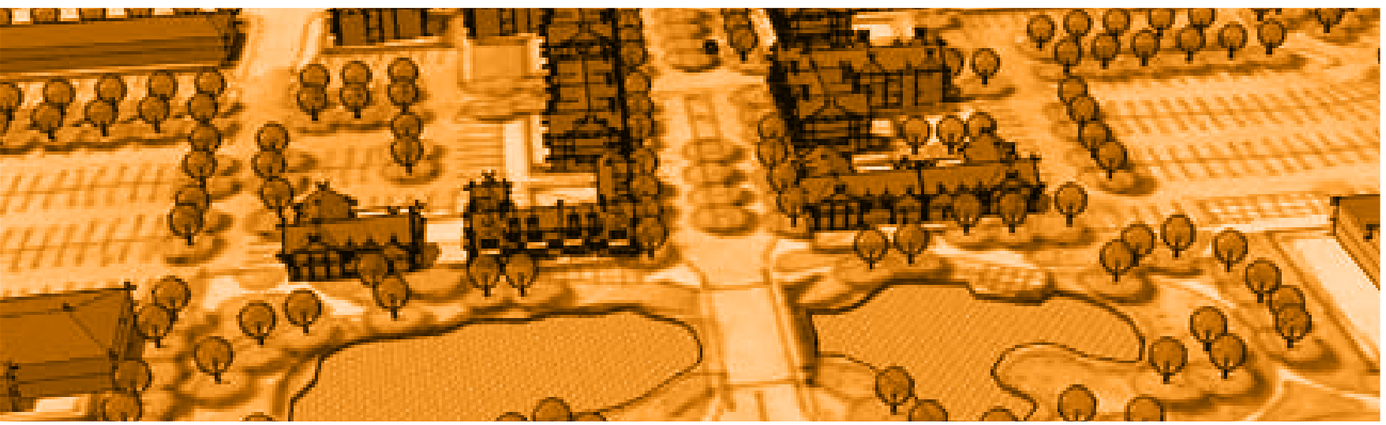


STRATFORD CORE AREA VISION: FINAL REPORT

March 2008

SUBMITTED BY:

Ekistics Planning and Design
1 Starr Lane,
Dartmouth, NS
B2Y 4V7

IN ASSOCIATION WITH:

P. Wood Associate
Cantwell & Company
Land Design Engineering
Form:Media
Atlantic Road & Traffic Management

EKISTICS PLANNING & DESIGN

TABLE OF CONTENTS:

TABLE OF CONTENTS:

TABLE OF CONTENTS:

Hillsborough River

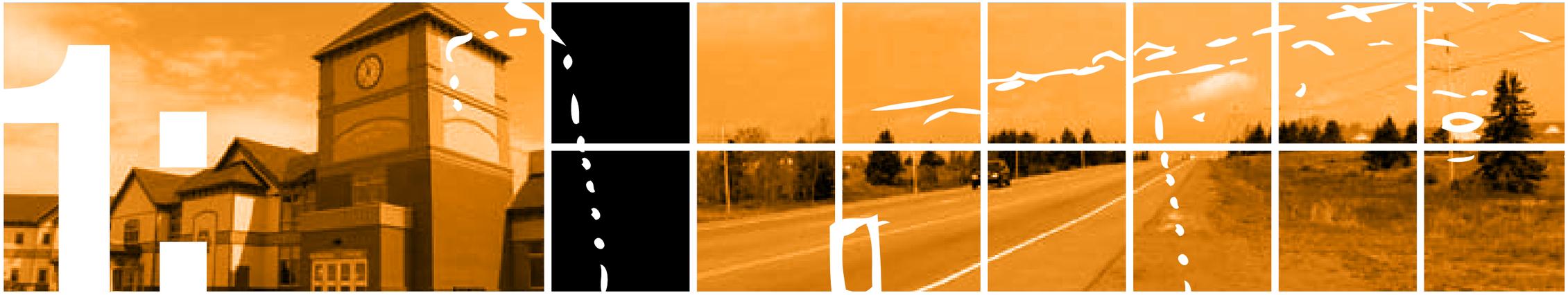
Hillsborough Bridge

Waterfront
Core Area

Town Centre
Core Area

Mason Road
Core Area

Open Space Master Plan



CHAPTER 1: INTRODUCTION

1. Background

Stratford's Core Area represents the first point of contact for visitors, a place of commerce and pride for Stratford residents, and the embodiment the Town's civic character. The highway which bisects the Town is both an opportunity and a challenge for Stratford. It brings thousands of visitors and residents a day through the community (for many, this will be their first and only impression), but it also creates a barrier to the north and south side of the community. Left unplanned, the Core Area would undoubtedly transition into a long commercial strip corridor of unbroken parking lots, placeless, homogeneous architecture, competing pylon signs, and stagnant, engineered highway infrastructure, devoid of trees, people or personality. This has become the reality for most communities in North America who lack foresight and vision. As the fastest growing community on PEI, the fate of the Core Area would be rapid and decisive.

The Core Area Vision represents an opportunity to direct high quality growth, to connect both halves of the community across the highway corridor and to create commercial and residential areas which are unique, desirable and contribute to the character of one of PEI's most desirable communities. This report is a testament to the foresight of the community and its leaders.

This report was prepared by Ekistics Planning Design (in association with P Wood & Associates, Cantwell Company, Atlantic Road & Traffic Management, and LandDesign Engineering) between February 2006 and February 2007 for the Town of Stratford. The report is the second phase of the Core Area Vision prepared by the Town in 2005. The scope includes the creation of two separate documents; an Open Space Plan for the entire Town and a Core Area Vision for the area from the Hillsborough River Bridge to the Mason Road Intersection. The Core Area can be divided into several 'nodes' along the corridor. These include the Waterfront Core on both sides of the highway, the Town Core, and the Mason Road Core. There is an intentional gap between the Waterfront Core Area and the Town Centre Core Area on both sides of the TCH. To the south of the TCH this area is largely developed and the development character is well established. The limited available opportunities for infilling should conform to the character of the surrounding development rather than the new Core Area standards. To the north of the TCH a high standard of development has already been established in the PURD area and adjacent lands with developments such as the Andrews' Senior's Complex. The balance of these lands should develop in a compatible manner pursuant to the provisions of the current development bylaw. Where these two areas abut the new Core Area, a transitional mechanism should be considered to assist in integrating new Core Area development standards with the existing development character, building styles and land uses.

As one of Atlantic Canada's most progressive communities, Stratford recognizes the growing importance of sustainable development in achieving long-term balance for the community. For this reason, the Vision outlines a variety of sustainability principles which will form the foundation of future development practices in the Town. The sustainability principles also provide an over-riding rationale for macro and micro scale land use decisions and policies to guide future growth. It is the intention of the planning team to see these principles eventually integrated into the official plan and to become directly reflected in the land use bylaw and administrative decision making structure of the Town.

2. The Core Area Imperative

Since the end of the Second World War, North America has seen a significant rise in suburban sprawl. Traditional neighborhoods used to be characterized as "mixed use, pedestrian friendly communities of varied population, either standing free as villages or grouped into towns and cities." As suburban developments spread further from the urban core, developers built large retail developments, which have evolved into today's "big box" stores . Following WW II, North America experienced a boom that shifted the economy from a 'central city-based manufacturing' economy to a 'suburban-based service and information' economy. The result of this shift was the rise of the suburbs which helped set the stage for the success of big box retailers by providing new markets in outlying areas. While big box stores boast convenient, one-stop shopping, they are criticized for their hidden costs which include: "traffic congestion; loss of trees, open space and farmland; displaced locally-owned small businesses; substitution of jobs that support families with low-paying jobs that do not; air and water pollution; dying downtowns with vacant buildings; abandoned shopping centres and the creation of more retail space than the local economy can support; a degraded sense of community; placing large burdens on public infrastructure, such as sewers and road maintenance; discouraging new business development; and sprawl."

As PEI's fastest growing community, Stratford is at a critical juncture. It can proactively shape the form, mass and mix of its Core Area, or like most communities, it can wait until developers shape it for them. For staff and Council, the latter scenario is not acceptable; and nor should it be for any progressive community.

This Vision outlines the Town's desires for shaping its core areas, ranging from a traditional downtown waterfront core, to a mixed use Town Hall core to a more typical big box core. The general message is that there is room for a wide range of commercial core area types in Stratford, assuming that high quality development can be assured and provided that they occur in areas where they are best suited. Individual developments must contribute to the greater whole of the Core Area in Stratford, and they must participate in 'place making' at the highest level. A proactive Core Area Vision is a real imperative for Stratford. This document is a response to that imperative.

Image 1: Stratford aerial photo, 1967

Image 2: Stratford aerial photo, 1991

3. History of the Town

Several Acadian families originally settled the Stratford area in the 1750s. The local economy has traditionally been based on agriculture. Other early industries include shipbuilding at Fullerton's Marsh, a shingle mill, a pasteurizing plant and brick kilns in Keppoch and Southport.

Several important institutions in Stratford's history include the Marine Hospital where all ships entering the Charlottetown Harbour were required to have passengers examined for smallpox. The first church was the Cross Roads Christian Church built in 1839 that is still in use and remains one of the Island's oldest churches.

Ferry Point was the first non-agricultural town development as it was point where the ferry crossed to Charlottetown. With the construction of the Hillsborough Bridge in 1905, this transportation link and associated commercial focus diminished.

As a result of the construction of the current Hillsborough Bridge in 1961, the process of municipal incorporation began as the new bridge vastly improved the connection to Charlottetown and spawned the rapid growth of suburban development. As Bunbury, Southport, Cross Roads and Keppoch-Kinlock incorporated, co-operation and joint initiatives, such as the Glen Stewart School, provided a solid foundation for the eventual amalgamation.

In 1993, the Provincial Government issued a White Paper on Municipal Reform in the greater Charlottetown and Summerside Areas. The reform model called for the creation of one large municipality in the Charlottetown area. Given the long standing history of co-operation between the four municipalities on the Stratford peninsula and the natural geographic boundaries of this area, Southport, Bunbury, Cross Roads and Keppoch-Kinlock felt the logical approach would see three municipalities formed. The new communities would include an expanded City of Charlottetown, a southern municipality south of the Hillsborough River and a western municipality to the west of the North River causeway. With this goal in mind the four communities, through the Waterview Municipal Co-operation Committee, made a joint submission to the Commission on Municipal Reform.
The technical arguments and the level of co-operation displayed by the Committee were sufficient to be adopted in the Commission's final report, which was eventually accepted by the Provincial Government.

On April 1, 1995, the new Charlottetown Area Municipalities Act came into effect and created the enlarged City of Charlottetown, the Town of Cornwall and the Town of Stratford.

The name Stratford was not determined by the Province but was selected by area residents shortly after the new incorporation was announced. Stratford, which means "road over water", now constitutes the land area of five previous communities of Bunbury, Southport, Cross Roads, Keppoch-Kinlock and Battery Point.

4. Planning Context

The Town of Stratford is located immediately to the southeast of the City of Charlottetown, the provincial capital and largest municipality in Prince Edward Island. The Town is situated on a peninsula, bounded by the Hillsborough River, Charlottetown Harbour, Hillsborough Bay and Fullerton's Marsh. To the south are the communities of Alexandra and Pownal and to the east is the community of Mt. Herbert.

While the Town represents a somewhat natural geographic region, the one obvious anomaly is the area often referred to as "Bunbury District", essentially the area between the former community of Bunbury and Fullerton's Marsh. During the discussions on municipal amalgamation the Town recommended the incorporation of this area into the new Town boundaries, but this did not occur. Today, this area remains an unincorporated region surrounded by the Town on two sides, and the natural boundary of Fullerton's Marsh and the Hillsborough River on the other.

The Town of Stratford is contained within a geographical area that includes 5,230 acres. The Trans Canada Highway, connecting the eastern end of the Province to the capital via the Hillsborough Bridge, bisects the Town from east to west.
The topography and drainage within the Town is quite diverse. In the northern part of the Town, the landscape is gently rolling with a poorly differentiated drainage system. The land falls generally from a high point on Mason Road north toward Fullerton's Marsh, west toward the Hillsborough River and south toward Stewarts Cove. There are no prominent streams in this area.

The southern part of the Town has much more diverse topography and a well articulated drainage system with a number of streams and several prominent ravines. The most significant stream system is the Hatchery Pond system feeding into Stewarts Cove. Several other streams are evident in the Keppoch-Kinlock and Cross Roads areas feeding into Hillsborough Bay.
The highest point of land in the town is Cable Heights, located in Cross Roads. A significant escarpment begins in the Keppoch-Kinlock area and runs for

several miles to the east through Alexandra and Pownal. This prominent land feature affords dramatic views to the south overlooking Hillsborough Bay and the Northumberland Strait, and has become a popular location for estate type housing.

The shoreline of the Town is marked by prominent cliffs in the Keppoch area, which become less pronounced to the north and east. A number of beaches are located along the shoreline, mostly at the mouths of streams and in coves.

Soils in the region are primarily of the Charlottetown series and tend to be somewhat heavy. High clay content in certain areas creates low percolation rates and poses problems for septic tile fields. While soil depth is generally good, there are pockets of shallow soils, primarily along the escarpment. A number of shale pits are located in this area. Ground water is of high quality and is in generally good supply.

5. Stratford Core Area Vision

In the winter of 2005, Stratford initiated the Core Area Vision process, designed to provide a vision framework to inform this more detailed implementation plan. Urban Strategies Inc. of Toronto was retained by the Town to prepare the vision. The framework for the vision was prepared over a week-long public symposium in March 2005.

The long term vision for Stratford includes a "Lake District" that forms the setting for a new office and commercial district to the south of the current municipal building. The backbone of the Lake District is a mixed-use main street (i.e. a new street south from City Hall to the TCH) that is the focus for commercial and civic activities and creates a defined arrival to the Town Hall and civic district. An attractive pedestrian oriented main street creates opportunities for social, cultural and economic exchange and a place for new more compact housing forms, small shops, retail and offices. This district can accommodate a future junior high school, sports fields, a multi use recreational facility, and a place of worship. These institutions would create a focus for neighbourhood development which would include detached homes, townhouses and apartments. An attractive public realm, comprised of walkable streets, parks, civic and main street gathering places and trail linkages, provides a clear structure for a mix of uses within the town centre. A radial pattern of streets, trail, hedgerow and open space connections will be constructed to connect the new neighbourhoods south of the city Hall district.

A new system of green linkages would preserve existing natural features and link the Town Centre and neighbourhoods to Cotton Park and the waterfront. A comprehensive open space system along the shore will strengthen Stratford as a waterfront community and create a new sense of arrival at the Hillsborough Bridge. Trail linkages along the bridge will connect the important public places along the waterfront. The waterfront should be developed to create a waterfront park, public marina, floating pier, residential development and commercial activities to support year round use, water-based recreation and civic

Urban Strategies' Core Area Vision Model

celebrations. The marina break wall, boardwalk and floating waterfront pier will connect people to the water and water-based activities. A new park can provide a setting for a public building that would house cultural, educational or arts uses. Adjacent to a new waterfront park the new neighbourhood along the shore is arranged around an extension of the Town street system.

Buildings are arranged around small courts and open spaces to create a village like setting at the waterfront. A plaza at the waterfront would make a great setting to view the activities along the river, fireworks, cruise ship movements and the view of Charlottetown. The plaza is directly connected to the piers and boardwalk. The waterfront connects to the south along Glen Stewart and St. John Avenue to the Glen Stewart School and then to the town centre and lake district.

While the 2005 Vision report developed a physical model to illustrate the principles of the vision, the vision plan did not account for some of the detailed realities that required significantly more investigation as part of this study. This explains why there are differences between the 2005 vision and this more detailed implementation concept.

1 Andres Duany, Elizabeth Plater-Zyberk, and Jeff Speck, "SUBURBAN NATION: THE RISE OF SPRAWL AND THE DECLINE OF THE AMERICAN DREAM" (2000)

2 "Big Box" development refers to stores that range from 90,000 to 250,000 square feet, which are typically 20 to 50 times the size of typical downtown retailers. Leslie Tucker, Retail Caps for Retail Glut: Smart Growth Tools for Main Street, NATIONAL TRUST FOR HISTORICAL PRESERVATION 1 (2002)

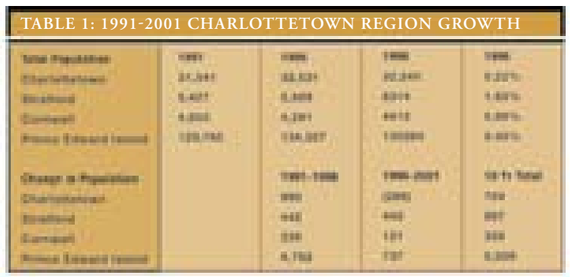
3 Constance E. Beaumont & Leslie Tucker, Big-Box Sprawl; (And How to Control It), MUNICIPAL LAWYER, 7 (Mar./Apr. 2002).

6. Demographic Profile of Stratford

Stratford's population started to grow rapidly after the construction of the new Hillsborough Bridge in 1965. The first large suburban subdivisions were established in the late 1960s and early 1970s. By 1976, there were in excess of 1,000 housing units in the Stratford Area with an estimated population of over 3,400 people. Young families with young children occupied the majority of these new housing units, thereby creating strong demand for new school facilities. In response to this demand, the Glen Stewart School was constructed in 1975, however the continued growth of families in the area rapidly outpaced this new capacity.

During the mid 1980s, the pace of growth in the entire Charlottetown region slowed down, but moderate growth rates returned in the late 1980s and continue today. Table 1 provides information on the growth of the population of the Charlottetown Region from 1991 until 2001.

TABLE 1: 1991-2001 CHARLOTTETOWN REGION GROWTH



From 1991 to 2001 the population of Prince Edward Island increased from 129,765 to 135,294; an increase of 5,529 people, or a 0.43 % population growth rate per year. During this same period of time, the population of the Town of Stratford increased by 887 people, a 1.63% average annual growth rate, making Stratford the fastest growing municipality in the Province. The population of the City of Charlottetown increased by 704 people, although all of this growth occurred during the 1991-1996 period, while the population actually decreased by 286 people during the second five-year period (from 1996 until 2001). The population of the Town of Cornwall increased by 359 people from 1991-2001, about half the rate of the Town of Stratford.

CHART 2: STRATFORD 2001 POPULATION

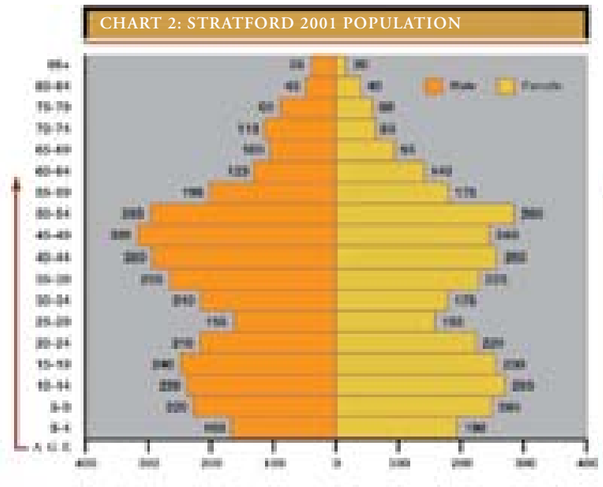


CHART 3: STRATFORD 2001 POPULATION

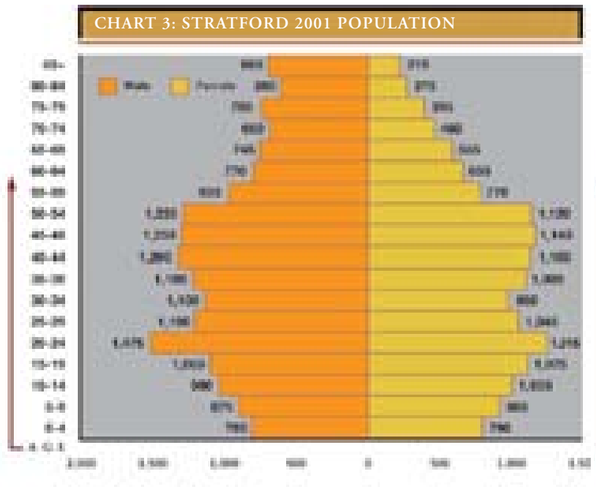
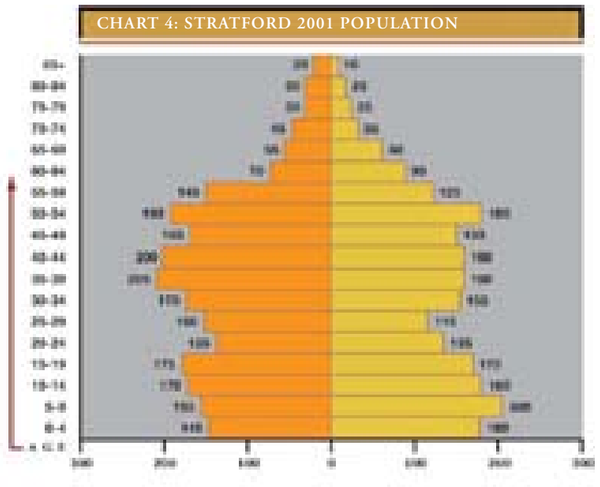


CHART 4: STRATFORD 2001 POPULATION



This data indicates that the population growth of the province is slowing down, and that a good portion of the growth occurring in the Charlottetown area is the result of intraprovincial in-migration to Queens County from Kings and Prince counties. Within Greater Charlottetown, Stratford is the fastest growing community, while Cornwall also shows positive population growth.

AGE DISTRIBUTION

Charts 2, 3, and 4 illustrate the age distribution (from 2001 census data) of the populations of Stratford, Charlottetown, and Cornwall respectively.

The chart above illustrates the distribution by age of the 2001 population of the Town of Stratford. When compared to the Province as a whole, or the City of Charlottetown, several observations can be made. First, Stratford has a large percentage of its population in the 35-54 age cohort. This clearly indicates a preference by mature adults and families with children to live in Stratford. It should also be noted how small the 20-29 age cohort is. This is the age group that is either in university, or working and probably has just leased their first apartment. Not surprisingly, Charlottetown sees a much higher percentage of this age group than does the surrounding communities, as Charlottetown has the university, a large employment base, and many urban amenities that appeal to youth. Stratford also has very few residents over 75 years of age, perhaps reflecting the availability of hospitals and nursing homes in Charlottetown.

The age distribution chart for Charlottetown illustrates several interesting facts. The City contains a large percentage of youth (aged 20-24) likely attending university in Charlottetown, and a large percentage of elderly residents, who are predominantly women. By contrast, the Town of Cornwall has far fewer elderly residents than Charlottetown, and even less than Stratford. Cornwall is similar to Stratford in that it does not have a large number of university-aged residents, but it does have a large percentage of young families with children.

Not taking into account the natural growth rates (births and deaths) and in-migration that will occur during the next decade, if this same data is projected forward fifteen years to 2016, the 55 and above cohort (especially 55–69, the active, retired population) will increase dramatically in Stratford; while the 35-44 the age cohort (currently the largest groups) will decline sharply. This increase in the active mature adult and active elderly will require new housing forms that provide increased accessibility, and amenities and recreational facilities to meet the needs of these age groups (e.g., walking trails, community centres, etc). The continued increase in the very aged over the next several decades also means that many more assisted and long-term care facilities will be required. This would be a good fit for the new Stratford Waterfront development project.

