3,000
SECTION SUBTOTAL					\$8,000

PART 4 - SITE FURNISHINGS

Item No.	Item Description	Unit	Quantity	Unit Price	Total Cost
4.1	Supply and install decorative light standards	ea	15	\$4,000	\$60,000
4.2	Supply and install decorative banner arms and hanging baskets for light standards	ea	15	\$600	\$9,000
4.3	Benches in secondary nodes	ea	6	\$1,500	\$9,000
SECTION SUBTOTAL					\$78,000

PART 5 - PLANT MATERIAL

Item No.	Item Description	Unit	Quantity	Unit Price	Total Cost
5.1	Deciduous Trees (60mm cal)	ea	30	\$450	\$13,500
5.2	Perennials within secondary nodes and bump-outs (1 gal.)	ls	1	\$6,160	\$6,160
5.3	Planting bed soil (av. 450mm depth)	m3	60	\$60	\$3,600
5.4	Structural Soil for street tree plantings (15m ³ per at grade tree)	m3	420	\$120	\$50,400
SECTION SUBTOTAL					\$73,660

GATEWAY STREETSCAPE ENHANCEMENT SUBTOTAL **\$249,835**

CONTINGENCY (10%) **\$24,983.50**

TOTAL **\$274,818.50**

Appendix F – Funding Opportunities Check List

Cardinal Streetscape Plan

Ecoplans, a member of the MMM Group

6/25/2012

Revitalizing Cardinal: The Village Community Improvement Plan

ELIGIBILITY AND DESIGN CHECKLIST

OFFICE USE ONLY

Application Number: _____

Date Received: _____

This form applies to applications for all financial incentives under the Community Improvement Plan. It is intended to assist applicants in ensuring that all applicable eligibility criteria are met. This form does not form a part of the Community Improvement Plan. The language and phrasing of the Community Improvement Plan takes precedence over this checklist.

My application for financial incentives meets the general eligibility criteria of the Community Improvement Plan:

1. My property is located in the currently designated Community Improvement Project Area.
2. There are no outstanding tax arrears and the property is in good standing with regard to taxation.
3. My project is in accordance with all applicable laws, including municipal by-laws and the Zoning By-law, or I am applying for a variance or amendment to the Zoning By-law.
4. I am contributing to at least 50% of the cost of the project.
Note: The Township will not contribute more than 50% of the cost of eligible projects or \$10,000, whichever is greater.

Yes, I meet all of these criteria

No, I do not meet these criteria (not eligible for any program)

My improvement meets the program-specific eligibly criteria of the Community Improvement Plan:

1. For **façade and property improvements**:
 - a. My project type is eligible. It relates to improvements or repairs to storefront doors, windows, brickwork, masonry, architectural details, awnings, canopies, painting, treatment of materials, lighting, signage, accessibility, sidewalk/outdoor café, landscaping, parking areas, walkways, tree planting, public outdoor furniture, or other similar improvements. Note that architectural/design fees are also eligible.
 - b. My project applies to a commercial building, a mixed use property, and/or a multi-unit apartment building.
 - c. My project considers accessibility to pedestrians, with clear and accessible entries from the sidewalk.

Yes, I meet all applicable criteria

No, I do not meet these criteria (not eligible)

Not applying for this program

ELIGIBILITY AND DESIGN CHECKLIST

2. For **heritage property improvements**:
- a. My project relates to works that preserve, restore or enhance original architectural materials or design elements, including removal of modern building materials.
 - b. My historic property restoration project is based on documented sources.
- [] Yes, I meet all applicable criteria
- [] No, I do not meet these criteria (not eligible)
- [] Not applying for this program
3. For **housing improvements** (new housing units or improved existing units):
- c. My project involves the creation of new residential units in an upper storey of a mixed use building or significant improvement to one or more existing residential units.
 - d. The subject housing units are located in the upper storey and rear of mixed-use buildings.
- [] Yes, I meet all applicable criteria
- [] No, I do not meet these criteria (not eligible)
- [] Not applying for this program
4. For applicants to the **tax increment equivalent grant program**:
- a. My project is a significant improvement or addition to an existing building (i.e., involving more than 25% of the gross floor area of the building or consisting of a new development project).
 - b. The subject housing units are located in the upper storey and rear of mixed-use buildings.
- [] Yes, I meet all applicable criteria
- [] No, I do not meet these criteria (not eligible)
- [] Not applying for this program
5. For applicants to the **planning and application fees refund program**:
- a. The required planning applications for my project (e.g., rezoning, site plan, official plan amendment) are not highly complex and will not c, recognizing that he Township of Edwardsburgh/Cardinal .
 - b. The required applications are in relation to retail and/or mixed use buildings.
- [] Yes, I meet all applicable criteria
- [] No, I do not meet these criteria (not eligible)
- [] Not applying for this program

My improvement project considers the following design principles:

1. For **new buildings and additions**:
- a. My project is compatible in scale, height, bulk and setback from the street compared with neighbouring properties.
 - b. I have considered incorporating harmonious elements, such as flowing rooflines and repeating architectural elements with neighbouring properties.
 - c. My project considers accessibility to pedestrians, with clear and accessible entries from the sidewalk.
- [] Yes
- [] No
- [] Not applicable

ELIGIBILITY AND DESIGN CHECKLIST

2. For **façade or property improvements**: **Yes**
- a. I intend to use historic and local building materials, or will restore original materials, where possible. **No**
 - b. I am not using aluminum cladding or similar economic materials which are not compatible with the streetscape. **Not applicable**
 - c. I have maximized architectural detailing and features, such as windows and feature details.
 - d. My proposed façade is interesting and is complete, with recessed entries, unobstructed display windows, and other detailing.
 - e. I have incorporated special treatments to the ground floor, where possible, such as awnings, or a sidewalk café.
3. For **sign improvements**: **Yes**
- a. My signs are scaled appropriately compared with the building and are oriented for pedestrians. **No**
 - b. My signs are not backlit. **Not applicable**

I have considered implementing the recommendations of the Streetscape Plan:

1. For **projects on all streets** with a front yard, boulevard or an opportunity for tree planting: **Yes**
- a. I have considered planting trees as part of my proposed improvement project. **No**
 Not applicable
2. For **projects on commercial streets and civic streets**: **Yes**
- a. I have considered providing enhanced landscaping treatments, including providing planters, planting trees, and manicured landscaping, as part of my improvement project. **No**
 - b. I have considered providing street furnishings such as benches, as well as bicycle racks, for public use. **Not applicable**
 - c. Where I am proposing streetscape elements as part of my project, I have considered the Streetscape Plan's recommendations with regard to light standards, type of bench, and type of bicycle rack.
 - d. I have considered upgrading parking areas and pedestrian connections to be more pedestrian-oriented
 - e. I have considered providing awnings, a sidewalk cafés, and other features which will contribute to a more vibrant streetscape in the commercial areas.