HOUSEHOLD INCOME

Chart 5 summarizes the 2001 Median Household Income for Stratford, Charlottetown, Cornwall and Prince Edward Island.

Overall, median income levels in Stratford and Cornwall are significantly higher than the provincial average, while those in the Charlottetown are lower. This is logical, given that both Stratford and Cornwall are bedroom communities for Charlottetown and house a large proportion of the people employed in the capital. Conversely, Charlottetown houses a larger proportion of less mobile, lower income workers and students, as the social services and affordable housing they need are in ready supply.

4 Adapted from Urban Strategies Inc. core area vision for the Town of Stratford - A Place at the Centre of Town

CHART 5: 2001 MEDIAN HOUSEHOLD INCOME BY INCOME TYPE

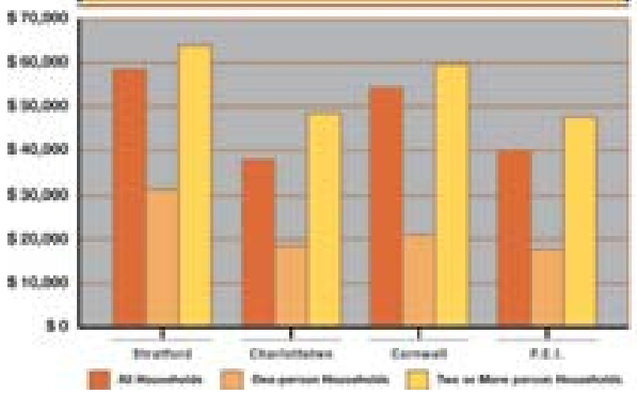


CHART 6: 2001 OCCUPATION BY INDUSTRY SECTOR

	Stratford	Charlottetown	Cornwall	P.E.I.
Public Administration	310	2,370	310	7,000
Health Care & Social Assistance	470	2,140	340	7,400
Retail Trade	420	2,080	380	7,300
Educational Services	280	1,340	145	4,300
Construction	240	970	95	5,270
Accomodation & Food Services	190	1,600	220	5,320
Professional Scientific & Technical Services	180	900	80	2,200
Other Services (except public administration)	160	820	120	3,720
Manufacturing	170	970	330	7,700
Transportation and Warehousing	140	920	70	3,870
Information and Cultural Industries	120	470	80	1,200
Waste Mgmt. & Remediation Administration & Support	110	370	130	2,270
Wholesale Trade	100	400	50	2,160
Finance and Insurance	100	500	70	1,340
Agriculture, Forestry, Fishing, and Hunting	70	270	150	6,850
Arts, Entertainment, and Recreation	70	490	20	1,040
Real Estate, Rental, and Leasing	40	270	60	980
Utilities	20	90	0	320
Mining, Oil & Gas Extraction	0	10	10	210
Management of Companies and Enterprises	0	10	0	940
Industry - Not Applicable	30	180	10	700
Total Labour Force 15 Years +	3,000	17,870	2,540	73,830

STRATFORD ECONOMY

The Stratford economy is inextricably tied to that of the City of Charlottetown, the provincial capital and major employment centre. According to the Statistics Canada Labour Force Survey, the Charlottetown Labour Market created 5,175 new jobs from 1995 to 2005, with 3,708 of these occurring in the five-year period from 2001 to 2005. Much of this growth is occurring in the service sector, however jobs are also being created in manufacturing and agriculture.

Chart 6 provides a breakdown of occupations for Stratford, Charlottetown, Cornwall and Prince Edward Island by employment sector.

As would be expected, the sectors employing most of the Stratford's population are public administration, health care, retail trade and educational services. Most of these jobs are located in the Charlottetown area; thus, the local population is employed significantly more than the provincial population in public administration and educational services, and less in the traditional Island employment sectors of agriculture, fishing, and manufacturing.

Future development of Stratford's core area is expected to contain a mix of commercial, office, retail and higher density residential uses. Current distribution of employment across the sectors would be expected to continue, although job locations would change. The new CGI call centre being built on the Southport lands (Stratford Waterfront) is the first example of an IT sector crossing the river to Stratford, and presents a real growth opportunity for the community to increase, and diversify, its own employment base.

LABOUR FORCE PARTICIPATION

Chart 7 presents labour force characteristics for Stratford, Charlottetown, Cornwall and Prince Edward Island based on the 2001 Census.
Unemployment rates in Stratford are almost 50% lower than those for the Province, while at the same time having a higher than average labour participation rate. Again, the Town benefits from its proximity to Charlottetown, which provides a stable, diversified and year-round employment base.

CHART 7: 2001 STRATFORD LABOUR FORCE CHARACTERISTICS

	2001 Population	Labour Force	Unemployment Rate	Participation Rate
Charlottetown	32,245	17,870	10.7%	68.6%
Cornwall	4,410	2,540	9.6%	72.8%
Stratford	6,314	3,000	7.4%	72.1%
Prince Edward Island	135,294	73,830	11.2%	69.5%

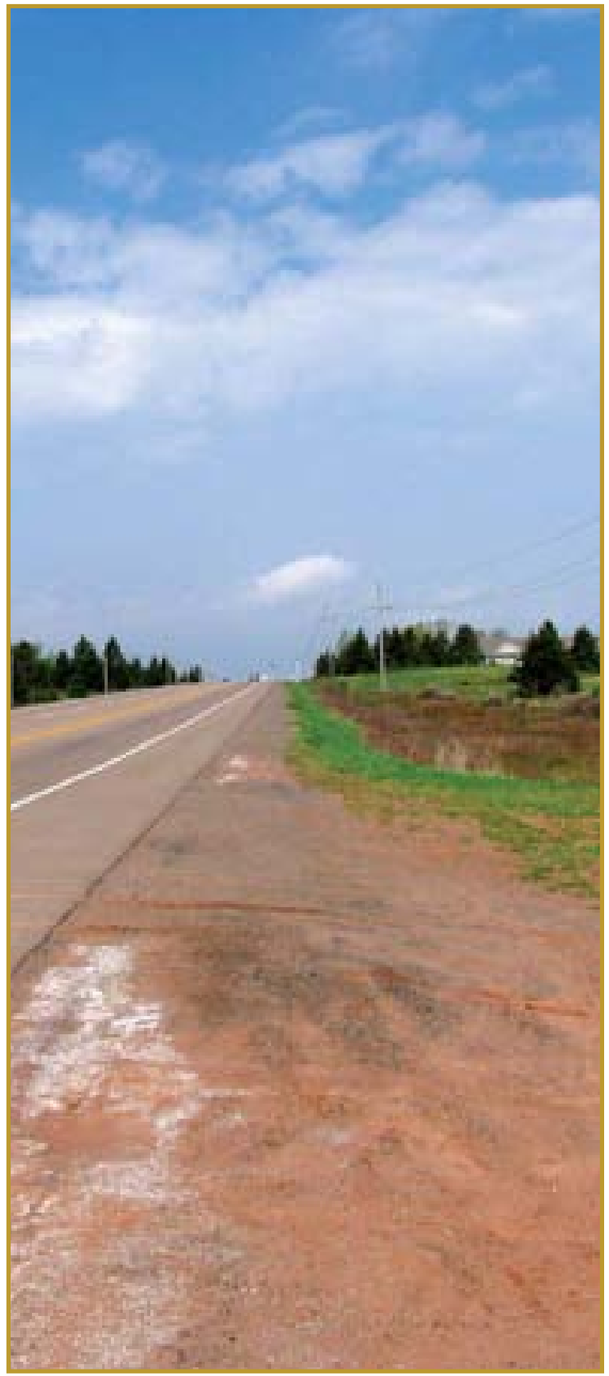


CHART 8: 1995-2016 STRATFORD POPULATION PROJECTION

Year	Population	Total Households	Average HH Size	Change in Population	Change in Households
1996	6,007	2,093	2.87		
1997	6,059	2,137	2.83	19	44
1998	6,133	2,222	2.77	129	85
1999	6,242	2,295	2.72	87	73
2000	6,296	2,347	2.67	54	52
2001	6,339	2,406	2.63	53	59
2002	6,434	2,490	2.58	95	84
2003	6,573	2,590	2.53	149	100
2004	6,733	2,711	2.48	160	113
2005	6,850	2,819	2.43	127	108
2006	6,974	2,913	2.39	124	94
2007	7,098	3,014	2.35	124	99
2008	7,221	3,116	2.32	123	102
2009	7,346	3,222	2.28	125	106
2010	7,472	3,332	2.24	126	110
2011	7,596	3,443	2.20	124	112
2012	7,720	3,562	2.17	124	117
2013	7,845	3,683	2.13	125	121
2014	7,968	3,808	2.09	123	125
2015	8,090	3,937	2.05	122	129
2016	8,213	4,071		123	134
Projected Change in Population and Households (2007-2016):				1239	1156

POPULATION PROJECTION

Chart 8 provides a population projection for the Town of Stratford that was prepared for the Eastern School District by the Town of Stratford.

Chart 8 indicates that the population of the Town of Stratford is projected to increase by 1,239 people during the ten-year period from 2007 to 2016 to a total of 8,213 people. During this same period, there are projected to be a total of 1,156 new households formed, thus increasing the number of apartments and homes in the Town of Stratford from 2,915 to 4,071.

When planning for housing, the important indicator is not population growth per se, but rather household formation (or headship rates as they are known in the housing industry). For example, if the child of a married couple reaches the age of maturity (i.e., 18 years old) and decides to get his/her own apartment, this creates a new household (and hence demand for an apartment) without a corresponding change in the population of a town.

Conversely, if a husband or wife dies, the population of a town decreases, but the surviving spouse will still need a place to live and may chose to continue living in the same home. Other factors that can influence the growth or decline of households include: divorce (creates more households); marriage (can reduce the number of households as both partners now live together); and the general state of the economy (i.e., if the economy is not producing high paying jobs, young adults may chose to come back home and live with their parents).

This process of household formation and contraction can best be expressed by looking at the average household size of a community. As shown on Chart 8, the average household size for the Town of Stratford decreased from 2.87 persons per household in 1996 to 2.39 persons per household in 2006 – a drop of 16% in just a decade. The effect of this demographic shift is that even if the population of the region was flat and did not change during this period, the propensity towards smaller households would have created demand for more housing.

For the next decade (2007-2016) the average household size for the Town of Stratford is projected to continue to contract, from 2.35 to 2.02, thus continuing to generate demand for new homes and apartments, even if the population of the Town does not change. However, the projection indicates that the number of households in the Town will grow by just over 1,100 people during the 10 year period from 2007-2016. This household growth will likely occur due to the wide availability of good quality land in Stratford that is in close proximity to the City of Charlottetown (i.e., jobs, social and cultural amenities), and the potential of the Southport waterfront lands that will provide a high quality waterfront environment that is considered desirable by many residents.

IMPLICATIONS OF GROWTH ON THE DEMAND FOR HOUSING

Before discussing what future types of housing are likely to be built in Stratford in the coming decade, it is instructive to review actual data on housing that was built in the last decade. Chart 9 provides information on housing starts in the Charlottetown area during the past eight years.

CHART 9: 1999-2006 CHARLOTTETOWN HOUSING STARTS

Year	Singles	Semi	Row	Apartment	Total
1999	228	8	27	58	321
2000	284	34	0	16	334
2001	237	36	4	16	293
2002	282	48	47	74	451
2003	310	58	40	77	485
2004	339	54	63	42	490
2005	300	88	79	35	448
2006	275	n/a	n/a	n/a	425

During the past eight years, the total number of single family homes built per year in the Charlottetown area has increased from just over 300 per year in 1999 and 2000, to a peak of 490 homes in 2004. This increase in the production of housing has been caused by the combination of increased household formation and low interest rates. It is unlikely that this level of housing demand will be repeated in the coming decade.

It should also be noted that the majority of new housing built in the Charlottetown market is single family housing, with an average of about 300 homes built per year in 2002-2005. Semi-detached are the second most popular housing type with 50 to 90 units built per year. Row or townhouses are becoming more popular, but still only account for 20 to 60 housing starts per year, while the market for multi-family housing (apartments and condominiums) has historically ranged from 15 to 80 units per year.

Chart 10 provides some detailed information on the types of housing built in Stratford during the past seven years. It is important to note that construction activity of the past seven years is not a fool proof predictor of future activity. For example, if serviced land was not readily available in Stratford for certain housing types during this period (e.g., apartment construction), builders and hence homebuyers likely went elsewhere.

CHART 10: 1999-2005 STRATFORD HOUSING BY TYPE

Year	Singles	Semi	Row	Apartment	Total
1999	50	3	0	20	67
2000	46	8	0	0	54
2001	65	18	0	0	83
2002	43	20	0	18	81
2003	58	22	0	29	109
2004	69	20	19	0	108
2005	61	18	19	0	98

An average of 100 units of housing per year was built in Stratford in 2003-2005. Approximately two thirds of this housing was single family housing and another 20% was semi-detached housing; both are low density housing options. Row houses are relatively rare, although 19 were built in 2004 and 2005. Apartment construction is sporadic, although this may have more to do with the lack of serviced land that is zoned for this type of development activity, than the actual demand. As well, until Stratford develops its own "urban downtown", apartment construction will continue to occur predominantly in downtown Charlottetown.

Chart 11 indicates the market position of Stratford relative to other communities in the greater Charlottetown area. For example, the first column indicates that Stratford captures 15% to 20% of the market for single family housing in the Charlottetown area; this amount increased steadily from 15% in 1999 to 20% in 2005.

CHART 11: 1999-2005 STRATFORD MARKET POSITION

Year	Singles	Semi	Row	Apartment	Total
1999	15.4%	25.0%	0.0%	51.7%	20.8%
2000	17.4%	22.2%	0.0%	0.0%	17.6%
2001	18.0%	50.0%	0.0%	0.0%	31.5%
2002	14.7%	41.7%	0.0%	24.3%	17.8%
2003	18.7%	39.3%	0.0%	37.7%	22.8%
2004	20.8%	37.0%	38.0%	0.0%	22.0%
2005	20.0%	18.0%	100.0%	0.0%	21.4%

Stratford has a large portion of the market for semi-detached housing, with new units in town comprising 20% to 50% of al units being built in the local market place. Both row housing and apartments appear to be sporadic, and can fluctuate from zero to 25% and 50% of the market on a given year.

Overall, the Town of Stratford has been capturing a large share of the local housing market and should continue to do so in the near future.

FUTURE HOUSING TRENDS.

Stratford is widely seen as one of the more affluent housing markets in Charlottetown, with average Multiple Listing Service (MLS) price exceeding those of nearby Charlottetown or Cornwall. In 2005, the average MLS price for Stratford was $153,718, 2% higher than the West Royalty area of Charlottetown and 10% higher than Cornwall ($139,437) and 17% higher than Sherwood East Royalty ($130,138). This affluent market has been an excellent fit for aging baby boomers looking for move up housing or dream homes, often on large lots with mature vegetation and views of the river.

However, during the next decade, there will be a slight shift towards housing that is easier to maintain (i.e., condominiums, apartments and townhouses) which are typically located in serviced urban areas close to shopping, personal services and health care facilities. The two core areas available for development within the Town of Stratford are both well positioned to capture this future demand. Although land is not in short supply in the Charlottetown area, there is a limited amount of urban waterfront land, and for this reason, the Southport Motel site should attract a large portion of baby boomers looking to downsize.

An increased demand for lower maintenance housing will increase demand slightly for apartments, condominiums and town homes when compared to historical housing production. Housing affordability will also become more of an issue, and municipalities will be forced to ensure that servicing costs do not get out of hand in order to be competitive relative to their neighbouring communities. One way to achieve these two goals is to increase the amount of medium density housing options provided (i.e., town homes and apartments/condominiums are cost effective and provide low maintenance). Demand for traditional single family homes will still be strong, but will decline slightly. The shift is demographics will require more walking trails and community centres where retired and/or single elderly residents can socialize. The Town's Official Plan should take these trends into account and prepare accordingly.

Existing apartments in the Town Core Area in Stratford

FIGURE A-1: TRAFFIC GROWTH TREND 1978 - 2026
HILLSBOROUGH RIVER BRIDGE, ROUTE 1, PEI

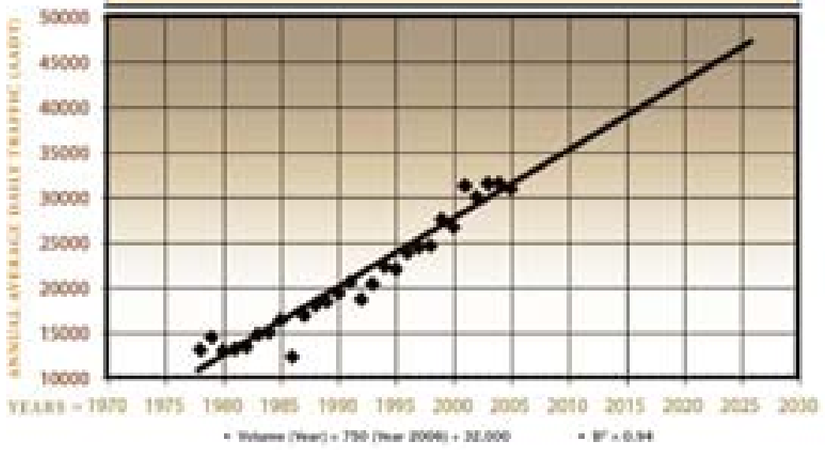
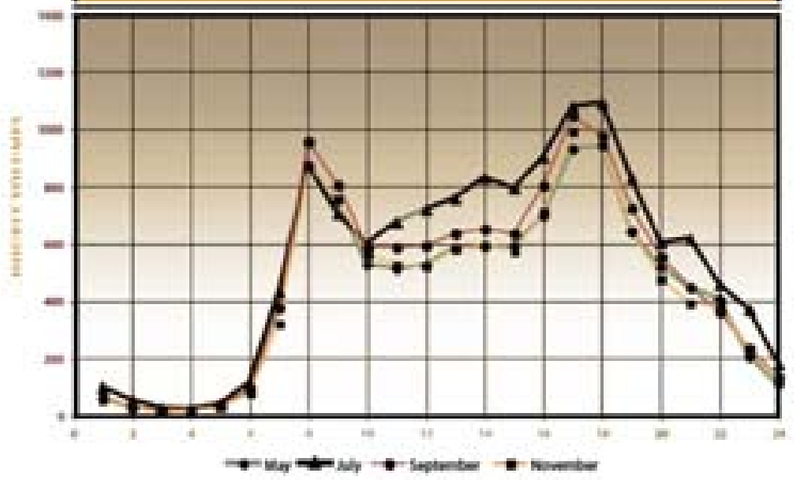


FIGURE A-2: EAST OF GEORGETOWN ROAD INTERSECTION
AVERAGE HOURLY WEEKDAY VOLUMES - 2005



7. Road Network

Trans Canada Highway Route 1 bisects the Town of Stratford east-to-west. This section of TCH Route 1 is part of the National Highway System and is considered to be of strategic importance to the Province of Prince Edward Island, as well as Government of Canada. This highway places Stratford in an advantageous position with immediate access to the Hillsborough River Bridge and Charlottetown to the west and the southeast part of the Province and Wood Islands Ferry to the east. However, there are disadvantages in that the highway divides residents, Stratford Town Hall and the Stratford Business Park on the north from other residents, schools, and principal business areas to the south side of the highway. Collector roads serving the Core Area in the north side of Town include Mason Road, Jubilee Road / Shakespeare Drive, Hopeton Road and Bunbury Road. Core Area south side collector roads include Stratford Road, Keppoch Road, Georgetown Road and Kinlock Road

The Core Area encompasses about three kilometres of TCH Route 1 from the east end of the Hillsborough River Bridge to the Mason Road intersection. The highway section, with a posted speed limit of 70 km/h, includes four significant intersections:

1. Bunbury Road – partial intersection for movements to and from the Hillsborough River Bridge; direct merge lane for westbound traffic; left turn lane on TCH Route 1 for eastbound traffic.
2. Stratford Road / Hopeton Road – traffic signal control; concrete median on TCH Route 1; left and right turn lanes; protected left turn phases.
3. Kinlock Road / Jubilee Road - traffic signal control; concrete median on TCH Route 1; left and right turn lanes; protected left turn phases.
4. Mason Road – T-Intersection with STOP sign control; left turn lane on TCH Route 1.

There are also two minor intersections at Clinton Avenue and Dale Drive, between the Kinlock Road / Jubilee Road and Mason Road intersections.

TRAFFIC VOLUMES

The Core Area section of TCH Route 1 experiences among the highest traffic volumes in the Province. The Department of Transportation has obtained traffic counts on the Hillsborough River Bridge annually since 1978. Estimated Annual Average Daily Traffic (AADT) volumes are tabulated in Table A-1 and are shown graphically in Figure A-1 represent a seasonally adjusted average daily volume. Regression analysis indicates that AADT volumes have been increasing by about 750 vehicles per day per year. This represents an annual growth rate of about 2.3% based on the estimated 2006 AADT volume of 32,000 vpd. If this growth rate continues, as it is expected to do considering the proposed Core Area Vision, AADT volumes are projected to increase to 47,000 vehicles per day over the next 20 years.

The Department of Transportation has also obtained several traffic counts on TCH Route 1 on the eastern approach to the Core Area, just east of the Georgetown Road / Stratford Road intersection. Weekday hourly traffic volumes for four different seasons in 2005 are tabulated in Table A-2 and shown graphically in Figure A-2. Weekday volumes varied from about 10,500 vpd in May and November to almost 13,000 vpd during July. If volumes at this location are assumed to increase at the same rate as volumes on the Hillsborough River Bridge, 'off-season' weekday volumes are projected to increase to about 15,000 vpd, with 'peak' season volumes of about 19,000 vpd, over the next 20 years.

Hourly volumes for west and east count locations for seven days between July 5 and 11, 2006, are tabulated in Tables A-3A and A-3B, respectively, and average weekday hourly volumes are shown graphically in Figure A-3. During that week, the average weekday volume varied from about 38,500 vpd on the Bridge to about 12,600 vpd east of Georgetown Road. Bridge average hourly volumes varied from 2500 vph during the AM peak hour, to 3300 vph during the PM peak hour, with an average volume of about 2300 vph between the peak hours. Route 1 average hourly volumes east of Georgetown Road varied from 900 vph during the AM peak hour, to 1100 vph during the PM peak hour, with an average volume of about 700 vph between the peak hours.

Year	AADT
1978	13,120
1979	14,480
1980	13,031
1981	13,185
1982	13,483
1983	14,835
1984	15,063
1985	16,419
1986	13,350
1987	16,956
1988	18,070
1989	18,451
1990	18,416
1991	20,597
1992	18,734
1993	20,395
1994	22,320
1995	23,038
1996	23,676
1997	24,421
1998	24,819
1999	27,320
2000	28,453
2001	31,223
2002	30,068
2003	31,329
2004	31,527
2005	30,944

FIGURE A-2: HOURLY VOLUMES - ROUTE AT EAST GEORGETOWN ROAD INTERSECTION

HOURLY VOLUMES ON ROUTE1 FOR FOUR SEASONS IN 2005

Hour	Tuesday [illegible]	Wednesday [illegible]	Average Volume	Wednesday [illegible]	Thursday [illegible]	Average Volume	Wednesday [illegible]	Thursday [illegible]	Average Volume	Tuesday [illegible]	Wednesday [illegible]	Average Volume
1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
10	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
11	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
12	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
13	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
14	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
15	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
16	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
17	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
18	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
19	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
20	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
21	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
22	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
23	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
24	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

FIGURE A-3: ROUTE 1 VOLUMES - JULY 5-11, 2006 - AVERAGE WEEKDAY HOURLY VOLUMES

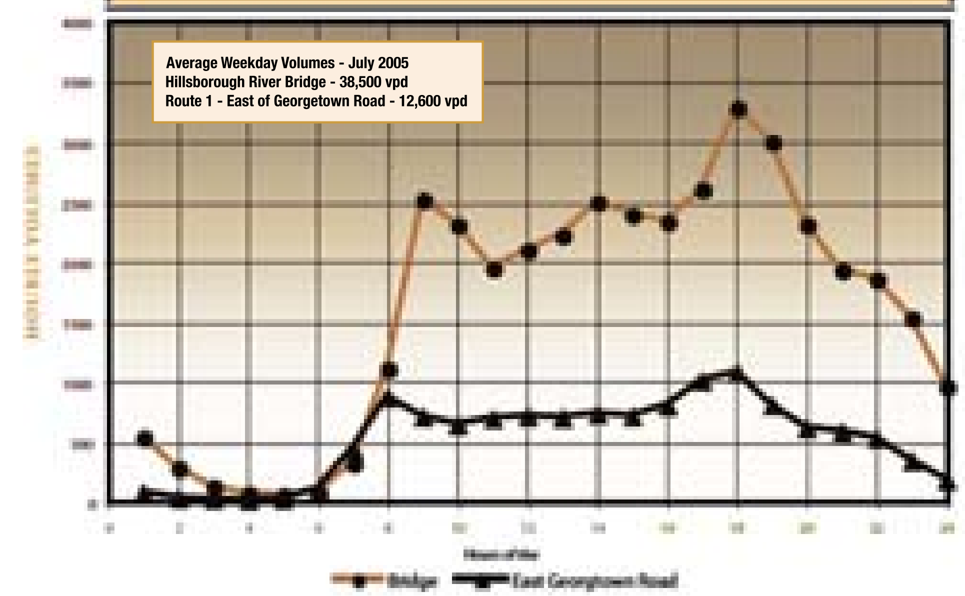


TABLE A-3A - ROUTE 1 - HILLSBOROUGH RIVER BRIDGE - JULY 5-11, 2006

Hour	DAYS OF THE WEEK JULY 5-11, 2006							HOURLY AVERAGES	
	Mon 10	Tues 11	Wed 05	Thur 06	Fri 07	Sat 08	Sun 09	Week	Weekday
[illegible]	543	471	553	580	634	759	854	629	542
[illegible]	271	307	251	287	325	491	577	358	287
[illegible]	124	118	102	167	157	253	363	188	134
[illegible]	48	59	65	113	101	241	390	108	77
[illegible]	54	58	53	81	88	105	107	89	69
[illegible]	86	81	83	100	76	95	100	81	87
[illegible]	337	362	303	326	312	195	184	288	328
[illegible]	1067	1175	1053	1212	1043	549	308	919	1114
[illegible]	2610	2573	2544	2658	2338	1072	616	2044	2525
[illegible]	2369	2362	2299	2353	2199	1505	944	2092	2313
[illegible]	2005	1909	1828	2070	1953	1993	1450	1888	1954
[illegible]	2228	2144	1962	1996	2267	2452	1875	2128	2105
[illegible]	2327	2271	2007	2128	2419	2600	2262	2288	2230
[illegible]	2343	2500	2509	2582	2567	2588	2225	2465	2504
[illegible]	2362	2387	2349	2455	2514	2428	2326	2394	2401
[illegible]	2284	2387	2447	2336	2342	2399	2469	2369	2343
[illegible]	2491	2613	2573	2745	2643	2265	2166	2499	2613
[illegible]	3241	3490	3305	3285	3078	2367	2126	2985	3291
[illegible]	2898	3201	3027	2952	2876	2094	1830	2710	3009
[illegible]	2349	2271	2297	2338	2352	2115	2009	2259	2319
[illegible]	1954	1953	1884	1964	1923	1836	1821	1905	1936
[illegible]	1909	1994	1876	1794	1736	1709	1717	1818	1861
[illegible]	1492	1524	1539	1505	1544	1545	1329	1511	1541
[illegible]	763	979	926	936	1226	1115	743	984	966
Total	38196	39160	37750	38921	39695	34909	31031	36353	38546

TABLE A-3B - ROUTE 1 - EAST OF GEORGETOWN ROAD - JULY 5-11, 2006

Hour	DAYS OF THE WEEK JULY 5-11, 2006							HOURLY AVERAGES	
	Mon 10	Tues 11	Wed 05	Thur 06	Fri 07	Sat 08	Sun 09	Week	Weekday
[illegible]	75	88	94	77	97	152	169	107	86
[illegible]	43	39	31	54	41	94	90	57	42
[illegible]	14	25	20	36	38	63	89	41	27
[illegible]	16	21	23	28	29	26	62	29	23
[illegible]	21	40	31	33	29	30	63	36	33
[illegible]	118	113	110	120	125	84	52	103	117
[illegible]	430	450	445	457	433	253	111	368	443
[illegible]	898	909	876	890	834	359	191	707	878
[illegible]	727	711	747	888	727	509	241	619	736
[illegible]	626	652	625	668	667	637	481	611	648
[illegible]	763	631	684	679	730	762	511	681	699
[illegible]	728	674	722	706	765	825	676	727	718
[illegible]	641	697	736	715	732	797	687	714	705
[illegible]	675	722	731	732	839	796	610	755	740
[illegible]	697	717	749	687	749	745	787	733	720
[illegible]	737	751	807	802	819	725	790	782	809
[illegible]	985	1007	1013	1052	1000	917	880	937	1013
[illegible]	966	1006	1078	1110	1129	746	693	966	1062
[illegible]	746	796	806	813	915	668	711	778	813
[illegible]	566	602	605	647	686	560	539	600	620
[illegible]	566	644	615	582	630	626	503	566	587
[illegible]	500	652	523	534	598	540	433	539	533
[illegible]	281	324	330	334	483	445	245	346	346
[illegible]	136	180	172	206	268	262	202	207	192
Total	11961	12309	12681	12634	13436	11428	9553	11992	12592

CONTEXT SENSITIVE SOLUTIONS

Highway design engineers, with the objective of building and maintaining a road network that provides safe, convenient, economic and efficient movement of persons and goods using motor vehicles, have utilized traditional highway corridor design for the section of TCH Route 1 which passes through the Core Area. While these objectives are extremely important, in recent years it has been recognized that there is a need to balance them with walkability, community values, sense of place, and quality of life.

Context Sensitive Solutions (CSS) is a different approach to the roadway planning and design process. It is a process of balancing the needs of all stakeholders and starts in the earliest stages of project development. It is also flexible in the application of design controls, guidelines and standards to design a facility that is safe for pedestrians and bicyclists as well as for motorized vehicles.

A definition for the CSS process used by the Federal Highway Administration (FHWA) in the United States indicates that " Context sensitive solutions (CSS) is a collaborative, interdisciplinary approach that involves all stakeholders to develop a transportation facility that fits its physical setting and preserves scenic, aesthetic, historic and environmental resources, while maintaining safety and mobility. CSS is an approach that considers the total context within which a transportation improvement project will exist."

The CSS process is based on the following tenets:

- Balance safety, mobility, community and environmental goals in all projects;
- Involve the public and stakeholders early and continuously throughout the planning and project development process;
- Use an interdisciplinary team tailored to project needs;
- Address all modes of travel;
- Apply flexibility inherent in design standards; and
- Incorporate aesthetics as an integral part of good design.

While the Hillsborough River Bridge has the highest volume of any road in the Province, and TCH Route 1 in the Core Area is part of the National Highway System, the road section is actually an arterial street through the Town. Comparison of volumes on TCH Route 1 east of the Core Area with those to the west (Table A3 and Figure A3) reveals that a large percentage of the high volume on the Hillsborough River Bridge originates within the Town. Since the Town is a major stakeholder, future planning and design of improvements to TCH Route 1 in the Core Area must adopt the Content Sensitive Solutions process.

5 American Association of State Highway and Transportation Officials. 2004c. A Guide for Achieving Flexibility in Highway Design. Washington, DC: AASHTO.

American Association of State Highway and Transportation Officials. 1997. Highway Safety Design and Operations Guide. Washington, DC: AASHTO.

Transportation Research Board. 2002. NCHRP Report 480: A Guide to Best Practices for Achieving Context Sensitive Solutions. Washington, DC: TRB.

8. Sustainable Development

Sustainable development is defined as "meeting the needs of the present without compromising the ability of future generations to meet their own needs." (Brundtland Commission, 1987). Sustainable development has many objectives including deliberate consideration of how to maintain the quality of the environment, human well being, and economic security. While some of the larger consequences, such as sea level rise, species extinction and the thinning ozone, seem beyond the capacity of local governments to effect change, it is at the local level (specifically the municipal level) that change can be most pronounced.

The sustainability principles described in this section provide a framework for guiding the implementation of Stratford's Core Area Vision and Open Space Plan. It also provides a framework for land use decision making which should be implemented at every scale of planning and design in the town.

Transportation Research Board. 2004. "Context Sensitive Design Around the Country, Some Examples." Transportation Research Circular Number E-C067 - July. Washington, DC: TRB.

Oregon Department of Transportation. 1999. Main Street ... When a highway runs through it: A Handbook for Oregon Communities.

6 http://www.greenroofs.ca/nua/nua.html. New Urban Agenda is a new electronic journal that provides analyses of urban problems and highlights success stories about innovative projects that help to implement the United Nation's Local Agenda 21, a blueprint for urban sustainable development

Sustainability is the root principle for all components in both the Vision and the Open Space Plan, whether it concerns broad-based elements such as the entire waterfront development or minor details such as the type of lighting suggested for Town streets. The fundamental concept is to create a Core Area Vision that aims to achieve a sustainable vision for the Town of Stratford for the long-term. Too often, municipal plans focus on short-term priorities and neglect to consider important environmental, energy, and development issues that threaten the long-term health and welfare of residents, the natural environment, and essential natural resources.

As noted in the Cardinal Group's New Urban Agenda , "Policies may reflect outdated assumptions about urban and ecological systems. Urban subsystems based on linear processes (in food supply, waste management, transportation, sewerage and water infrastructure) assume the cheap availability of energy and materials, rich public treasuries, and the infinite capacity of the ecological sinks that must handle our pollution". The aim of this Core Area Vision is to focus on sustainable practices that will make Stratford a vibrant, healthy, and viable community for the long-term at the building level, site level and community level.

BUILDING LEVEL

The building level, where important features include urban design, the use of renewables, improving energy efficiency, facilitating the 3Rs, and using 'green' materials. There is a considerable amount of work being undertaken in this area and the building level has been the focus of significant government programming domestically and internatonally since the 1970s.

SITE LEVEL

The development site level includes features such as the integration of ecological protection, use of alternative sewage and storm water management, and encouraging alternatives to auto use. This level and the subsequent level have only more recently, in the last decade, become the focus of efforts to develop government programs that support sustainable community development.

PLANNING LEVEL

The planning and infrastructure level includes features such as promoting higher density, supporting affordability, supporting livable communities with vibrant local economies and adequate community services, and implementing regional growth management and protection of watersheds and other significant ecological resources.

9. Sustainability Principles

The sustainability principles provide a yard stick for measuring the success of the Core Area Vision and Open Space Plan and a foundation for its organization. To be truly effective, the principles must eventually be integrated into every aspect of the official plan and development bylaw (not just open space and the Core Area). The sustainability mindset will also take some time to gather momentum. In the future, the Town should consider preparing a Sustainability Development Plan to review all aspects of Town operations and policy with a focus on making the Town more sustainable.

Before outlining a detailed list of specific principles for sustainability, there are three broad themes that must be in place to implement the detailed components of any sustainable initiative for a region:

- A desirable long-term future, and the short- and medium-term steps needed to support that future;
- An integrated approach that recognizes the need for mutually-reinforcing economic, social, and environmental considerations; and
- The need to go beyond government and to engage a broad cross-section of regional society in the enterprise.

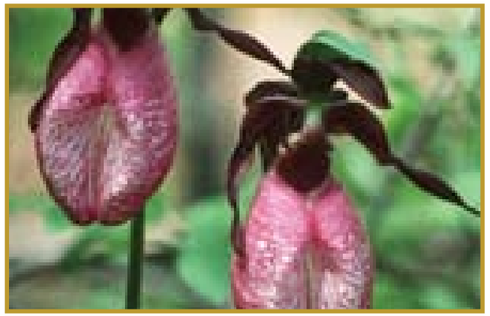
These themes recognize that a sustainable community cannot be built overnight. Firstly, the community must recognize the desirability of a sustainable community. Then, within the context of a long-term vision, short- and medium-term goals must be defined to reach that objective. Secondly, the plan must recognize the interconnectivity of various policies that are often considered mutually exclusive. Once the concept of interconnectivity is outlined, the plan can then develop an integrated, holistic approach to community planning. Finally, if the sustainable vision is to succeed, there must be broad-based, grassroots support among community stakeholders. The most fundamental aspect that will guarantee a sustainable community is the support of residents exemplified through their daily actions.

From the following themes, it is possible to outline 12 principles of supporting sustainable community design. All aspects of the Core Area Vision and the Open Space Plan will conform to at least one sustainability principle, but more often than not, the individual concepts and designs will conform to multiple principles due to the interconnectivity of the integrated sustainability approach to community design.

ECOLOGICAL PROTECTION

Identify and protect the unique ecology of Stratford:

- Protect all streams and wetlands by designating a 10-30m buffer (as outlined in the Environmental Protection Act) on all zoning maps. Designate the buffer as an Environmentally Sensitive Area (ASE) zone. Sensitively sited trails are the only permitted use in these areas.
- A Watershed Management Plan and a regional green space protection plan should be prepared for the Town to preserve communal water resources and open space networks.
- A Well Field Protection Plan should be established to protect Stratford's drinking water source.
- A Site Development Ecological Plan should be prepared for all projects seeking approval on properties larger than 8 acres. The Town should establish guidelines for the content of this study including habitat and water resource mitigation, environmental protection, stormwater management, erosion control, etc.
- A Beach and Shoreline Protection Strategy should be prepared to identify sensitive beach and shoreline resources and to create and preserve access to suitable beach resources for the community in areas of low sensitivity.
- A sustainable Development Plan should be prepared for the Town to review existing policies and bylaws with a view towards making the town more sustainable.



STEWARDSHIP

- Protect agricultural land by designating it as an agricultural reserve and limit non-agricultural construction on designated lands.
- Protect and foster public access to both fresh and salt-water areas within the Town of Stratford.
- Designate and protect all riparian corridors and wetlands within the Town. Develop Conservation plans for the larger areas and ensure public access so long as it does not compromise the resource.
- Identify and restrict development on flood prone lands.
- Plant and renew street trees in the Town. Support indigenous species.

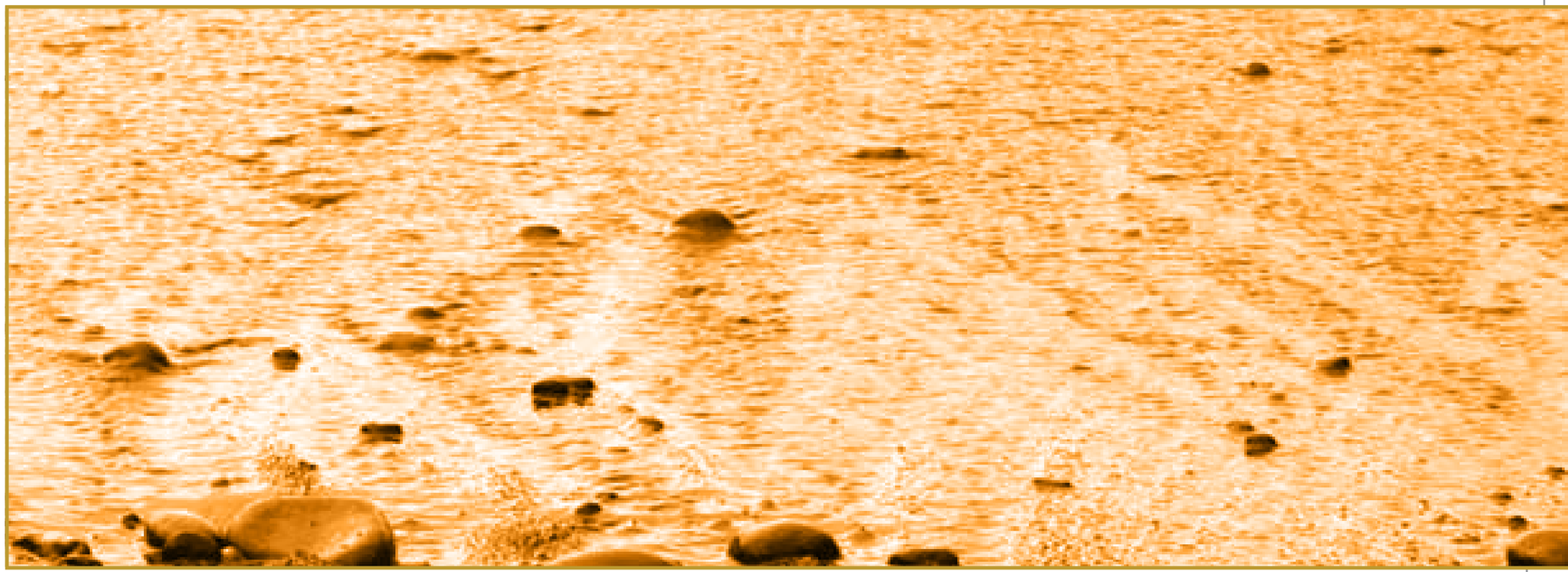
7 From: http://www.sustainability.ca/thebasics

8 Principles adapted from the following sites: Greater Vancouver Regional District Sustainable Region Initiative (http://www.gvrd.bc.ca/sustainability), the Cardinal Group's New Urban Agenda (http://www.greenroofs.ca/sustainabecommunities), and the Charter of the Congress of New Urbanism (http://www.cnu.org/charter).

DENSITY

Density consumes less land than suburban or rural development. It reduces sprawl, reliance on the automobile and, hence, Co2 emissions, municipal capital costs (specifically roads & sewage water infrastructure).

- Encourage density in the Core Area to reduce the Town's ecological footprint.
- Minimize front, side and rear lawns for all buildings in the Core Area.
- Encourage zero lot line developments in the Core Area
- Build at densities able to support a viable range of uses and facilities.
- Reduce space given over to roads and parking.
- Intensify along transport corridors and link areas of high activity.
- The Core Area should include as much mixed use (residential and commercial) development as possible. Where possible, ground floors should be reserved for commercial type uses, while upper floors should encourage residential or office type uses.
- The waterfront area should encourage 2-4 storey developments. The waterfront area should become Stratford's eventual 'downtown'. Only the highest quality development should be permitted in the waterfront area so that it becomes the 'postcard' of Stratford.
- The Town Hall Core should become Stratford's 'village centre' and active recreational core. The new intersection should promote smaller scale; multi-storey, mixed use development over big box style development.
- Alternative small lot housing should be encouraged in and around the core area. Design standards for these lots should ensure high quality development.



DIVERSITY

- The Town should encourage a diverse, socially mixed community through its support of a wide range of housing types. Housing quality should be encouraged for all types of housing.
- Encourage and support innovation in building design and site design to a human scale.
- Provide high quality public spaces designed to maximize public interaction and foster community spirit. This would include a wide variety of park and open space types.
- The Town should encourage and support new developments that promote walking and cycling and alternate modes of transportation.
- The Town should ensure that new facilities are designed to be accessible to all segments of the population.
- Recognize changing patterns of living and work and allow residential zones flexibility for live and work.

RESOURCE EFFICIENCY

- Promote the use of alternative energy sources in all buildings. Encourage all new municipal public buildings to be LEED certified.
- Employ microclimatic design principles when siting new facilities
- Work with the City of Charlottetown to develop a linked Transit network with Stratford.
- Foster the support and enhancement of the Provincial waste disposal system.
- Encourage new multi-unit dwellings to demonstrate energy efficiency in construction materials and methods, waste disposal management, water use, heating, and landscaping. Ensure the new buildings in the Core Area are designed with at least a 30 R rating.
- Encourage low flow fixtures on all new residential units in the Core Area.
- Encourage the use of recycled, renewable and local materials.
- Utilize existing serviced land before extending services.

SUSTAINABLE TRANSPORT

- Develop and adopt an active transportation strategy for the Town to provide more alternatives than just the car. This should be part of the town Sustainable Development Plan.
- Encourage Context Sensitive Design (CSD) for all road design in the Town. Do not support blanket standards for roads or parking without questioning their suitability for Stratford.
- Implement an integrated open space strategy for the Town and create a continuous network of trails and parks throughout.
- Provide ample opportunities for safe pedestrian crossings at all intersections on the Trans-Canada Highway.
- Encourage cycle-lanes or shared bicycle lanes on all collector roads in the Town.
- Make Stratford the quintessential bicycle Town of PEI.
- Link the Confederation Trail to Stratford as soon as possible. Start by bringing it across the Hillsborough River Bridge and linking it to Cotton Park.
- Identify and encourage a continuous greenway network throughout Stratford.
- Enhance safety by reducing pedestrian/vehicle conflict.

AFFORDABLE AND GREEN HOUSING

- Encourage community diversity and variety
- Encourages mixed-use development
- Provide a range of housing types and prices
- Blend affordable units in with the community as a whole so not to segregate based on socio-economic status.
- Encourage Green Roofs
- Encourage LEED (sustainable sites, water efficiency, energy & atmosphere, materials and resources, indoor environmental quality, innovation & design processes)
- Integrated design: Sustainable design views the building structure, its systems, and the site as one interdependent system. In other words, the structure, building site, lighting systems, heating, ventilation, and air-conditioning systems (HVAC), indoor environment, and the end use of the building are viewed as one 'whole building system' rather than a number of separate, independent systems.
- Site: Creating a sustainable building begins with the selection of an appropriate site and the adoption of environmentally responsible site development practices. Properly assessing a site's drainage patterns, topography, vegetation, ecosystems, soil conditions, microclimate, solar paths and wind patterns will significantly affect a building's performance and its impact on the surrounding environment.
- Site design strategies include:
  - erosion and sedimentation control,
  - stormwater management and streamside protection,
  - reduction of heat island effect, and
  - brownfield and urban redevelopment.

POLLUTION REDUCTION:

- Adopt a multi-year tree-planting program. Match projected CO_2 emissions with tree planting.
- Encourage and support the reduction of hard non-permeable surfaces and run-off.
- Develop and implement a Pesticide By-law in the Town.
- Encourage the reduction of solid waste, light pollution and noise pollution.

DISTINCTIVENESS:

- Encourage new construction to reflect local architectural character.
- Encourage high quality architecture and landscape architecture in the Town by employing only high quality designers for Town Civic work (buildings, parks, open spaces, roads, etc).
- Adopt architectural and landscape design controls in support of civic distinctiveness in the Core Area.
- Preserve the Town's architectural and archaeological inheritance.
- Develop a Stratford civic brand and use it on the website, stationary, signage, announcements, etc.
- Develop a high quality Core Area Marketing Package along with a proactive strategy for developing the core area. Do not wait for businesses to come to Stratford; go find the businesses that will support the Town's vision. Start by creating a special section on the Town's website.

SUFFICIENCY:

- Demonstrate a sense of public sector civic responsibility and encourage private sector civic responsibility.
- Involve the community in decision-making and help to build a sense of community through consultation and participation.
- Encourage local food production.
- Encourage environmental literacy.
- Provide bicycle parking facilities in the Core Area and at all public facilities.
- Increase use of "green" sustainable energy
- Reducie the reliance on the automobile by creating active transportation networks
- Adopt a civic tree planting program to improve air quality, reduce noise and glare, encourage civic responsiveness, and green the community.
- Orient building to utilize passive solar energy

SEWAGE & STORMWATER

- Encourage tertiary sewage treatment systems with source control programs, or large-scale constructed wetlands to control stormwater run-off
- Landscape design should use drought-tolerant and/or native species
- Encourage rainwater harvesting for irrigation and flushing toilets
- Recycle waste water (greywater) from sinks, laundry and showers
- Encourage water saving fixtures and fittings such as ultra low flush or dual flush toilets, waterless urinals, composting toilets, and high efficiency irrigation systems.
- Undertake a stormwater strategy for the Town.

10. Organization of this Report

The Core Area Vision is organized into 6 Chapters. The chapters are divided into geographical areas of the Core Area including the Waterfront Core, the Town Centre Core, and the Mason Road Core. There is also an Introduction Chapter, a Signage and Branding Chapter, and a Summary Chapter. Each of the geographic chapters conclude with an implementation strategy for each individual part of the Core.

The Stratford Open Space Plan was completed in parallel with this Vision and has been released as a separate document.

linkages

STRONG NEIGHBORHOOD CONNECTIONS

community

MAXIMIZE LOCAL HEALTH

greenspaces

play

BEACHES

RAPIDLY GROWING

OPPORTUNITIES

diverse

TRAIL NETWORK

parks

health

SOCIAL AND ECONOMIC BENEFITS

valuable open spaces

ecosystem

NATURAL

COASTAL AREAS

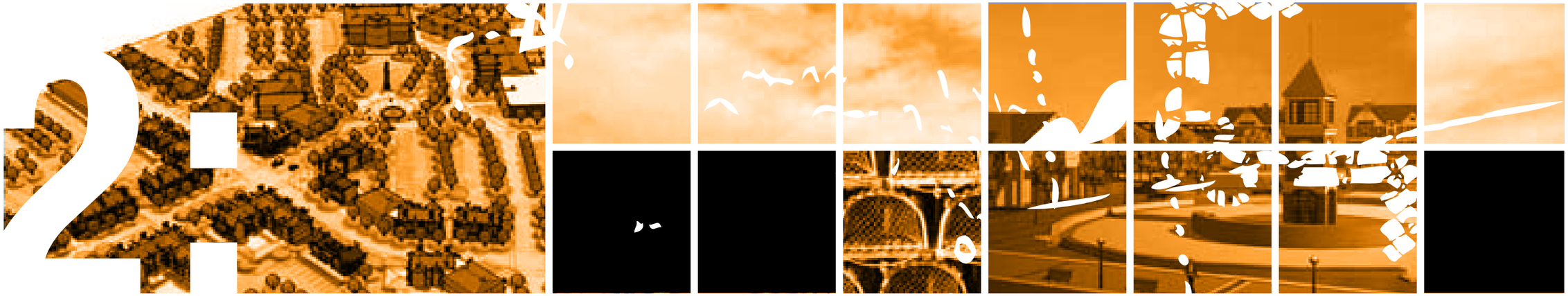
BENEFITS

PRESERVATION

recreation

HEALTHY COMMUNITY

ACCESSIBILITY



CHAPTER 2: WATERFRONT CORE AREA

The Waterfront Core Area (WCA) will be the heart of Stratford's future downtown. The creation of a Waterfront Core Area has the most potential to influence positive change in the community. With public amenities such as municipal parks and walking/cycling trails linked to a public waterfront plaza, municipal wharf and marina, and an active compact downtown, the Waterfront Core Area will be the "100% point" (the central gathering area) for Stratford. Furthermore, the vision for the Waterfront Core Area is to create a physical place that conjures a mental picture in the minds of visitors and tourists whenever Stratford is mentioned. The Waterfront Core Area will become the primary location for high profile functions and events such as festivals, concerts, and ceremonies and will be the focal point of a mixed use downtown full of retail shops and residential living.

In order to achieve this long-term vision for the Town of Stratford, there will be many challenges due to the magnitude and scope of the project. These challenges can be effectively addressed by creating a planned framework with a phased approach to development that allows the project to move ahead incrementally. A long-term, incremental approach to planned development will preserve the vision without succumbing to the pressure to develop immediately, especially if the immediate investment is inconsistent with the long-term goals of the Waterfront Core Area. The most difficult aspect of the development concept, both politically and economically, will be to adhere to the long-term goals outlined in the vision in face of development pressure or the temptation to lower the development standards simply to attract investment. There will be significant pressure from developers to accept a lower standard either by deviating from the design guidelines of the WCA or to change the type of permitted land use in exchange for immediate investment in the Stratford WCA. Conversely, a lack of initial investment in the WCA may cause support for the WCA vision to waiver and permit development that is inconsistent or incompatible with the vision. It is essential that the Town of Stratford commit to a long-term phased approach that will enable the WCA to become the heart of the Stratford Core Area.

1. Vision

In 2020, the vibrant waterfront of downtown Stratford has become a destination for island residents, tourists and small business. Either arriving across the Hillsborough Bridge from Charlottetown or east along Trans-Canada Highway, a clearly demarcated landscape gateway welcomes visitors to downtown Stratford. The major gateway is landscaped with clear views of the Harbour and is located at the intersection of Waterfront Drive and "the hub" of waterfront trails linking Stratford to Charlottetown and other points on the Island. Visitors and residents will know they have entered downtown Stratford as unique architectural markers will be located at the boundaries and special signage, lighting and streetscape elements will reinforce the WCA of Stratford as a special place to visit. Secondary entry points along Stratford Road and the TCH will have specially designed, but subtle gateways.

Waterfront Core Area boundary

The WCA will be connected to outlying communities by a linked system of greenway trails. A waterfront trail will link the downtown to the Hillsborough Bridge, through the major TCH gateway and on to Robert Cotton Park. The existing municipal parks will be linked by a series of trails and two new parks, the urban waterfront park and another at the site of the old sewage lagoon site, creating ample open space for recreational activities and relaxation in the waterfront area.

Waterfront Core Area Vision concept plan

Visible from the Hillsborough Bridge, the Stratford waterfront is the counterpoint to Charlottetown's urban waterfront and is representative of a traditionally inspired, modern waterfront of a small Maritime town. In Stratford, the WCA has become the centre of a new downtown; a magnet to residents, tourists and workers in the downtown with regular lunch and evening activities, boutique shopping, and a variety of dining options. In the height of summer, there will be numerous festivals and events. Parking will be plentiful, convenient and unobtrusively located at the rear of buildings. Signage will be tasteful and unambiguous, and banners and street trees will line the waterfront area. A water taxi has been established linking downtown Stratford to Charlottetown.

The Waterfront Core Area has become the commercial heart of Stratford and many businesses have located in the commercial area to capitalize on the many advantages offered by the compact, walkable and visually pleasing atmosphere in the Waterfront Core Area. A new Main Street off Stratford Road will have active retail/commercial space on the ground floor, with residential space or office above. Other areas of the WCA will have multi-unit residential of the highest quality design with front doors and raised verandas overlooking the street so neighbours can talk to one another. There are no blank walls on the street, no driveways and no single entry apartment building masses. All buildings on the WCA area are tight to the street edge with no setback and many share common side walls. Well designed, award winning mixed-use developments at a variety of scales are part of the Waterfront Core Area. In places, there are opportunities for a few narrow lot, single family homes. New development, with modern architecture that is influenced by traditional Island architectural styles, provides a range of commercial and residential spaces. The variety of uses supports a diverse community, and allows residents to find suitable housing in the downtown as their tastes and needs for shelter evolve with age. A vibrant downtown population supports year round economic activity and increases the viability of downtown shops and services and provides a unique alternative to living in Charlottetown, yet still provides the proximity to all the amenities the capital City has to offer.

A second waterfront core area lies north of the TCH. Although separated from the Hillsborough River by the Bunbury Road, the northern WCA has the potential to extend the success of the southern WCA in the future. The Town is now in the position to proceed with the second large phase of the WCA expansion. In the meantime, the triangular block of land bounded by the TCH, the Bunbury Road and the Hopeton Road is developed using the same principles of the southern WCA; however, its eventual linkages to the second phase of the WCA expansion (to the west) are considered in its layout and design. A large parking area is located in the centre of the block, with mixed use development on the fringes. A large park frames and organizes the new buildings in this development. The park is mirrored across the TCH on the southern WCA lands when the sewage lagoons are decommissioned.

Stratford will be perceived positively as a truly Canadian small town with its award winning architecture and streetscapes, accessible and attractive downtown venues, parks and other open spaces containing playgrounds and works of public art, pedestrian-friendly streets, and theme signage and lighting. The signage will reflect Stratford's rich heritage, specifically its history as a centre of agriculture and pay tribute to the previous villages that combined to form Stratford. Sidewalks covered by a tree lined canopy complete the dynamic, vibrant streetscape that is complimented by theme lighting, colourful banners, and seating and street furniture that reflect the Maritime heritage of Stratford.

Most importantly, there will be vitality and activity downtown and a sense of place for the people of Stratford. People of all ages and types, will be able to shop, dine, and even work in the same town where they live. At its completion, the Waterfront Core Area will be transformed into a source of community pride and will be readily identifiable as 'Stratford'.

2. The Concept

The Waterfront Core Area Vision can be divided into the north core (above the TCH) and the south core (below the TCH). Currently, the south core area is the most achievable area because the land is vacant, the major land owner is foreword looking and buys into the vision, and the land is directly connected to the riverfront with views of downtown Charlottetown. The north waterfront core is currently the home of a strip mall and a series of commercial and residential buildings, which will, obviously, take longer to redevelop. It is also not directly connected to the riverfront (but it may be someday), so the development will not carry the same value as the south WCA. It will be important that the north WCA be designed to anticipate its eventual linkage to the waterfront expansion.

The WCA is composed of several key elements that contribute to the overall character of downtown Stratford. These elements can be separated into three categories: 1) urban design elements for the entire district; 2) specific infrastructure elements essential to the creation of the Waterfront Core Area; and 3) land use policy elements that support the Vision and Waterfront Core Area concept. The urban design elements specify the characteristics that are common to all projects regardless of the phasing. The specific infrastructure elements are subject to phasing, yet must conform to urban design elements and be consistent with the land use objectives. The land use policy elements establish the broad principles that enable the vision for the Waterfront Core Area and create the municipal framework for implementing the physical elements of this vision. By combining these three elements, it is possible to implement the concept in distinct phases as described in this chapter.

URBAN DESIGN ELEMENTS

The urban design elements for the Waterfront Core Area are broken down into broad scale improvements and fine scaled detail improvements. At the broadest scale, the urban design elements recognize the need to create urban design templates for streetscapes, gateways, and open spaces throughout the Core Area of Stratford. On the fine scale, specific elements (i.e. the type of hard surface landscape materials for sidewalks) are recommended when the urban design elements are implemented.

An aerial view of vision for the Waterfront Core Area gateway and commercial area

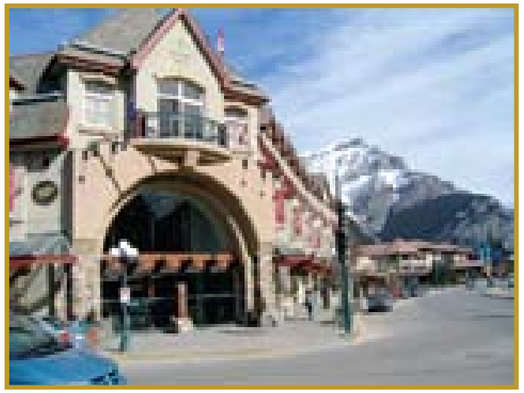
Streetscapes

One of the fundamental urban design elements for Stratford will be a streetscape template for all streets in the Waterfront Core Area. The goal of this pattern is to create visual appeal for the Waterfront Core Area that establishes a sense of place for residents and visitors that is identified as "downtown Stratford". The streetscape design differentiates the new downtown from other areas of Stratford through the use of landscape materials, vegetation, signage, lighting, street furnishings and design guidelines for new buildings. The creation of a lively, appealing streetscape for pedestrians is a fundamental element to the success of the Waterfront Core Area. In this area, streets are designed more for pedestrians than they are for cars.

The streetscape design template for the Waterfront Core Area contains design elements that ensure that Stratford's core area streets will be appealing to pedestrians. When it comes time to create working drawings for these streets, the working drawings should reflect the following principles.

- The location and type of street trees will be identified along the sides of the streets. The street tree planting program will create a tree lined streetscape with a canopy that is visually appealing and creates shade. Street trees also provide a level of physical safety along streets by separating pedestrians and vehicles.
- The location and type of street lighting will be identified on both sides of streets. Street lighting will be specifically designed for Stratford and will be a high quality pole and fixture with a banner arm(s) reminiscent of the traditional lighting in Maritime downtowns. Attractive street lighting, in conjunction with underground utilities on important streets such as Waterfront Drive and Main Street, will provide a visually appealing traditional streetscape for the WCA.
- Colourful, themed banners and street signage will be attached to the street lighting. The street signage will be designed to reflect Stratford's history and heritage. Street banners will celebrate community festivals, holidays, and municipal attractions.

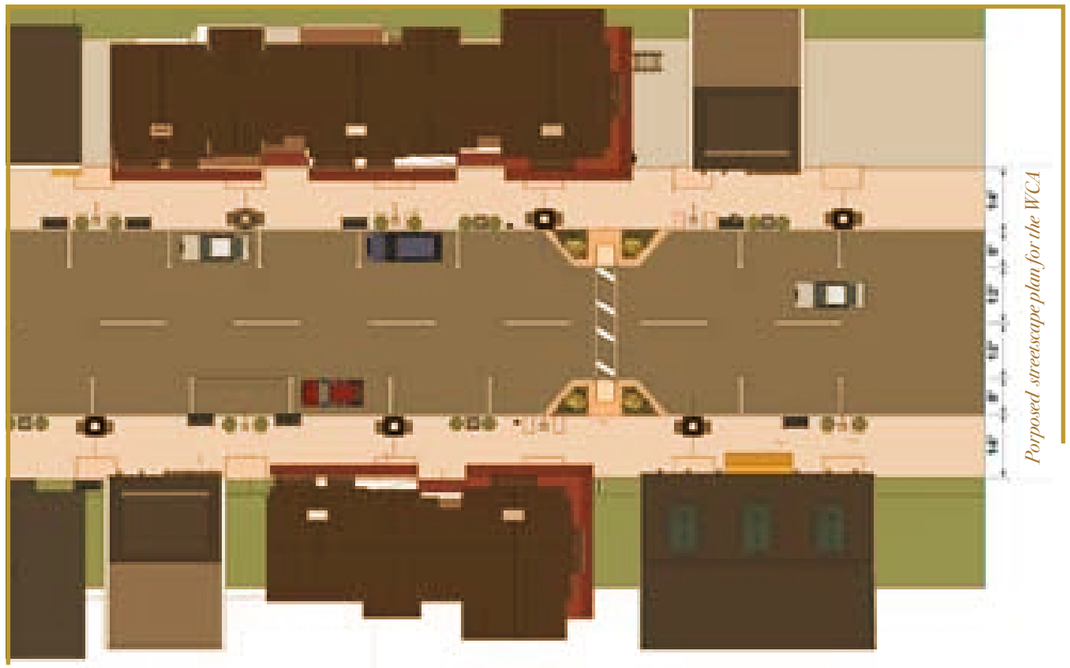
- Wayfinding structures, specifically designed for Stratford, will be strategically located at important pedestrian intersections to provide directions for tourists and residents. These will also provide space for information on local attractions, civic institutions and businesses.
- The location of community bulletin boards will be identified to provide space for residents to post information on community events such as yard sales, concerts, and other public information.
- The location and type of street furnishing such as benches, trash/recycling receptacles, etc. will be part of street character. These furnishing are essential to the successful design of any streetscape as they provide the basic amenities for leisurely on-street recreation and create a street environment that is clean, safe, and requires minimal municipal maintenance.



Context Sensitive Design in Banff

Context Sensitive Design in Montreal

- To ensure an attractive and interesting streetscape for pedestrians, all buildings will be encouraged to have doors at least every 60' and windows along the length of the street. Furthermore, no large blank walls greater than 10' should be permitted. The articulation provided by regularly spaced doors and windows creates a warm and welcoming streetscape. Large blank walls and buildings with a mass of unarticulated facades create a sterile and cold streetscape that is unappealing to pedestrians.
- Buildings along the major streets also should be constructed with a zero lot line (i.e. no setback from the sidewalk). The zero degree lot line will also encourage buildings to be constructed using common side walls as there will be no required side yard setback.
- The streetscape will not have any gaps in the built form along the street larger than 30' for access/egress of vehicles or any other purpose. In conjunction with the zero lot line for building frontage, parking lots are not permitted in front of buildings. Ample parking will be provided at the rear of buildings along Glen Stewart Drive Extension and Waterfront Drive.



Porposed streetscape plan for the WCA

Gateways

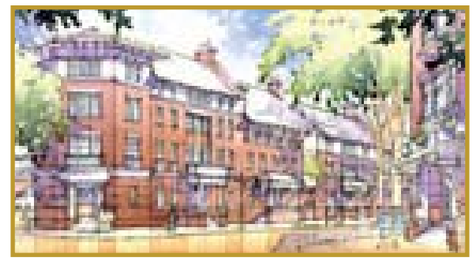
The Waterfront Core Area of Stratford will require the creation of new entry gateways to direct people to the downtown and waterfront. The purpose of the gateways is to identify the critical entry points to the Core Area. Identification of the major gateways helps to delineate the boundaries of the Core Area for residents and visitors. Creating specially designed gateways with appropriate signage and landscaping gives people the impression they are entering a special area. The concept for the Waterfront Core Area will create these gateway connections to the downtown. Furthermore, the Waterfront Core Area Vision will provide an overall signage strategy and wayfinding plan to make the Waterfront Core Area legible and navigable once people arrive at the waterfront through the gateways.

The main gateway to the Waterfront Core Area will eventually be from the TCH Route 1 and will welcome visitors as they cross the Hillsborough Bridge from Charlottetown. However, as the Waterfront Core Area Vision will be implemented using a phased approach, two minor gateways will be created first at the intersection of Stratford Road at the new Main Street opposite St. John Avenue and the intersection of Stratford Road at the extension of Glen Stewart Drive. The gateways will have streetscape parkettes and buildings will be set back to create a visually appealing, landscaped entry point to the Waterfront Core Area.

Open Spaces

The Waterfront Core Area Vision will improve open space and greenway connections, including trail connections, by ensuring that open space design is a key component of the vision. The Waterfront Core Area Vision will build upon the existing network of trails, municipal parks, and opens spaces and become a critical part of the Open Space Plan for the Town of Stratford. Open space, parks, and trails are essential to providing the recreational amenities required to attract visitors and create opportunities for the active recreation needs of the citizens of Stratford. Improving linkages to existing trail networks will encourage alternative means of transportation for residents and enable them to travel throughout Town without an automobile. A focal point of the Open Space Plan will be ensuring greenway and

Close up of new commercial areas in the WCA



Typical massing for the WCA

trail connections are linked to the new Waterfront Park and marina. This connection, in turn, needs to be linked to the new Town Centre Core Area (the next chapter). The eventual decommissioning of the sewage lagoons will free up valuable land for another gateway park which will bridge the south and north side of the TCH, providing a focus for additional infill development.

THE NORTH AND SOUTH WCA

The waterfront core can be divided into the north and south core according to their location relative to the TCH. The south core is the most ambitious project and provides the greatest benefit to Stratford. The north core is a longer term development since the land is already occupied. The components of the South and north cores are described below.

The South Waterfront Core Area

The following elements outline the major components that will be required to implement the vision for the south Waterfront Core Area. Due to the cost and scope of the new infrastructure elements for the core area of Stratford, it is recommended that these elements be phased in over time as outlined in the phasing section of this concept.

New Streets

One critical component to the success of the Waterfront Core Area will be the creation of a new Main Street for Stratford (hereafter called 'Main Street'). The St. John Avenue extension is the least encumbered for development because there are no existing buildings in this area preventing its construction. However, due to its proximity to the TCH signalized intersection (queue backups from the signals, especially during AM peak hours), there is a good chance that the St. John entrance into the waterfront core will need controlled access (right turn in and right turn out only) at some point in the near future. This intersection can never be signalized due to its proximity to the existing intersection. The Glen Stewart Drive extension could be signalized and would make the ideal gateway; however, the existing motel units are currently located within the proposed right of way of the road extension. The Glen Stewart Drive extension is clearly the most desirable first phase 'Main Street' development for the WCA. The groundfloor of all buildings on this street should be retail commercial type uses. The St. John Avenue extension should also have commercial groundfloor uses; however, non-retail commercial uses like hotels, are better suited to this street than Glen Stewart extension. For the remainder of this report, the Glen Stewart extension will be referred to as the Glen Stewart Extension, the St. John Avenue extension as St. John Avenue Extension and the third street (to the south) as Residential Street. The waterfront street will be referred to as the Waterfront Drive.

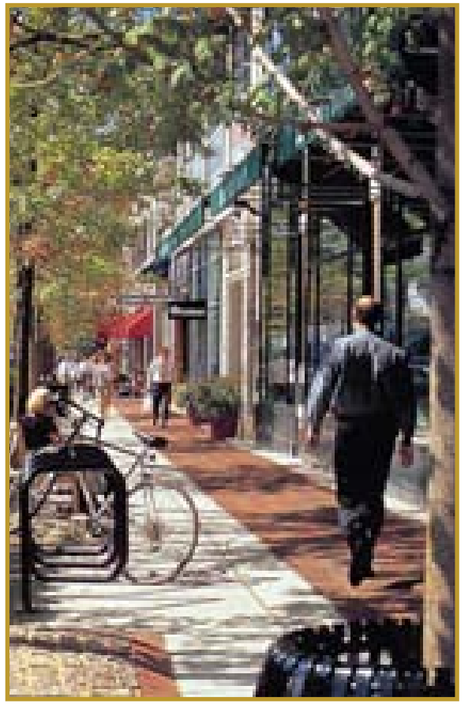
Typical residential massing for the WCA

The Glen Stewart Drive Extension will be the retail/commercial backbone of the Waterfront Core Area and will link Stratford Road to the waterfront. The St. John Avenue Extension will be similar, except it will accommodate less 'retail type' commercial uses. The street will be lined with three and four storey buildings with architectural styles similar to other traditional Maritime downtowns (one and two storey buildings will not be permitted on Main Street). Strict architectural design guidelines and signage controls must be followed for all buildings in this area (described later in this chapter). These buildings will be constructed tightly to the front lot line with no setbacks permitted. The ground floor of these buildings will consist of active retail storefronts. The upper stories will consist of a flexible mix of commercial, institutional, residential and other retail uses. There will be no parking lots in the front of buildings and the streetscape will consist of a solid mass of well-articulated buildings with very few gaps. There will be ample on-street parking and parking lots at the rear of stores with landscaped alleys complete with public art installations connecting the new streets to the rear parking lots. Awnings on storefronts will provide cover from the elements and add a visually appealing element to the streetscape. All signage will be front lit. The architectural style and character of buildings will be of the highest quality, enforced by flexible architectural guidelines tailored to reflect Stratford's built heritage. The two main streets will terminate with a beautiful vista looking across the Harbour to Charlottetown. No buildings will be permitted to significantly impede waterfront views at the foot of the street.

The streetscape will be built to the highest quality with a mix of high quality pavers and natural stone, trees every 20-30' with metal tree guards, benches, planters, street furnishings, ornamental lighting, themed wayfinding signage, banners, and bike racks. The streetscape quality will be extended through alleys to the rear parking lots.

Should the Harbourview Drive residents be receptive to a road connection to the waterfront Core Area, the Town could look at introducing a one-way street into the WCA.

There will be a requirement to provide a 'significant' buffer between the existing low-density residential homes and any higher density development within the WCA.



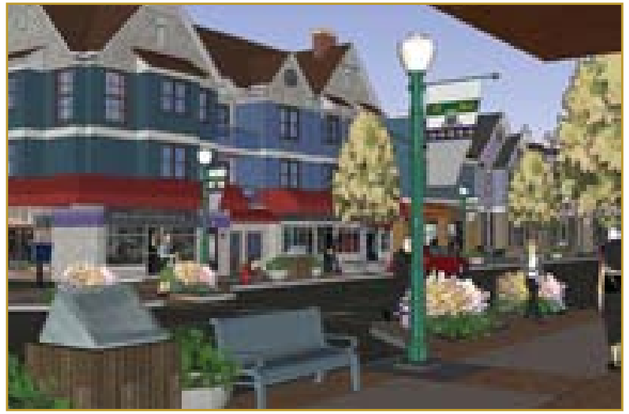
Example of vibrant mixed use streetscape

Residential Blocks

The 'Residential Street' will be primarily medium density residential units designed to the highest quality. Commercial uses will be permitted in this area so long as they have at least a 50% residential component. Groundfloor units should be designed to consider their potential conversion to commercial use in the future. Every groundfloor unit facing the street must be designed with its own entry directly on the street. Unlike the commercial area, residential buildings will be permitted a 10' maximum setback from the street to accommodate verandas, steps or small urban front yards. There will be strict architectural design controls for buildings in this area. Underground parking is permitted as long as the garage entrance is not accessed from the street. Lobbies for upper storey units should be accessible from the street and from the rear parking area. Upper storey decks (on the street side) must be built opaque using the same siding materials of the main structure in order to hide deck furniture. A 4-storey height limit will be imposed.

Sketch of the future vision for WCA with Charlottetown in the background

WCA streetscape and building form



Street furnishings and lighting in WCA

Concept for new WCA open space

Waterfront Greenway Promenade

A vital concept to the Waterfront Core Area Vision is to provide Stratford's citizens an opportunity to actively enjoy the beautiful waterfront offered by the site's prominent location. To this end, and as a part of the Open Space Plan for the Stratford core area, a continuous trail will be constructed along the waterfront on the west side of Waterfront Drive. This trail will be developed as a multi-purpose trail which permits walking, cycling, rollerblading and cross-country skiing in the winter. Eventually the trail should be paved with a three metre asphalt surface, although this can be phased in over time. This trail will link to the Hillsborough Bridge and other municipal parks and wind its way through a new waterfront park and, most importantly, provide a pedestrian connection to the new Waterfront Plaza. Opportunities for smaller parkettes along the length of the waterfront greenway will create interesting destinations for residents and visitors. The trail will have accompanying interpretive signage to recount the history of the area and the importance of the Hillsborough River as a nationally designated heritage river. The waterfront greenway should eventually connect across the TCH at a new intersection. In the meantime, the Town should continue to work with CADC (Charlottetown Area Development Corporation) to implement a possible trail connection under the Hillsborough bridge.

Waterfront Plaza

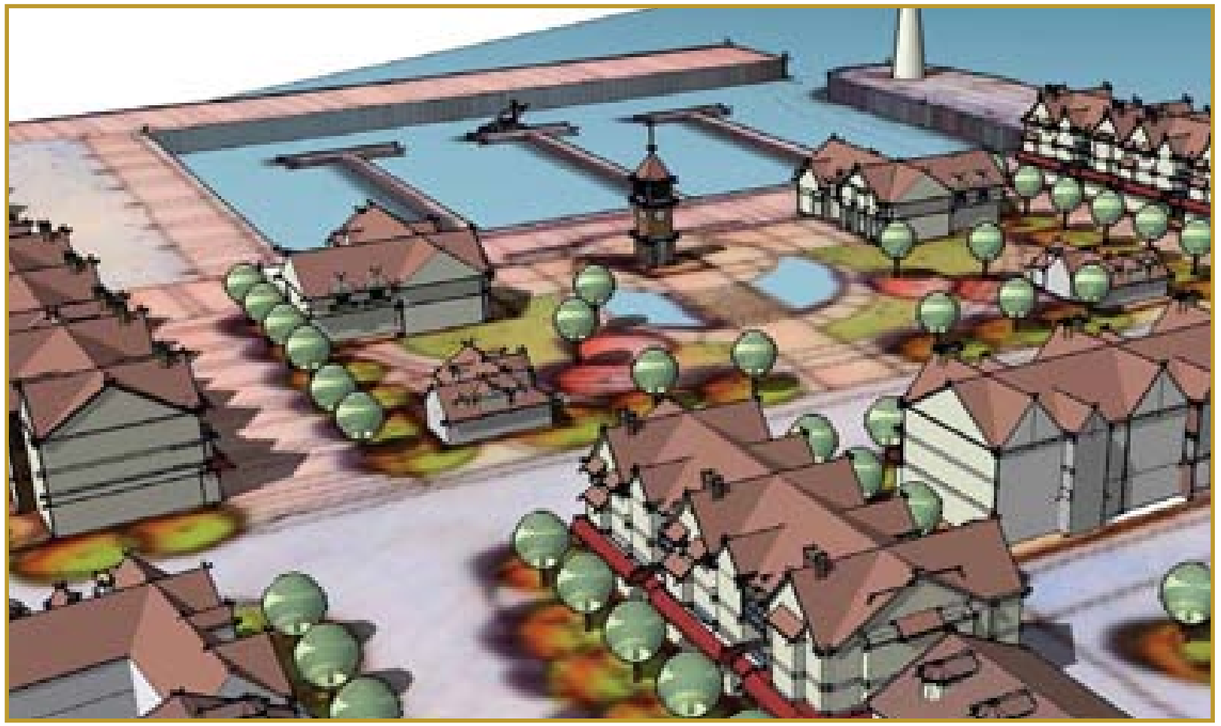
The centrepiece of the new Stratford waterfront will be a new public Waterfront Plaza. The Waterfront Plaza will be the 100% point (the centre of town) in the downtown and will be a public gathering place for important civic events, concerts, festivals, and ceremonies. It will be landscaped with a mixture of mature trees, ornamentals, and flower/bulb beds with a hard surface and adequate street furniture for both quiet reflection and social gathering. Extending along the waterfront side of the Waterfront Drive, there will be opportunities for several building sites. These buildings should be a mix of commercial, and high end apartments/condominiums appealing to a broad range of people, from retirees to young families. These buildings must be of the highest architectural quality and large enough to attract a stable downtown residential population to keep the Waterfront Core Area busy all hours of the day. Also, food kiosks and restaurants should be encouraged to locate on the waterfront in small commercial clusters. These restaurants and kiosks would help establish an entertainment area on the waterfront and create a year round reason for residents and visitors to visit the waterfront. Finally, directly across from the Waterfront Plaza, a large lot has been proposed for a prominent building of public importance. Through public consultation and an evaluation of the municipality's infrastructure needs, it will be possible to determine the most suitable use for this site. Some possibilities may include a public library, a performing arts centre, or a public/private development that would combine a residential component with a year round farmer's market or recreation centre. This site needs the highest quality architectural design.

The Waterfront Plaza would be the focal point of the Waterfront Core Area. At first, this large open space could be designed as a grass amphitheater but over time would evolve into a hardscape plaza. As the 100 % point of the downtown, the site provides an excellent opportunity for water features such as a large fountain or pond, which could be a winter skating area similar to Toronto's waterfront skating rink. The creation of a future skating rink would require the installation or purchase of either permanent or seasonal refrigeration system to make it a viable option. Several companies make roll-out refrigeration mats which can be used under skating surfaces (Custom Ice Inc., Burlington). These temporary refrigeration units could be rolled out in the winter and stored in the summer. In addition, a rubber skate cover would have to be placed over the steps down to the skating surface.

A large town clock would also create a visible icon for the Stratford waterfront, visible from the Hillsborough Bridge.

Aerial view of the WCA mixed use area and waterfront with marina and waterfront plaza

Aerial view of the waterfront plaza concept



View of proposed marina and waterfront plaza

Aerial view of the proposed marina

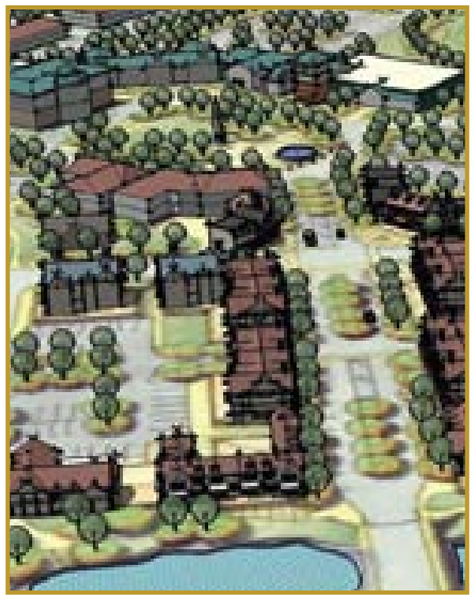
Marina

The marina would be the most costly public component of the WCA development concept. A Stratford Marina Engineering Feasibility Study was undertaken in 2002 by Coles Associates and the study determined that it was technically feasible to build a 100 berth marina. Coles Associates recommended the marina project be undertaken in two phases: the first phase being the construction of the marina infrastructure, and the second being the construction of a marina development with a clubhouse and commercial/residential component. Only the marina infrastructure phase of the Coles Associates study would be applicable in the context of the WCA Vision. Coles Associates estimated the capital costs associated with construction of a 100 berth marina would be $5.2 million (2002 dollars) and would take 26 months, including completion of the design and approval process.

The marina would require permits from both the federal and provincial governments. The federal component of the marina proposal would involve a number of government departments and agencies and would culminate in an environmental assessment as outlined in the Canadian Environmental Assessment Act (CEAA). As there are a number of federal authorities with jurisdiction over various aspects of the marina project, the CEAA appoints a lead federal authority to administer the environmental assessment and ensures that the project does not contravene federal legislation such as the Navigable Waters Protection Act, the Fisheries Act, and the Canada Marine Act. In addition to the federal legislation and permits, Prince Edward Island, through the Department of Environment, also requires an environmental impact assessment. Generally, federal and provincial authorities will work together to harmonize the environmental assessment process to ensure efficiency. Finally, as part of the approval process, an environmental protection plan for the project must also be completed. The environmental protection plan is generally a requirement of the environmental impact assessment and outlines the mitigation measures for the project, monitoring procedures, and a contingency plan for any significant effect that may occur during construction.

The current configuration of the marina fits more closely with the Coles Associates plan than the Urban Strategies vision configuration. This will minimize costs by locating facilities where the water is deepest and where there is the greatest potential to minimize subsequent dredging and infill. The detailed hydrographic design of the marina will require more detailed investigation in future phases. The marina development is likely decades away from reality, however, the ultimate success of the landside development could significantly decrease the development window for the marina. The WCA Vision shows approximately 60 berths for 20-30' boats and layby space for two or three larger vessels (60-100 footers).

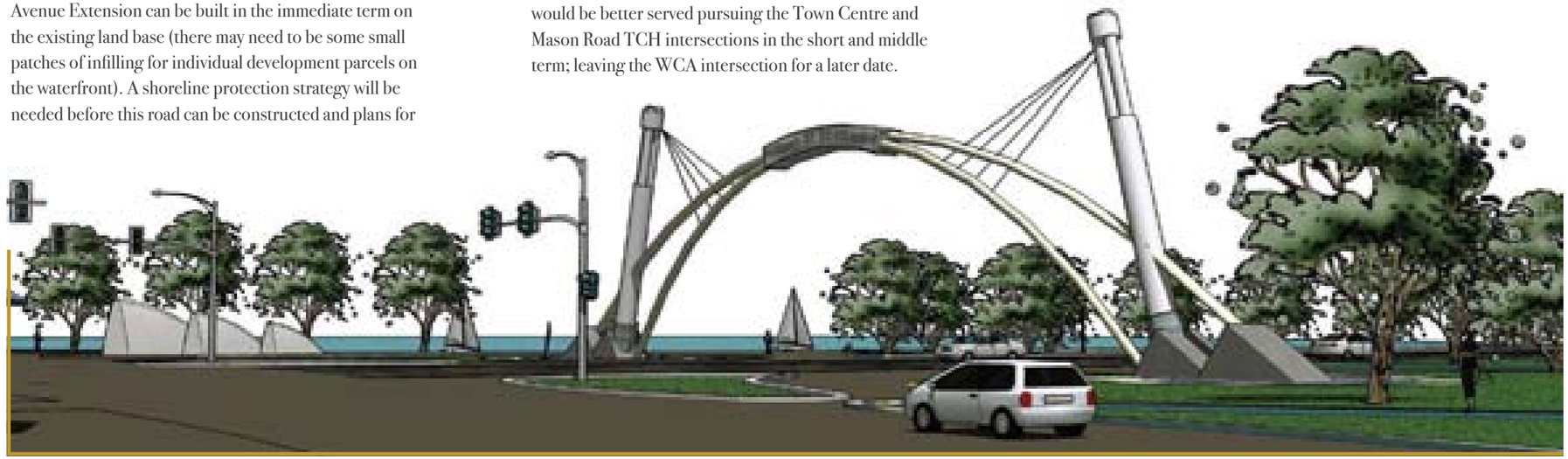
In late 2006, the Charlottetown Harbour Authority (CHAI) moved forward with plans for a 70 berth marina on the waterfront north of Confederation Park. As part of the plan, the 125 slip Charlottetown Yacht Club (CYC) will be relocated from their current location to the CHAI marina development. Currently, 50 new marina berths are required immediately to fill the backlog of waiting list at both Quartermaster and the Charlottetown Yacht Club. The new marina proposed by the Charlottetown Harbour Authority north of Confederation Park clearly will not meet the full demands of the 125 slip CYC facility and the additional requirement for another 50 slips. Depending on the final outcome, there may be a need for an additional 60-70 slips to serve the boating market in the near future. CADC will continue to play an important lead role coordinating the marine aspirations for the harbourfront in Charlottetown and Stratford.



Waterfront Drive

Waterfront Drive can be divided into two sections. The section between 'Residential Street' and St. John Avenue Extension can be built in the immediate term on the existing land base (there may need to be some small patches of infilling for individual development parcels on the waterfront). A shoreline protection strategy will be needed before this road can be constructed and plans for this should be undertaken immediately by the Town in partnership with CADC. The shoreline strategy will need to consider the near term feasibility of the marina project as the shoreline protection approach will vary depending on if the marina concept is a short term or long term project. The Coles Associates marina study should be updated as soon as possible and should be supplemented with a marina market study. The study could also evaluate the shoreline protection options. This stretch of Waterfront Drive will have on-street parking on both sides of the street. No buildings should be placed at the foot of any of the streets running down to the waterfront.

The second stretch of Waterfront Drive connects the end of the St John Avenue extension with the TCH. DOTPW engineers currently do not support a signalized intersection at the end of the Hillsborough bridge; however, they stated that they may consider a controlled access egress (right turn in and out) access to waterfront drive. In the short to middle term, this access is not needed since the WCA will have access from three new roads on Stratford Road. This stretch of road may require some slight infilling and shoreline protection to implement. It does create several development sites once the sewage lagoons are decommissioned, and so the lagoons may be the trigger for constructing this section of road. In the longer term, when the north WCA is realized, the intersection becomes critical (in the same way it does at the other end of the bridge, linking north Charlottetown to downtown Charlottetown). The Town would be better served pursuing the Town Centre and Mason Road TCH intersections in the short and middle term; leaving the WCA intersection for a later date.



View of the waterfront plaza from the marina

Typical commercial massing for the WCA

North Waterfront Core Area concept

TCH Stratford gateway from the Hillsborough Bridge

Community Park

One of the significant challenges in developing the Waterfront CoreArea Vision is the current location of the municipal sewage lagoon. This report recommends that the sewage lagoon be eventually relocated and acknowledges this is a longer term project. Nonetheless, due to the current location of the sewage lagoon, specifically its proximity to the waterfront and the gateway to Stratford, it is essential to clearly envision the long-term land use goals for the future of the site.
It is recommended that this site should be reserved as a future community park and a vital component of the Open Space Plan for Stratford. The sewage lagoon site is prominently situated to act as the critical land bridge linkage which bisects the TCH and the north and south core of the WCA. There is potential for the site to include active recreation space such as a sports field, but more likely the site should be considered as a welcoming passive parks space. With appropriate community support, there is even the possibility the site could be developed as Stratford's version of a 'Public Gardens'. The vision shows the WCA community park bridging both sides of the TCH. It becomes an organizing structure for future phases of the north and south core development. Once the sewage lagoons are decommissioned, and the location of the Waterfront Drive is established, a detailed site plan should be prepared for this park on both sides of the TCH. Each side of the road offers a park footprint roughly the same size as Confederation Park in Charlottetown.

THE NORTH WATERFRONT CORE AREA

The north waterfront core is part of the northern gateway into Stratford. While the site is currently occupied by a strip mall, various pad commercial sites and a single house, the WCA should include this area because it is a vital component of Stratford's Core Area strategy. In addition, if the south WCA gets built-out, the north WCA will become a real priority for the Town. In the meantime, the triangular block of land bounded by the TCH, Bunbury Road and Hopeton Road, should be immediately designated as part of the north WCA.

The development concept shows an organizational structure similar to the south WCA lands. Buildings are organized around a central park space, a gateway building is located at the eastern corner of the TCH and the Bunbury Road intersection, parking is accessible but is hidden from view from the TCH to the interior of the block, An open space network links the park to the south to Robert Cotton park to the north, building sites are located around the fringes of the property giving a street presence for Bunbury Road and Hopeton Road. Access into the block is set back far enough from the TCH to allow a future signalized intersection should it be necessary. The Bunbury Road, Hopeton Road and Rankin Drive intersection is rationalized to provide safe access at this dangerous intersection.

3. Challenges to Implementation

An ambitious project such as the Waterfront Core Area Vision presents many challenges in its implementation. There are several significant challenges to implementing the vision for the waterfront area that will require patience, perseverance, creativity, and cooperation to overcome. With a phased approach to the concept, there will be ample time to evaluate options and reorganize priorities in order to implement the vision. The most critical challenge for the implementation of the Waterfront Core Area Vision will be to remain committed to the vision for the site in the face of the following complex, long-term challenges. The following is a list of some significant, yet very manageable, challenges for the Waterfront Core Area.

ROAD AND TCH INTERSECTION(S)

Four new intersections could be needed to implement the WCA vision and create the important gateways for entry into the new development. Three of these intersections will be on Stratford Road and the other will eventually be located on TCH Route 1 near the Stratford end of the Hillsborough Bridge approximately opposite the existing Bunbury Road intersection. The waterfront core TCH intersection shown on the concept is a long term solution for the new downtown. Clearly, the Department of Transportation does not favour this intersection as a near term opportunity. The Town would be better served pursuing the Mason Road and Town Centre signalized intersections shown in the next chapters. The current WCA vision is not reliant on this intersection. DOTPW has said that they would consider right turn and possibly right turn out controlled access to the south WCA. However, as the north waterfront core area becomes a reality, the intersection will be a real necessity. We believe, that ultimately, an intersection at this location will be built for a variety of reasons and they have been shown on our plans.

The three intersections on Stratford Road could be handled with STOP signs until the traffic volumes warrant installation of traffic signals. The new TCH intersection is one of three new Core Area intersections on the TCH, including the relocated Mason Road intersection, planned on TCH Route 1 passing through Stratford. While highway engineers typically resist signalized intersections on primary arterial highways, across Canada there are many examples of signalized intersections on the TCH, especially as they pass through urban areas. Charlottetown is one example, with several signalized intersections on Riverside Drive and the Arterial Highway that comprise the TCH by-pass of the City's central core. In urban areas, signalized intersections are an unfortunate necessity and Stratford is the quintessential example as the TCH bisects the entire town.

RIVER INFILLING AND DREDGING

Later phases of the vision require infilling to accommodate the entry intersection, portions of Waterfront Drive, and some development sites along the waterfront. The creation of a new marina will also require dredging of the Harbour.

The waterfront development and marina will require dredging as most of the depths range from 5 1/2' above the low water mark at the shoreline to 24 1/2 ' at the deepest point in the channel. According to Coles Associates' Stratford Marina Engineering Feasibility Study, "the water level between the highest and lowest tide was indicated in the Canadian Tide manual to be in the order of 2.75m. During low tide, the river bottom at the proposed {Marina] site extends approximately 150m from the shoreline."

A meeting with Department of Environment in September 2006 to review the WCA vision provided some insight in the application process for dredging and infill. The department was clear that it does not normally support the infilling of any wetland or watercourse, except where the project "stands to benefit the general public as a whole". If a formal application for this project were submitted, an Environmental Impact Assessment would have to be conducted by both provincial and federal government departments. At minimum, the departments that would be involved in the assessment process include:

- Transport Canada
- Department of Fisheries & Oceans;
- Navigable Waters Canada;
- Provincial Department of Transportation & Public Works;
- Provincial Department of Environment, Energy & Forestry
- Environment Canada
- Charlottetown Harbour Authority

There would be many major issues involved in the scope of this project, which would include, but not limited to:

1. Dredge Spoils
1.1. The amount of dredge spoils involved in this project could be large
1.2. Location for the disposal of dredge spoils
1.3. Maintenance of dredged areas
2. Infilling/destruction of watercourse/wetlands
2.1. Destruction of shellfish/fish habitat
2.2. Destruction of feeding areas for seabirds/wildlife
2.3. Destruction of breeding grounds for seabirds/wildlife
3. Potential water quality issues related to the infilling and dredging processes
4. Issues with sewage lagoon decommissioning. Rebuilding? Relocation?

Potential studies associated with this project would include:

1. Existing water quality and potential impacts the project may have on water quality
2. Existing tidal flows and currents and potential impacts the project may impose on tidal flows and currents
3. Existing avian/wildlife populations and associated impacts
4. Existing aquatic habitat and associated impacts
5. Composition of dredge spoils
6. Impacts on dredge disposal site
7. Source and composition of proposed infill material to be used
8. Compensation to shell fishermen for loss of habitat
9. Public consultation with shell fishermen, lobster fishermen, native groups, local residents, City of Charlottetown, etc.

Many waterfronts in Atlantic Canada have found that the cost of creating new land does not justify the value of the land ultimately created. One innovative way of overcoming this problem, is to adopt a 'passive' approach to infilling as opposed to the standard 'active' approach. In Bedford, Nova Scotia, after spending $20 million to create land valued at $9 million in phase 1, the Waterfront Development Corporation, for phase 2, is providing a cost recovery marine dumping area for pyritic slates. The WDCL charges $15 per cubic yard. These acid bearing slates commonly found around Halifax are costly to dispose of because they are a significant environmental liability when oxidized. In a period of about 6 years, about half the land for phase 2 has been created at significantly lower cost than 'active' filling. The WDCL estimates that 900,000 cu yards of structural fill are required for phase 2. The project is anticipated to break even when completed in 7 - 10 years.

Similar to Bedford's approach, Stratford could provide an area for dumping of suitable Construction and Demolition material. This approach allows for dumping of approved fill over time, especially as other phases of the development are started. Suitable materials for the infill might include screened construction and demolition materials such as concrete. There will be different geotechnical fill requirements for roads and for building footprints so there will be opportunities to consider many different types of material depending on their suitability for the required use.

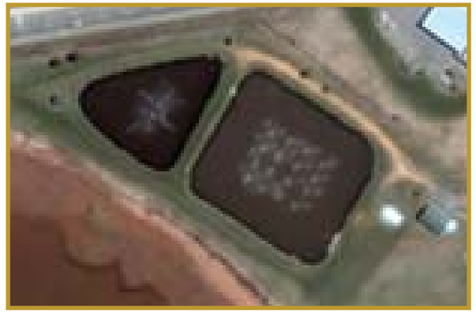
Waterfront Drive has been designed to minimize the infilling. There would need to be some slight infilling in a few areas and the length of the shoreline would need erosion protection. A shoreline armouring strategy would have to be developed in concert with the relevant provincial and federal authorities. Coles Associates estimates 54 340 CM of material will be dredged from the basin and the channel and it was recommended in the marina feasibility study this material could be used to infill the shoreline where geotechnical conditions permit (especially in the area of the linear waterfront park).

SEWAGE TREATMENT LAGOON

The community is currently served by two aerated lagoons. These were constructed almost twenty years ago, primarily as a medium term solution to support new development in Stratford. Since that time, they have been augmented by some pre-treatment as flows grew to above the original design capacity. The outfall from the facility extends along the causeway, but does not remain below water at low tide.

The existing aerated sewage lagoons are subject to a guideline that normally requires a separation distance between them and development. To adhere to the guideline, new commercial development can be no closer than 30 m to the open water, and new residential development no closer than 150 m. This restriction can be accommodated by locating parking and commercial development proximal to the lagoons, while respecting the residential clearance. Alternatively, replacing the lagoon process with a contained plant, and relocating it to the other side of the TCH, would eliminate this restriction, and allow unfettered use of the (large) land area currently occupied by the lagoons. It is possible to look for ways to reduce the separation distance for the existing lagoon, but given the nature of their operation, this course of action would be difficult, and ultimately would probably mean future problems with new residents.

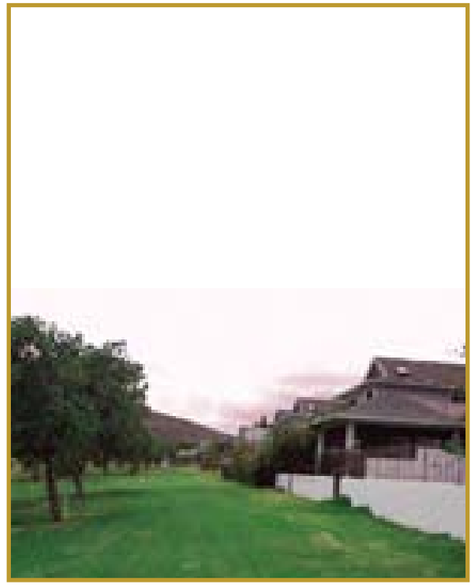
As the gateway into the community, the lagoons ultimately need to be tackled to present a positive first impression of Stratford. There are short term and long term solutions with widely varying costs.



Existing sewage lagoons

A building covering a SBR at Brudenall River

Baffles inserted in a sewage lagoon (Antigonish)



Drip irrigation with an orchard above in California, Ekistics 2007

SEWAGE TREATMENT OPTIONS

Option 1 - Cover the existing lagoons:

There is a growing industry related to the use of geomembrane covers for sewage lagoons. However, simple blankets, the most cost effective cover technology, is not applicable for the Stratford lagoons because they are fully aerated.

The aeration requirement for the lagoons requires covering options consisting of more rigid structures with control and capture of the air flow from the structure for subsequent odour scrubbing.

Although technically feasible, this approach has several inherent disadvantages.

a. Covering the lagoons does not create an increase in capacity
b. Covering the lagoons means more land would be required for the facility than it now occupies.
c. The cost of covering is estimated to be approximately $2 million dollars.
d. There would be visual and aesthetic concerns with the covering blocking views of the new community.
e. Operational costs would increase with no improvement in effluent quality.

Option 2 – Employ a decentralized sewage management approach for new development

The future of wastewater management lies in a less central dependent approach to collecting and treating domestic sewage. This is proving to be true in most of the world, now that modern treatment methods have been shown to be cost effective at smaller scales than used to be considered practical.

This approach involves identifying discrete phases of clusters, and designing them to be self contained in how they manage their waste. Medium scale treatment is accomplished using new "Packed Bed Filter" technologies, and the treated effluent is then returned to the land via drip irrigation in public open spaces, such as sports fields, parks, farm and orchard land, green strips, medians , and other open space. A good example of state-of-the-art in sewage management is being undertaken in PEI at Victoria. In Victoria, the entire Town's sewage will be highly treated, and then reintroduced into the ground in a safe manner via drip irrigation and subsurface inducement.

This decentralized approach has some merit when considered in the context of new development in Stratford that will require the an expansion of the existing sewage treatment plant to accommodate it. When significant open space for parks, sports fields, golf courses, and other green areas is created, a corresponding opportunity to disperse treated sewage effluent is also created. The irrigation can serve to keep the green space green in a safe and environmentally responsible manner. Such a proactive plan has the possibility of attracting extra funding from innovative and environmentally sustainable funding sources.

If the Fox Meadows golf course's irrigation needs were met by treated sewage (clean and disinfected), for example, that would mean that their costs for water would decrease, and the amount of effluent discharged to the river would decrease.

In terms of cost, a decentralized treatment approach should only be considered practical when its cost is equivalent or less than the cost of expanding the central treatment plant to manage the flows.

Despite the many possible advantages of the option of installing a decentralized treatment system, this approach has several inherent disadvantages.

a. A decentralized system may not take full advantage of existing investment in infrastructure capacity.
b. A decentralized system relies on open space land for effluent dispersal and that land can never be developed.
c. It may be seen as too "new" and risky by less forward thinking bureaucrats.
d. Although able to respond to growth in a modular manner, this also means that a decentralized system would be difficult to address the entire community's needs through a single funding application and would require a series of installation projects as development is phased in.
e. Operational costs would increase compared to one central facility, if the existing facility were to remain and not be replaced by this approach.
f. It would be difficult, if not impossible to replace the existing facility and collection system with this approach.

Option 3 - Replace the Lagoons with a Sequencing Batch Reactor (SBR) process

The existing collection system appears to be adequate to support increased flows for some time. It direct effluent to the lagoons and then to the harbour via the existing outfall. The current treatment process is inefficient as it requires a large amount of land area and the current land parcel is undersized to handle any expansion of the current facility to meet increased capacity due to the new development. As a result, if flows increase substantially, as they should when development commences, this treatment process will require even more investment and land to treat the sewage.

It is very important to Stratford to maintain the legal right to use the existing outfall, even if it means effecting an improvement to it via an extension to deeper water, closer to the main channel.

As a result of the land available for expanding the current treatment facility, it makes sense to consider replacing the lagoons with another less land intensive process and consider an option which can be enclosed to reduce both the visual and olfactory impact. A replacement process should also be easy to expand in modular phases to grow with the demand.

Current market and technical performance in Atlantic Canada tends to direct the solution of this problem to a sequencing batch reactor type of process. This process can be located on a much smaller plot of land, be enclosed and odour controlled, and utilize less energy for the same volume of sewage to be treated. It offers high quality (at least 20:20) effluent and is straightforward and relatively efficient to expand. Current flows are estimated to be 420,000 Igpd, with projected flows from this development at 1,300,000 Igpd. A completely new SBR type plant to treat the ultimate flow would cost approximately $3.0 million dollars, with another $500,000 for engineering, work on the outfall, and site development costs. A new treatment plant of this type would take up about a half acre of land in total. This would then allow the existing lagoons to be eliminated, freeing up land for open space use such as proposed in this chapter.

The best option may be to design a new treatment plant to handle half the ultimate flow, and allow room, and mechanical and electrical infrastructure, to support a future doubling in capacity. To construct a new SBR designed for 650,000 Igpd, would cost about $2.8 million, with a future second phase resulting in twice the capacity costing only another $800,000.

The option of constructing this treatment option all at once, or in phases, would likely be determined by the type of project funding that applies. A large plant of this style can be run at smaller flows and adjusted as flows increase.

The initial step for this approach would be to design and construct a system that will handle current flows, plus those anticipated from the first phase or two of the development. The outfall should be extended at the same time.

Permitting of this option should be straightforward, as the effluent will only improve, and the outfall extension will only improve the assimilative function of the river/harbour of that effluent. It is rare to have any Provincial Department of Environment discourage an improvement in sewage treatment function.

Option 4 – Temporary Upgrade to the Existing Lagoons

It is possible to do some immediate work on the existing lagoons to allow them to serve an increased flow. Designing the lagoons to function as a multi-celled version of an aerated lagoon system, using baffles hung in the ponds, can result in a capacity increase of up to 50%. Provided the existing mechanical components do not require upgrade, this option could cost as little as $100,000 for the increased capacity.

This option presents an attractive holding pattern alternative if the community accepts the continued presence of the lagoons at its major gateway to the Trans-Canada Highway. New development can be accommodated in a responsible manner. Clearance buffers would still apply, however, the total land used would not decrease.

Option 5 - Upgrade the Existing Lagoons

It is also possible to upgrade the existing lagoons though a process change, to increase their capacity to handle the ultimate design flow. Conversion to a Biolac™ type system, or to a Sequencing Activated Sludge system would offer the most capacity for the investment from the existing facility. Using these approaches might reduce the overall cost of providing full capacity treatment to $2.5 million. Again, as with the above measures that involve keeping the lagoons intact, they act as constraints to development because of the buffer requirement and as a potential aesthetic constraint to the establishment of a successful and attractive gateway to the community.

I. Option 6 - Pump effluent to Charlottetown

It is possible to pump the sewage to Charlottetown for treatment. The costs of this approach have been investigated previously, and the potential for success lies more within the realm of intergovernmental cooperation than basic engineering and costs analysis. It is important to note that this option does add significantly more value to the community through the total elimination of a sewage treatment plant site and removal of any clearance buffers on land use.

If a deal can be negotiated with the City of Charlottetown where the construction and operating costs compare favourably with the costs of building and operating a new treatment plant (probably an SBR), then this option warrants pursuing.

Conclusion

At this time, Options 3 and 6 appear to offer the better direction for dealing with the sewage management needs of the growing community. They both reduce or eliminate the physical and aesthetic constraints posed by the lagoons. However, regardless of the path chosen, significant up front investment is required for both. If funding for this work is not forthcoming, Option 4 offers an interim solution at a price that should be affordable.

4. Branding

In order to properly brand and market the new Waterfront Core Area in the coming years, a place name and identity will be required to create the appropriate marketing materials and to elevate the importance of the area for Stratford. Several names have been considered including generic names like the Stratford Waterfront, or Stratford Riverfront; however there is consensus among various stakeholders that this new development needs its own brand identity. Historically, the area just south of this site was known as Southport as it was the most south easterly port of Charlottetown. The name was adopted for the RV Park which currently occupies the site. The name Southport conjures an image of the quintessential, traditional New England waterfront community. This association is a positive image for Stratford as the urban design elements of Waterfront Core Area Vision borrow many of the same elements that make New England waterfront communities so successful. For both its historical value and future branding potential, we recommend calling the WCA development 'Southport' and a draft logo is presented on this page. Following this study, a final version of this logo should be used on marketing packages, although as the different phases of the Southport development commence, the development logo may need to be periodically redesigned.

The Town should continue to develop the material presented in this Report (specifically, Chapter 5: Signage & Branding) to prepare a marketing package for Southport. At a minimum, this should include a kit folder, a brochure, and some ad templates for various publications. The Town will need to decide whether they hire an in-house marketing person (to serve the remainder of the Core Areas and the industrial park) or whether they contract out the marketing and sales aspect of these developments. In any case, all the Core Areas will need a concerted sales and marketing effort to be realized in the coming years.

STRATFORD TOWNSHIP

SOUTHPORT LANDING

5. Phasing and Implementation

There are some considerable short term constraints to developing the Vision, not including the marketing and build-out challenges for over 180,000 square feet of commercial space and 600 residential units planned for the Southport development. Based on recent market absorption studies, the completion of this development will likely take several decades to complete. The challenge will be to brand this new development and to attract several anchor projects that will establish new momentum for this area, and therefore decrease the build out time for the entire development as outlined in the vision. A successful approach to this development will require a phased approach that addresses each of the challenges outlined above and systematically implements the various elements of the Waterfront Core Area Vision.

Using this phased approach, the first consideration for implementation of the vision is to provide ample room for the existing motel which occupies a small portion of the site to enable the business to continue operating for the foreseeable future. A phased approach, sensitive to the location of this business, will permit the existing land owner to continue to operate while the development fills in over time.

There are some clear benefits to the Town and the landowner from following the development approach described in this chapter. A separate pro-forma was prepared comparing current land use conditions and the proposed WCA concept. The results show positive economic benefits to the landowner, assuming the Town and CADC partner in various aspects of this development. At full build out, the proposed waterfront development will generate $1.6 million dollars of property tax revenue per year, $725,000 of these funds would be paid directly to the Town of Stratford. Using a 7% discount rate, the present value of this future cashflow is worth $10.4 million to the Town over the life of the project. The province will receive $950,000 per year in property tax rates at full build out; the present value of this amount is $13.6 million.

Clearly it is in the Town's best interests to partner with the existing land owner on the future development of this parcel of land; it has the potential to redefine the Town of Stratford, and bring the core of the community to the Hillsborough River. As such, it is recommended that the Town, CADC and the landowner negotiate a list of responsibilities for the development prior to moving forward.

PHASE 1 (ESTIMATED COMPLETION TIME - 2-3 YEARS, COMPLETION DATE: 2010)

The easiest component of the WCA is the immediate development of the properties fronting on Stratford Road. Early in this study, the CGI building was negotiated using an early version of the vision and early architectural design controls. This building will be complete in early 2007 and there is significant potential for additional developments to follow suit. Phase 1 should then include all land on Stratford Road excluding the existing Southport Motel. Phase 1 should include a Council commitment to partner on construction of the streets and/or infrastructure for the remaining phases. It is estimated that phase 1 will take 2-3 years to complete. It is possible that phase 2 may begin before build-out of phase 1 is completed.

Phase 1 Next Steps:

a. Initiate active marketing strategy for the Southport development. Develop print and branding collateral.
b. Coordinate the roles and responsibilities for the Town, CADC and property owner in implementing the various stages of the development. Determine when resources will be needed to see the various stages realized and budget costs in capital budgets for the various phases. (2006).
c. Complete negotiations with Imperial Oil to secure a right-of-way or a portion of their property south of the existing Esso. This will be needed for the St. John Avenue extension. Determine to what extent, Imperial Oil will partner on this project (would they like to develop their land, reserve their land, or sell their land?).
d. Implement the recommended zone changes consistent with this vision.
e. Undertake the Marina market study and shoreline protection study
f. Implement the changes needed to the sewage treatment lagoon to enable the surrounding property to be developed efficiently. Council will need to choose a short term or long term solution for the lagoons as described in this Vision. Start dialogue with the City of Charlottetown for long term sewage treatment options.
g. Work with CADC to construct the waterfront trail along the waterfront and under the Hillsborough Bridge.
h. Capitalize on the PR value of the CGI development for future phases.
i. Negotiate the 3 intersection improvements on Stratford Road with the Department of Transportation for the next phase.
j. Determine possible infrastructure funding programs to implement the various phases outlined in the Vision.

PHASE 2 (ESTIMATED COMPLETION TIME - 5 YEARS : COMPLETION DATE: 2015)

The second phase of the vision is to realize the three waterfront access roads (Glen Stewart Drive Extension, St. John Avenue Extension and, Residential Street). These will most likely develop at different times depending on market conditions for the various areas (high density residential, retail, commercial, etc.). One of the immediate challenges will be maintaining the operation of the current Southport Motel. This poses no challenge for development of St. John Avenue Extension and Residential Street, however, for Glen Stewart Drive Extension, it means that the road must be constructed as a single loaded road with development on the south side only, or part of the motel must be relocated or torn down. Since this area will be the main commercial street, the existing land owner and the Town will need to work closely together to see the project realized in a mutually acceptable fashion. A lift station will need to be constructed near the end of Harbourview Drive at some point early in phase 2. An optimistic estimate for phase 2 is 7-12 years to complete. It is possible that a portion of phase 3 may begin before phase 2 is completed.

Phase 2 Next Steps:

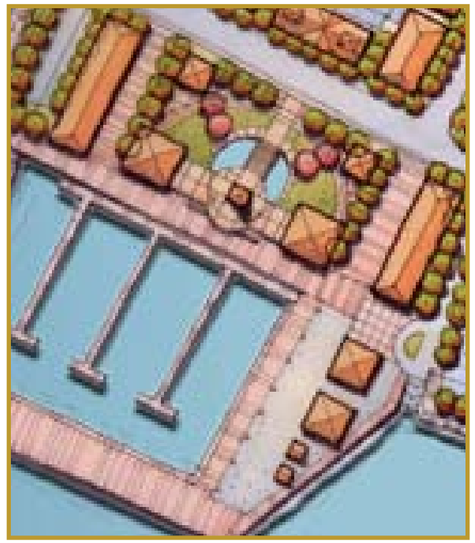
a. Continue marketing Southport to developers and builders.
b. Begin dialogue with property owners in the North Waterfront Core Area to determine if partnerships could be formed with the Town to allow this area to be considered in the overall Southport marketing Strategy. Develop schedules for redevelopment of this area. Assign budgets for capital improvements in this area (the park, intersections, servicing improvements, etc.)
c. Create a detailed layout and grading plan for all of phase 2. Create streetscape details and road sections for tender. Determine the scope of each various tender package and its timing for construction. This will be coordinated depending on developer interest for the various aspects of phase 2. It will likely involve 3 separate tender packages for each of the 3 roads.
d. Prepare detailed conceptual schematics (not working drawings) for phase 3 to ensure coordination with phase 2 works.
e. Construct the roads as infrastructure as developer interest warrants.
f. Implement the Civic Signage Strategy.
g. Investigate permits for shoreline infilling needed for phase 3 Waterfront Drive.
h. Begin to identify possible uses (library, art centre, etc.) for the public land reserve across from the waterfront plaza.
i. Partner with CADC on a management plan for public parking lots in phase 2.

PHASE 3 (ESTIMATED COMPLETION TIME - 3-5 YEARS : COMPLETION DATE: 2018-2020)

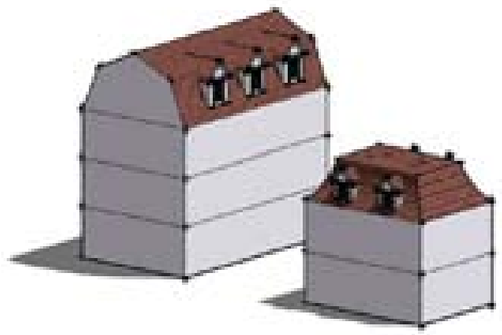
Phase 3 includes construction of Waterfront Drive and related developments. This phase should be tied into the potential marina development; although, the street related development parcels could proceed without the marina. During the implementation of this phase, the waterfront plaza will likely be relatively simple. Possibly sod and a few trees. In later years, the waterfront greenway and plaza will be constructed. The question of whether a full TCH intersection or a controlled access intersection is warranted will be answered during this stage of the project. This phase will also be contingent on the sewage treatment lagoon decommissioning.
Likely around the time phase 3 gets implemented, the north WCA will start to proceed as the existing strip mall nears the end of its life and as the first two phases of the south WCA start to take shape. At this stage, momentum will be gathered to carry the principles forward across the TCH to the north WCA. It is estimated that phase 3 will take 3-5 years to complete.

Phase 3 Next Steps:

a. Implement the long-term sewage lagoon strategy to remove the lagoons and reduce the footprint of the facility. Ensure the solution will not compromise the future north WCA development potential.
b. Prepare a park site plan for the sewage treatment lagoon site. Ensure coordination across the highway with the North WCA lands.
c. Determine if the marina development is feasible and plan for its coordination with the waterfront drive extension.
d. Determine if a "full intersection' or 'controlled access intersection' is warranted at the TCH. Implement the most feasible option.
e. Complete permits for infilling and dredging as may be required for the marina or waterfront drive extension.
f. Prepare working drawings for phase 3 on the south waterfront core lands.
g. Work with owners of the north waterfront core lands to ensure development is coordinated with the waterfront core lands approach.
h. Implement the waterfront greenway when infilling is complete.
i. Prepare a master plan for the north WCA lands.

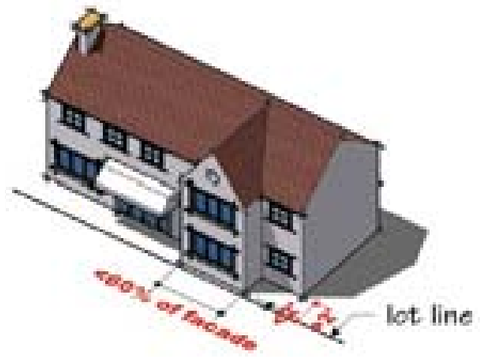


Marina and waterfront plaza



Buidling height and roofing types

Street level commercial with awning



Building Mass

PHASE 4 (ESTIMATED COMPLETION TIME - 10 YEARS : COMPLETION DATE: 2030)

Phase 4 shifts focus from the south waterfront core to the north waterfront core. The triangular block of the existing strip mall may have begun or may be completed by this stage. It is estimated that phase 4 will take a further 10-20 years to complete depending on the scale.

Phase 4 Next Steps:

a. Implement the master plan for the north WCA lands.
b. Coordinate the extension of the waterfront trail from the bridge to Robert Cotton Park.
c. Update the Core Area Vision and Open Space Plan for the town.

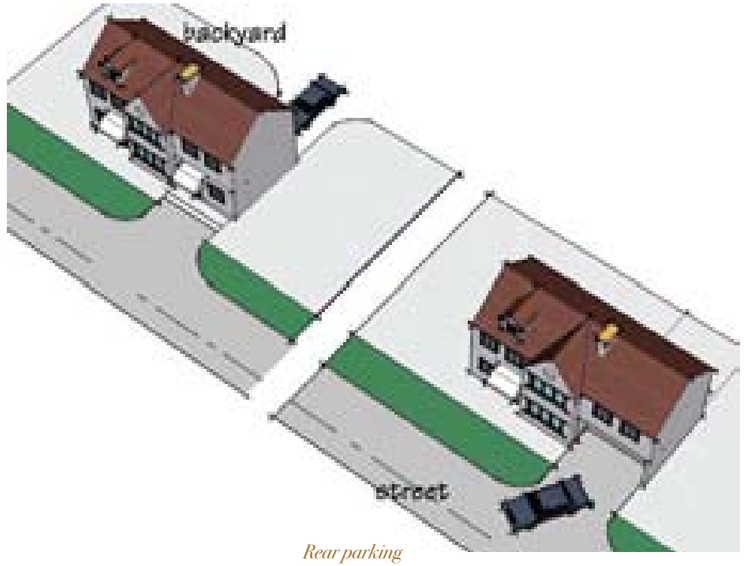
6. Design Guidelines for the Waterfront Core Area

The following design guidelines have been assembled to direct the appropriate form of development in the Waterfront Core Area. The guidelines can be broken down into commercial mixed use guidelines, residential guidelines and signage guidelines.

COMMERCIAL MIXED USE AREA

- Building Height: Building height in the district should be no less than 2 stories and no higher than 4 stories. The 4th floor should be incorporated into the roof design (i.e. the roof eave is no higher than the 4 feet above the 4th floor finished floor elevation).
- Ground Floor Uses: The ground floor should be dedicated to retail type commercial uses only on Glen Stewart Drive Extension. The ground floor should be dedicated to commercial uses only on St. John Avenue Extension.
- Ground Floor Openings: Windows and doors should occupy no less than 60% of the ground floor face area.
- Building Setback: The building setbacks should be no more than 2' from the street lot line for at least 60% of length of the facade. No part of the ground floor facade should have a setback greater than 8'.
- Sideyards: Sideyards should not exceed 3' to the lot line. Street corner lots should not exceed 15' or be less than 12' for both adjacent sideyards. These corner lot sideyards should become publicly accessible alleyways. Zero lot development is preferred for all lots other than corner lots. Any alleyways between buildings (except corner lot alleyways) should be fenced with an opaque 6' high, high-quality fence.
- Rear yard: The building footprint envelope should remain within 80' of the street right of way. Rear yard entry into commercial developments are permitted and encouraged. Transformers, planters, etc should be screened with a wood fence if they occur between the parking lot and the back of the building. A shared service area may be incorporated into the rear parking lot design.
- Awnings: Awnings or overhangs are required to cover no less than 50% of the groundfloor facade. Awnings should have at least 7.5' of clearance for snow clearing. Signs are permitted on awnings and under-lighting is encouraged. Awnings should be traditional shed in design. Cotton canvas is preferred over poly-type materials.
- Patios: No upper storey projecting patios are permitted facing the fronting street. All patios should be recessed into the building if they are used, with no patio extending more than 3' beyond the facade. Any patios facing the street should be screened using the prevalent facade material (brick, shingles, etc.) to at least 36" above the floor elevation.
- Roof Pitch: Roof pitch should be no less than 8:12 unless flat.
- Building Mass: The mass of any building on the block should be 'pedestrian scaled'. Buildings greater than 60' of frontage length need to be broken down into 60' 'compartments' with a distinct change in vertical architectural style using different facade materials, projections, roof changes, colours, etc. No compartment should be less than 30' of frontage. At least one door is required for each compartment on Glen Stewart Drive Extension.
- Stormwater Management: Roof leaders at the rear of the building should be directed to a covered cistern designed to hold the 2 year- 1 hour storm volume. Roof leaders at the front of the building should be tied into the street stormwater system.
- Light Pollution Reduction: Building lighting should be designed to minimize light bleed onto sidewalks or parking areas. 'Up-lighting' is not permitted except during the month of December for Christmas decorations. Architectural lighting that is 'Dark Sky Compliant' is encouraged.
- LEED-NC: To encourage sustainable building design in the waterfront core area, Council could consider making LEED-NC certified buildings eligible for a commercial tax rebate for the first 10 years.
- Water Use Reduction: Low flow plumbing fixtures and waterless urinals are encouraged in all buildings.
- Mechanical or communication appurtenances: Mechanical or communication appurtenances larger than 2 sq.ft. should not be visible from the street

Building setback



Rear parking

Residential massing

RESIDENTIAL BUILDINGS

- Building Height: Building height in the district should be no less than 2 stories and no higher than 4 stories. The 4th floor should be incorporated into the roof design (i.e. the roof eave is no higher than the 4 feet above the 4th floor finished floor elevation).
- Ground Floor Uses: All 'ground floor units' abutting the street should have independent doors for each residential unit on the street. A veranda or landing no less than 6 sq.ft. should accompany each ground floor entrance.
- Building Setback: Zero setbacks are preferred. Building setbacks should be no more than 10' from the lot line.
- Sideyards: Sideyards should not exceed 3' to the lot line. Street corner lots should not exceed 15' or be less than 12' for both adjacent sideyards. These corner lot sideyards should become publicly accessible alleyways. Zero lot line development is preferred for all other than corner lots. Any alleyways between buildings (except corner lot alleyways) should be fenced with an opaque 6' high, high-quality fence.
- Rear yard: The building footprint envelope should remain within 80' of the street right of way. A 10' minimum rear yard should be required.
- Awnings: Awnings or overhangs are required over all public entry ways into multi-unit developments.
- Underground Parking Garage: Access to any underground parking facilities is not permitted from any street. Access should be from back or sideyards (if the unit abuts the main parking lot entrance).
- Patios: No upper storey projecting patios are permitted facing the fronting street. All patios should be recessed into the building if they are used, with no patio extending more than 3' beyond the facade. Any patios facing the street should be screened using the prevalent facade material (brick, shingles, etc.) to at least 36" above the floor elevation.
- Roof Pitch: Roof pitch should be no less than 10:12 unless flat.
- Building Mass: The mass of any building on the block should be 'pedestrian scaled'. Buildings greater than 60' of frontage length need to be broken down into 60' compartments with a distinct change in vertical architectural style using different facade materials, projections, roof changes, colours, etc. No compartment should be less than 30' of frontage.
- Stormwater Management: Roof leaders at the rear of the building should be directed to a covered cistern designed to hold the 2 year- 1 hour storm volume. Roof leaders at the front of the building should be tied into the street stormwater system.
- Light Pollution Reduction: Building lighting should be designed to minimize light bleed onto sidewalks or parking areas. 'Up-lighting' is not permitted except during the month of December for Christmas decorations. Architectural lighting that is 'Dark Sky Compliant' is encouraged.
- LEED-ND: To encourage sustainable building design in the waterfront core area, Council could consider making LEED-NC certified buildings eligible for a residential tax rebate for the first 10 years.
- Water Use Reduction: Low flow plumbing fixtures and waterless urinals are encouraged in all buildings.
- Mechanical or communication appurtenances: Mechanical or communication appurtenances larger than 1 sq.ft. should not be visible from the street.
- Landscaping: Grass is not permitted between the building and the street. Only native vegetation or hardscape materials (stone, pavers, concrete, etc.) are permitted.

SIGNAGE

- Sign Board: A sign board for commercial signage or awnings is required above the first floor for no greater than 60% of the frontage length. Gooseneck lighting is preferred above all sign boards.
- Sign locations: Signs are permitted anywhere between the first and second floors. Signs on the top storey are permitted provided they are no greater than 12 sq.ft. Signs in the first storey are permitted provided they are no greater than 30 sq.ft..
- Back-Lit Signs: Back-Lit signs are not permitted anywhere in the waterfront core area, except to backlight raised lettering only, where said letters are greater than 12" high.
- Projecting Signs: Projecting signs are encouraged in the waterfront core area. Projecting signs can be no larger than 9 sq.ft. Projecting signs should have a clearance of 9' above grade.

parks

community

STRONG NEIGHBORHOOD CONNECTIONS

PRESERVATION

greenspaces

ACCESSIBILITY

play

MAXIMIZE LOCAL HEALTH

linkages

diverse

ecosystem

OPPORTUNITIES

health

valuable open spaces

BENEFITS

BEACHES

TRAIL NETWORK

NATURAL

COASTAL AREAS

SOCIAL AND ECONOMIC BENEFITS

RAPIDLY GROWING

recreation

HEALTHY COMMUNITY

CHAPTER 3: TOWN CENTRE CORE AREA

The Town Centre Core Area, is located between the Waterfront Core (Hopeton/Keppock Road) and Kinlock Road. This area sits at the geographical centre of Stratford and is the civic heart of the community.
The focus of the Town Centre Core should be to:

1. Promote the establishment of a compact, pedestrian-oriented Town Centre consisting of vibrant and dynamic mixed-use areas, and residential living environments that provide a broad range of housing types for an array of housing needs;
2. Promote a diverse mix of residential, business, commercial, office, institutional, educational, and cultural and recreational activities for workers, visitors, and residents;
3. Promote the health and well-being of residents by encouraging physical activity, alternative transportation, and greater social interaction;
4. Create a place that represents a unique, attractive, and memorable destination for visitors and residents of Stratford; and
5. Enhance the community's character through the promotion of high-quality urban design.

From an urban design perspective, Town Hall was designed as a civic focal point; it is surrounded by high quality open space, and local streets terminate at the edge of the property, thus providing unique vistas of Town Hall. In keeping with this principle, the vision illustrates a new intersection from the highway that would provide another direct access to Town Hall , thus reinforcing its civic presence; this connection has yet to be built.

In order to enhance the image of Town Hall in the future, additional land should be added to the existing green belt around the building, thus allowing room for the construction of a new school or other institutional facilities at a later date. Following this design thought further, this Vision recommends providing additional space for other institutional uses such as churches and medical clinics. The civic clues of the Town Centre Core should be surrounded by high quality residential development on three sides and high quality mixed use development (commercial and residential) to the south, connecting Town Hall to the Highway.

On the south side of the highway, the Town Centre Core should include high quality mixed use development which addresses important natural features such as the major drainage corridor that runs through the centre and the urban forest in the south east corner of the new intersection. The intersection must be designed to accommodate pedestrians, connecting the residential areas south of the highway to Town Hall, and should incorporate a high standard of landscape design. Housing options for the Town Centre Core should provide a mix of housing types styles, from traditional single family homes, to condominium, apartment, town house, and duplex.

Where the Town Centre Core backs on to existing residential properties, new residential development style should be sympathetic to existing housing and neighbourhoods; but as development moves away from existing residential areas towards the Core, there should be more opportunities for increased housing density and more diverse development types. Obviously, multi-storey residential housing would be better suited closer to the commercial and mixed use areas.

Unlike the Mason Road Core Area, the big box retail and large plate commercial model is not ideally suited for some areas of the Town Centre Core Area (mostly the land west of the new intersection). This approach is characterized by pavilion style buildings surrounded by parking and asphalt on 4 sides. On the new north entry road leading to Town Hall, the commercial development style should encourage the street related commercial style with pedestrian related sidewalks entering into commercial units from both the street and rear parking areas. Parking should be accessible from the street but should be located in the rear, shielded from the street by buildings. The scale of the street should be consistent with a 'town' scale, not the recent highway collector scale.

Town Centre Core Area base plan

The exception to the approach described above includes the lands adjacent to the Jubilee/Kinlock/TCH intersection. This area represents an extension of the building/development forms and land uses represented in the Mason Road Core Area (Chapter 4).

The drainage corridor that runs through the centre of the Town Centre should be preserved as a linear park, which doubles as a drainage corridor (i.e., an open space focal point) rather than a right of way for underground storm sewer pipes. Many communities in North America are now spending significant municipal budgets to 'daylight' old streams and drainage corridors that were culverted with stormwater pipes over the last hundred years. Daylighting principles should be employed in the Town Centre to create visible open space stormwater amenities instead of invisible civil infrastructure. The Town Centre should be directly linked to all outlying communities in Stratford via a multi-use trail network.

Civic Core Area

1. Town Centre Core Vision

In 2020, the Town Centre Core Area will be the definitive civic heart of Stratford. The area surrounding Town Hall will be some of the Town's premiere open space with walking trails, a multi-use field and a high quality urban park. The Town Centre open space will be linked to all the outlying communities via a spacious multi-use trail network. A potential Junior High School to the North of Town Hall will provide shared parking for the school and Town Hall. A new entrance on the north side of Town Hall will link the two facilities. The residential land to the north of the Civic Core will provide a variety of high quality housing options for a broad cross section of Stratford residents, from young families to seniors. All are just a few minutes walk (on sidewalks and trails) to outstanding parks and stores that provide daily conveniences.

The Town Centre intersection will offer some of the finest landscape design in the town. A short urban bridge will link the highway to the Civic Core over a landscaped pond which doubles as a component of the Town's stormwater control infrastructure. High quality 2 and 3 story buildings line the road into the Town Centre Core on both sides of the Trans Canada Highway. These roads have sidewalks, pedestrian scale lighting with banners, street trees with large canopies over the street providing shade to pedestrians, and ample on-street parking. The buildings lining these streets are outstanding examples of architecture which reinforce Stratford as the quintessential Canadian Town. Parking will be accessible and plentiful behind these buildings. In some places, animated cafe's spill out onto the sidewalk. Civic art is plentiful and reinforces the notion of Stratford as the cultural capital of PEI. Throughout, there is ground floor activity with offices and shops, while residents live in upper floors. The drainage corridor running through the centre of this area provides an open space back-bone linking the Town Hall Civic Core to the Glen Stewart School.

Example of desired building mass for Town Centre Core Area

2. Town Centre TCH Intersection

The proposed Town Centre intersection is the key to the Town Centre Core Area. Without it, development potential and neighbourhood connectivity with the civic core will be seriously compromised. The intersection provides a vital connection between the civic heart of Stratford and the outlying communities. It also provides a pedestrian crossing to bridge the north and south sides of Stratford, linking both sides to the institutional core of Stratford.

While the previous Core Area Vision study showed an additional intersection aligned with Ducks Landing, it is not believed that an additional intersection is required or warranted. The Core Areas will be served by parallel collector streets that will provide interconnection between Stratford Road, the Town Centre (Town Hall) Street, Kinlock Road / Jubilee Road and Mason Road.

The Town Centre intersection on TCH Route 1 should be developed to a high design standard. Since volumes on TCH are high and will continue to increase over the next 20 years, the intersection design should include:

- Two through lanes on TCH Route 1 for each direction of travel.
- Concrete median with appropriate landscaping on TCH to separate opposing traffic flows and to provide refuge for pedestrian crossings.
- Left turns lanes on TCH for both directions of travel
- Right turn lanes with right turn channels will probably be required at the four corners
- Town Centre Street should have two approach lanes to the intersection; one for through and right turning vehicles, and one for left turning vehicles
- Actuated traffic signals, with separate left turn phases for all approaches and pedestrian actuated cross walk signals.

While this new intersection will be an important point of access for vehicles into the Town Centre, it will be equally important as a pedestrian connection between various Stratford communities and the civic uses in the Town Centre. The main roads off the Trans-Canada should be designed to an urban standard with curbs and gutters, 6-10' wide sidewalks separated from the roads by grass medians, tree lined and with parallel parking on both sides of the street. A planted 10' wide median should extend from the TCH to the Town Hall. Light standards on the connecting roads from the TCH should be pedestrian scale instead of highway cobrahead standards, except adjacent to the Jubilee/Kinlock/TCH intersection.

3. The North Town Centre Core

The North Town Centre Core includes the land north of the TCH, including the lands around Town Hall, the residential land surrounding it and the commercial corridor along the highway. It is clear that the north Town Centre Core needs to be well connected (pedestrian and vehicles) to the rest of Stratford. The Civic Core (the area surrounding Town Hall) needs to be one of the highest quality open spaces in Stratford and provisions must be made to include other institutional functions. The commercial area should include mixed-use developments sympathetic to the town centre model as well as big box style developments directly adjacent to the TCH/Jubilee intersection.

THE CIVIC CORE

The civic core is the heart of the town centre core area and includes the land surrounding Town Hall, approximately 20-22 acres in size (the existing Town Hall Parcel is 12.7 acres). Town Hall creates the focal point for the Town Centre Core. In the concept plan, roads have been aligned to showcase the tower on Town Hall. The tower emphasizes the importance of the institution as a focus point for the Town.

There are several components that make the civic core important. These include:

Additional Institutional Infill

There are ample opportunities for a range of additional institutional infilling surrounding Town Hall. This could include:

a. A new Junior High School building with room for bus drop-offs, roughly 60-100 parking spaces, large gathering areas for students on the non-residential side of the building, a sympathetic school face on the residential side, and well connected trail system into the community. The parking lot and multi-use fields could be shared with Town Hall.
b. Other institutional uses like churches, clinics, library, museums, arts facilities, convention centre, other cultural/civic facilities, etc. There may be opportunities for mixed use development on the main south entry into the Civic Core.

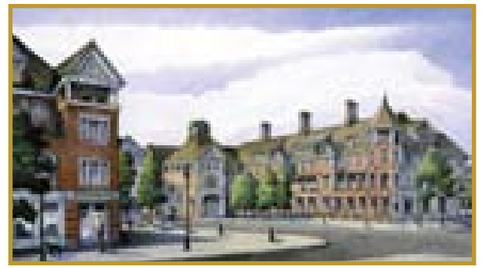
Typical streetscape for Town Centre Core Area streetscape

Town Square

The central urban park will provide a counterpoint to the architectural form of Town hall. The drawing shows a traditional 'Town Square' arrangement for this urban space. The town square will be surrounded by large stately trees, landscaped areas, civic art and a major water feature as a focal point for the entry road into the Civic Core. Like a traditional town square, mixed use buildings could surround it. The Town Square needs to be designed to a very high quality, while recognizing that implementation could be piecemeal over the next decade.

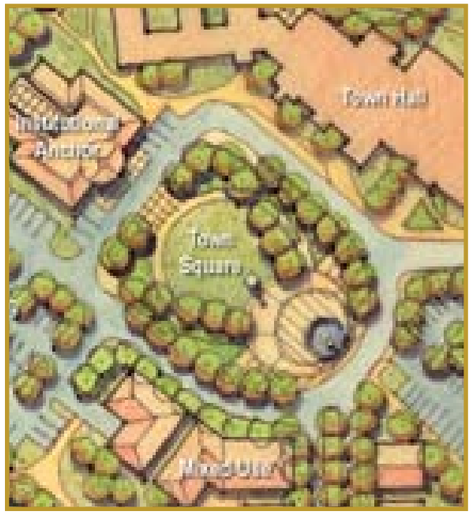
Clustered parking

Clustered parking provides pockets of parking for the Civic Core. Unlike the existing configuration for the Town Hall, where parking lines both sides of the entry road in a highly visible manner, the parking should be distributed off the main roads to be accessible, but discrete. The parking lots should be designed to retain stormwater runoff of less than 2 year recurrence interval. Trees should be planted in all parking islands to reduce the impact of the urban heat island effect (increased temperatures in urban areas as a result of reflected radiation from asphalt). In the future, there may be an option to provide a large parking lot north of Town hall. This would require future access from the building on the north side of the central entry (shown on the plan).



Typical massing for Town Centre Core

Typical massing for Town Centre Core



Civic core concept

Aerial view of Town Centre Core concept

Entry to Town Core

Entry to Town Core

Active Recreation Facilities

A high quality multi-use field could be a central feature of the Civic Core. Properly designed, the field could be used for soccer, football, baseball, softball and rugby. The Town could explore an all-weather turf field for the Core. These synthetic fields provide extremely high quality sport surfaces and are not subject to growing conditions which damage traditional fields. A high quality sand-base sports field would also be appropriate for this area. The topography should be sculpted to provide seating overlooking the fields. A high quality adventure playground facility should also be accommodated next to the fields. The Town should consider constructing an 'accessible playground' facility where all children, with and without disabilities, can develop essential skills for life as they learn together through play.

CONNECTED GREENSPACE

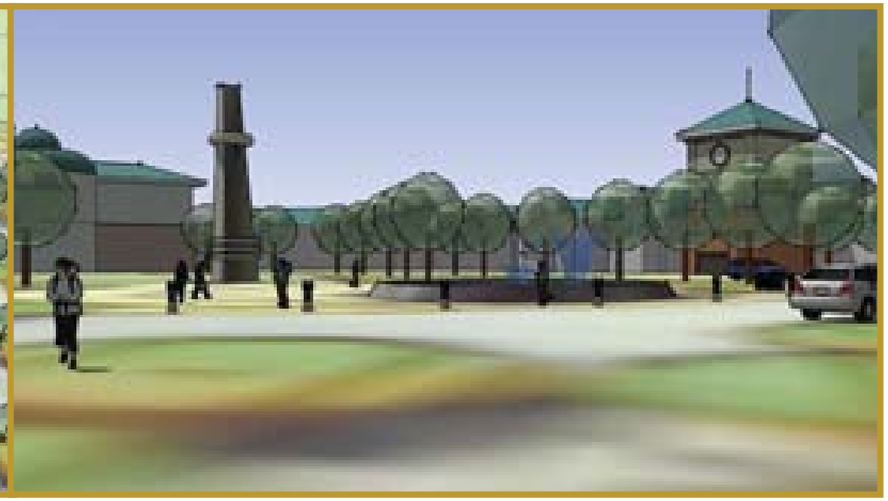
The Civic Core must be well connected to surrounding neighbourhoods via a series of greenways and on-street sidewalks. A 30' multi-use trail corridor should connect the Civic Core with Mason Road, Bunbury Road and the eastern border of the adjacent lands.

RESIDENTIAL LAND SURROUNDING THE CIVIC CORE

The land bordering the east side of the new Civic Core could be lined with medium density residential development like townhouses and semi-detached homes or possibly mixed use development. Families typically like to back onto active recreation park lands. Large single family lots typically do not want to be located adjacent to active recreation fields. The land to the west of the Civic Core is zoned R3 and there are currently apartment buildings in this area. Apartments are an as-of-right use in this area and they do not compromise the Civic Core concept.

It will be important that the Town work with the existing developer to maximize the area for the Civic Core. Future parkland dedications for the lands should be located in the Civic Core to provide ample space for this important area. The Town should also work with the developer to consider reallocating parkland dedicated to an area south of the recent PURD development lands (an area of approximately 2.75 acres) to the Civic Core. A small 6,000 -8,000 sq.ft. playground area should be preserved with road frontage of no less than 60'. This would allow the developer to utilize this area for future housing while ensuring that the town reserves parkland where it is best suited around Town Hall. On top of this, a well integrated trail network should be linked to the Civic Core throughout the remaining developments in this area.

Aerial view of Civic Core



View of Civic Core

THE NEW INTERSECTION – NORTH GATEWAY CORRIDOR

The new intersection proposed on the TCH in this location will be the main gateway into the north and south Town Centre Core. The road to the north should be designed with a 10' landscaped boulevard in the centre, on-street parking on both sides of the road, generous sidewalks, street trees on the outside of the sidewalks and street related mixed use development with ample ground-floor activity. A stormwater pond, located at the entrance to the northern gateway, will serve as park-like entrance into the Civic Core. A bridge-like (not necessarily a bridge) structure will cross the stormwater ponds. The bridge should be designed with seating overlooking the park areas, ceremonial light standards, colourful banners, wide sidewalks, interpretive panels for pedestrians and a marine nautical flair. While the ponds could connected with a simple 'Shaw-span' structure, it is important that, from above, the bridge be designed as a ceremonial gateway. The stormwater ponds should be designed with a well landscaped park surrounding and should be connected to the highway trail system proposed for the north side of the TCH. The ponds must not be designed as a typical 'engineered detention basin'. Powerlines should be directed to the rear of the properties in this corridor.

View of Civic Core from Town Hall

Town Core bridge gateway

THE SHAKESPEARE RESIDENTIAL CORRIDOR

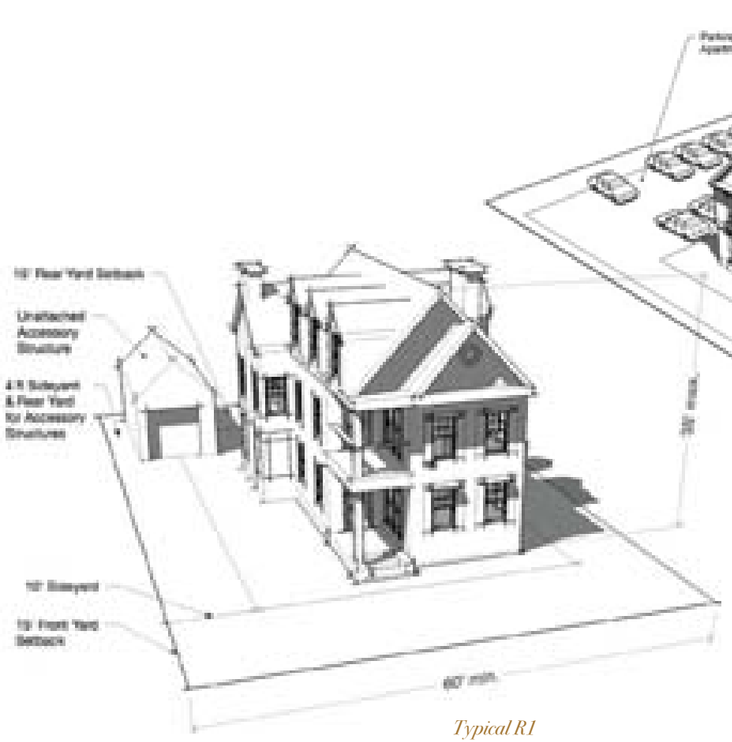
The Shakespeare Drive corridor is currently designed as a TCH collector road, aligned to direct traffic past the Town Hall, west into the Heron Drive neighbourhood where the road system is convoluted. The suggested design connects into a Civic Core ring road at a T-intersection, allowing motorists to drive straight into the Civic Core, turn right into the new residential lands and up to Mason Road, or turn left onto Shakespeare Drive. This T-intersection design is important in establishing the Civic Core ring road concept. It also helps to slow traffic entering the Town Core.

For the lands south of Shakespeare Drive (south of Ducks Landing), lots which front on Shakespeare Drive are currently required to conform to the established lot standards. New development that does not front on Shakespeare Drive is encouraged to meet the higher development standards recommended for the Town Centre Core. Council should consider granting density bonuses in return for compliance with higher development standards.

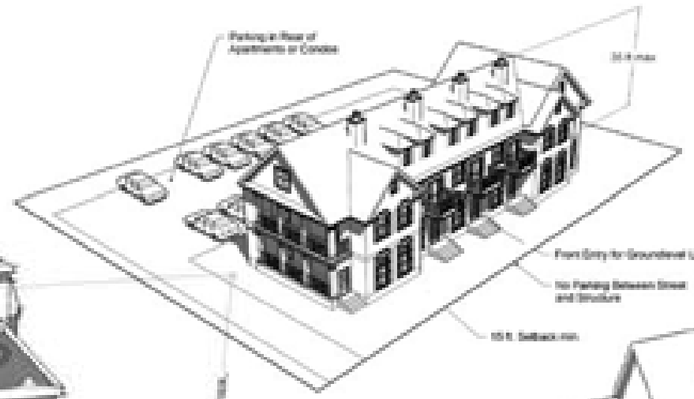
Town Core bridge gateway

TOWN CORE COMMERCIAL CLUSTER

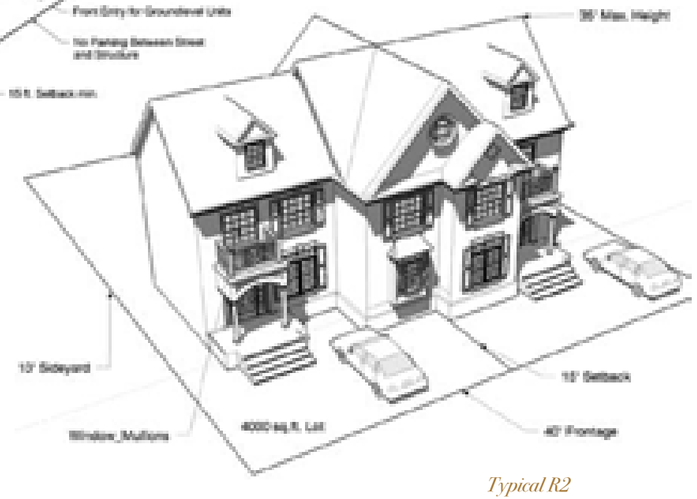
The lands immediately bordering the TCH (in the vicinity of the Jubilee Intersection) provide ample room for medium scaled, free standing traditional commercial developments. For these developments, the highway 'face' of the building needs careful consideration. Service bays and maintenance areas (trash, loading bays, etc.) should not be located on the highway face. Ideally, several of these building types would be clustered together with service areas located between them. The landscape guidelines recommended in this chapter should be observed.



Typical R1

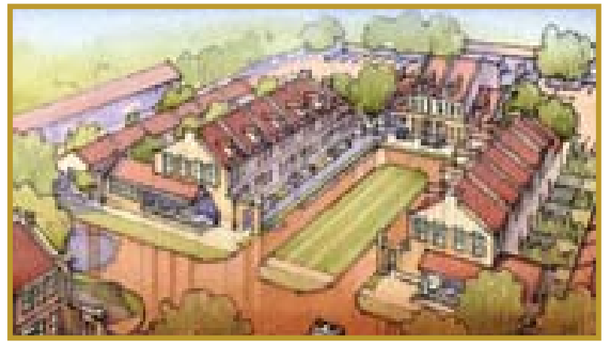


Typical R3



Typical R2

Caption to be defined



Caption to be defined

Caption to be defined

4. South Town Centre Core Area

The South Town Centre Core Area lies to the south of the TCH below the proposed new Town Core intersection. The area is currently zoned as a Comprehensive Development Area zone (CDA). While CDA zoning is employed all over North America, the uncertainty associated with this type of zone often stalls development (developers frequently refer to the CDA acronym as 'Can't Develop Anything'). The lack of easy accessibility to this parcel probably did more to restrict development than the CDA zone. However, with the construction of a new intersection in this location in the near future, the CDA zone could limit development potential and would not offer developers any direction on the desired development form. Much of this area should be rezoned as Mixed-Use like the North Town Centre Core.

There has been discussion for years about the alignment of MacKinnon Drive and its connection to either Glen Stewart Drive or St. John Avenue. There are serious constraints with both connections. Opponents of the Glen Stewart Drive connection fear that the additional traffic on Glen Stewart Drive would be a real cause for concern for students of the Glen Stewart School. Opponents of the St. John Avenue connection fear that traffic will be directed to the St. John - Stratford Road intersection, which can never be controlled by traffic signals due to its proximity to the existing TCH - Stratford Road intersection. This would create a very dangerous intersection.

As long as MacKinnon / Glen Stewart Drive road speed is limited to 50-60 km/hr, the MacKinnon-Glen Stewart Drive connection is the better option from both a traffic and safety perspective (exiting Stratford Road from a non-signalized St. John Avenue intersection will be dangerous for drivers and pedestrians). It must also be considered that Glen Stewart Drive will be the main link into the Waterfront Core Area and despite a MacKinnon-St. John Avenue alignment, many drivers will opt for the Glen Stewart shortcut because it will be signalized. Dozens (possibly hundreds) of schools in Atlantic Canada contend with similar traffic conditions as would exist with a MacKinnon / Glen Stewart Drive connection. Despite this rationale, residents and parents have a real concern about this connection and will need further consultation after the Core Area Vision is approved to ascertain the most acceptable alignment.

The vision shows how the MacKinnon Drive - St. John Avenue connection could work (the solution for the MacKinnon-Glen Stewart connection is evident). The northern road reserve on Marion Drive (by the ball field) should also be used to connect Marion Drive to MacKinnon Drive. This solution distributes the traffic over a number of road systems and neighbourhoods without concentrating traffic on any one road. A future trail right-of-way should be preserved between the new intersection road and Marion Drive cul-de-sac.

TOWN CENTRE COMMERCIAL

The land between the existing Sobeys store and the proposed new intersection should be preserved for additional medium scale commercial development similar to what exists on the Sobeys property next door. The previous vision plan showed this area preserved entirely as an urban forest. Clearly, the highest and best use for this land adjacent to a new intersection is not urban forest as the demand for commercial expansion will be significant in this area. Nonetheless, a portion of the urban forest (no less than 2000 sq.m.) should be preserved along the highway to break up what would otherwise be a very large parking lot. A smaller pad mixed use lot should be reserved for the south east corner of the new intersection and be developed to a high standard.

Typical Town Core residential massing

Typical Town Core massing

MIXED USE ZONE

A mixed use zone should be established over the lands east of the new TCH intersection. A drainage corridor bisects this area and there are low, periodically wet areas though this corridor. The land in this area transitions from the large commercial plate facility on the Sobeys land to the residential and mixed commercial areas on St. John Avenue. A mixed use development would ideally bridge these land uses. The mixed use area drawn on the conceptual drawing flanks both sides of the drainage corridor. Ideally, a pond and park could be constructed in this area to provide an amenity for the surrounding residential development. There are opportunities for medium scale commercial facilities, offices and high density residential in this area.

DRAINAGE CORRIDOR

The stormwater drainage corridor through the south Town Centre Core should be preserved as an above-ground feature as much as possible. The drainage corridor between Millennium Drive and Greensview Drive must be observed connecting this area to Spruce Grove Park. The cross section should be designed to carry the 25 year flood (with mitigation measures for the 100 year flood) but it should not be an 'engineered-looking' structure (rip rap, rock lined ditch, etc.). Instead, it should be designed as natural drainage swale and landscaped with native vegetation. This corridor should also be used as a trail backbone as part of the open space network.

HIGHWAY CORRIDOR ENHANCEMENT PROJECT

The highway corridor is currently a single purpose environment designed to move vehicles safely through Town. Other communities in Canada (even Charlottetown and Cornwall) are moving towards a multi-purpose highway corridor design which includes wildlife habitat improvement, aesthetics, microclimate amelioration, community identity, etc. This is clearly the domain of the provincial Department of Transportation and will require significant discussion and negotiation before any enhancments can be considered.

The Town should strike a community led "Highway Corridor Enhancement Program" committee to lead the effort. The group should be challenged with introducing trails and street trees (possibly lighting) along both sides of the TCH. There are a number of vehicle safety setback issues that must be observed for a 70km/hr highway corridor; however, these issues can be accommodated. One or more councillors, and an equal number of staff, should sit on the committee. The group should identify necessary land acquisitions, DOTPW transportation safety standards, and a suitable plan for advancing to DOTPW. The Town should identify funding opportunities for advancing the project and should facilitate communication between the committee and the DOTPW.

5. Challenges to Implementation

The challenges for the Town Centre Core are not insurmountable; however, this area will take time and patience as it evolves. On a positive note, there are very few land holders with whom the Town needs to coordinate the implementation of the vision. This can be positive if the land owners subscribes to the premise of the Core Area Vision. There are also a number of community and DOTPW coordination issues that need to be addressed. There are no real physical constraints, except some of the drainage corridors.

HIGHWAY INTERSECTION

The Town will need to continue dialogue with the Department of Transportation and Public Works to see the new intersection realized. The stormwater drainage swale runs directly in the location of the proposed intersection and will require some additional coordination.

SERVICING

The existence of the Town Hall and the servicing in place for that development are important assets when examining future sanitary infrastructure requirements to support the development envisaged in the Vision for the Town Centre Core. The existing sanitary sewers and water mains have capacity for new development, although in the lower area near the Trans Canada it may be necessary to install a sewage lift station from the low point to existing gravity sewers.

Water supply is, like most of PEI, from a well field. As the demand for water increases in Stratford, this resource will need to be monitored, and perhaps revisited in terms of safe yield. The higher elevation parts of the Town, in particular in the far corners to the northeast and southeast, may require some form of booster pump station as demand grows and reduces system pressure through water use.

General policies, such as requiring the looping of water transmission pipes whenever possible, funded as part of on lot development requirements for large developments, should be maintained and enforced.

STORMWATER MANAGEMENT

The Town should implement a no-net runoff approach to developing the commercial properties in the Town Centre Core. This means that the 5 year post-development runoff curve should match the 5-year pre-development runoff curve. Flood conveyance is not recommended as the sole civil design treatment. Instead, the projects should be designed to store 5 year floods onsite using a wide variety of modern approaches to design. As much as possible, the existing stormwater drainage swale should be preserved as an above-ground solution rather than an underground solution through the Town Centre Core.

RESIDENTIAL BUFFERING

About three dozen residential properties border the Town Centre Core Area (north and south). Where existing vegetation is present, a 20-30' buffer of vegetation should be preserved where all new residential development borders existing residential properties.

South Town Centre core

South Town Centre core perspective

6. Phasing and Implementation

Since much of the land is privately owned, there is no clear phasing strategy for the Town Centre lands except for the areas where the Town can effect some change. There are several things the Town can do to effect change in the near-term. These include:.

1. The Town should actively pursue the proposed intersection implementation on the TCH. This will take negotiation with both DOTPW and the land owner. The addition of this intersection, coupled with the proposed new land use bylaw changes for new core areas zones, will create immediate commercial and residential demand. Work with the Department of Transportation and land owner to fine tune the intersection alignment and design.
2. The Town should assemble a community led committee to pursue the Highway Corridor Enhancement Program. The group should establish their mandate (with help from Council and staff) and the Town should facilitate discussions with DOTPW. The Town should begin dialogue with other communities in PEI who have gone through a similar process (Charlottetown, etc). The Town should identify potential funding and revenue sources for implementing the program. The committee and Council should consider encouraging the community to help construct various aspects of the project (tree planting, trails, etc.).
3. The Town should undertake a comprehensive stormwater management strategy. The Town Centre Core will play a prominent, direct role in this strategy since the drainage corridor bisects the area. A pond or series of ponds may be required as part of this concept. Single purpose engineering structures should be avoided in favour of multi-purpose community and wildlife amenities.
4. The Town should work with the land owner(s) to begin discussions with the local community about the Mackinnon Drive extension alignment. This will be initiated by the land owner, facilitated by Town planning / engineering, and possibly DOTPW staff.
5. Work with the land owner and DOTPW to determine an equitable cost sharing arrangement for the new intersection. To this end, a property assessment should be completed for the affected lands without the intersection and with the intersection.
6. The Town can start to plan for the implementation of the Civic Core. The Town could start to look for partners for the potential commercial / institutional lands. The Town should continue to consider the location for a future junior high school.

7. Design Guidelines

The following guidelines have been assembled to help direct the appropriate form of development in the Town Centre Core Area. The guidelines can be broken down into commercial, mixed use, residential, and landscape guidelines.

ARCHITECTURAL DESIGN GUIDELINES (SINGLE FAMILY, DUPLEX & SEMI)

1. Sheds, detached garages and any other accessory building should be compatible with the style, color and composition of the main house and should be maintained to the same level of repair and appearance as the main house. Pre-fabricated, freestanding sheds are not permitted. Accessory Buildings should not be placed within 3' of the property line.
2. Permitted roof materials are asphalt shingles, cedar shingles, metal, slate or copper, or any combination thereof or similar materials. Painted metal roofs may be allowed where they are compatible or for porches and bay windows. Roof stacks and plumbing vents should be placed on the rear slopes of the roof where possible to minimize visibility from the street.
3. The preferred location for satellite dishes and other antennas is below the peak of the roofline on the backplane of the house so as to have no (or minimal visibility) from the front of the house, or entirely within and below the height of approved privacy fencing which fully encloses the rear yard of any attached townhouse.
4. Porches are encouraged on all homes.
5. Vinyl siding may be approved where the architectural details are appropriate to traditional building design. All shingle or clapboard type siding should be full profile and not wider than five (5) inches.
6. All windows should have mullions and proportions which are appropriate and reflect the architectural style of the building.
7. Low-flush toilets and low-flow shower heads are encouraged in all bathrooms.

South Town Centre core gateway

South Town Centre core typical massing

8. Fence designs should be appropriate for the architectural style of the building. Chain link fences are not permitted.
9. Garages should be located and treated so that on approach the house on the lot is not visually dominated by the garage. To this end, attached garages should not extend more than 4 feet past the front door of the house. Only single garage doors are permitted and should be less than 12' wide. Carports are discouraged and will only be approved where they are compatible with the architectural style of the building and where adequate screened storage facilities are provided.

ARCHITECTURAL DESIGN GUIDELINES (MULTI-UNIT APARTMENT OR CONDOMINIUM)

1. All groundfloor units facing the street should have individual front door entries providing direct access to the street.
2. No parking between the building and the street is permitted.
3. 'Projecting' patios/decks are not permitted on the street face of the apartment. All patios/decks on the street side should be recessed into the building at least 2' if they are used, with no patio extending more than 3' beyond the facade. Any patios/decks facing the street should be screened using the prevalent facade material (brick, shingles, etc.) to at least 36" above the floor elevation.
4. The building should be designed to clearly conform to an architectural 'style' (Victorian, Prairie, Craftsman, Georgian, etc). Exterior details should support the selected style (windows, roof, porticos, trim, shingles, entries, etc.).
5. All windows should have mullions and proportions which are appropriate and reflect the architectural style of the building.
6. Vinyl siding may be approved where the architectural details are appropriate to traditional building design.
7. Low-flush toilets and low-flow shower heads are encouraged in all bathrooms.
8. Fence designs should be appropriate for the architectural style of the building. Chain link fences are not permitted.

COMMERCIAL DESIGN GUIDELINES

Roof Lines

Variations in roof lines should be used to add interest to and reduce the massive scale of large buildings. Roof features should compliment the character of any site built adjoining a neighborhood.

1. Rooflines should be varied, with a change in height every 15 linear metres in the building length, or with parapets or other architectural roof details. Parapets, mansard roofs, gable roofs, hip roofs, or dormers should be used to conceal flat roofs and roof top equipment from public view. All rooftop equipment will be concealed from public right-of-way view adjacent to the property.

DETAIL FEATURES

Buildings should have architectural features and patterns that provide visual interest at a pedestrian scale, reduce massive aesthetic effects, and recognize the character of the local area. The elements in the following standard should be integral parts of the building fabric and not superficially applied through trim, graphics, or paint.

2. Building facades should include a repeating pattern with no less than three of the elements listed below. At least one of these elements should repeat horizontally. All elements should repeat at intervals of no more than twelve (12) metres, either horizontally or vertically.
   - Color change
   - Texture change
   - Material change
   - Expression of architectural or structural bay through a change in plane no less than 12 inches in width, such as an offset, reveal, or projecting rib.

COMMERCIAL LOADING & STORAGE AREAS

Loading areas and outdoor storage areas have visual and noise impacts on surrounding neighborhoods. These areas, when visible from adjoining properties and/or public streets, should be screened, recessed or enclosed. Appropriate locations for loading and outdoor storage areas include areas between buildings and on those sides of buildings that do not have customer entrances.
As a guide:

3. No areas for outdoor storage, trash collection or compaction, loading, or any other such use should be located within 20 feet of any public street, public sidewalk, or internal pedestrian way.
4. Loading docks, truck parking, outdoor storage, utility meters, HVAC equipment, trash dumpsters, trash compaction, and other service functions should be incorporated into the overall design of the building and the landscaping so that the visual and acoustic impacts of these functions are fully contained and out of view from adjacent properties and public streets.
5. Areas not inside a building for the storage and sale of seasonal inventory should be permanently defined and screened with walls and/or fences. Materials, colors, and designs of screening walls and/or fences and covers should conform to those used as predominant materials and colors for the building. If such areas are to be covered, then the covering should conform to those used as predominant materials and colors on the buildings.
6. Temporary sales/display areas of seasonal materials such as Christmas trees and seasonal landscape plant material, loading areas and outdoor storage areas should not restrict the traffic flow onto or through the site.
7. All exterior shopping cart carrels should be designed to match the character of the main commercial building.

South Town Centre core gateway perspective

Pedestrian Amenities

Pedestrian accessibility opens auto-oriented developments to adjacent neighborhoods, thereby reducing traffic impacts and enabling the development to project a friendlier, more inviting image. Public sidewalks and internal pedestrian circulation systems can provide user-friendly pedestrian access as well as pedestrian safety, shelter, and convenience within the commercial property.

To accommodate pedestrian flow:

8. Sidewalks at least 1.5m in width should be provided along all sides of the lot that abut a public road right-of-way.
9. All sidewalks should be concrete with appropriately spaced contraction joints (2m max.) and expansion joints (10m max.).
10. In the winter, sidewalks should be maintained with the same frequency and to the same standards as parking lots.
11. Sidewalks on public right-of-ways should be linked to commercial sites via a 1.5 m minimum sidewalk. These connecting sidewalks should be placed to minimize crossing internal roads or parking lots. There should be at least one sidewalk linkage per adjacent street frontage (eg. flankage yards require 2 connecting sidewalks, properties with 1 road frontage require 1 connecting sidewalk). Linking sidewalks from the TCH should be no less than 1.8m wide. Where the connecting sidewalk connects to a parking lot, the sidewalk should extend to the travel lane (i.e. it should not end or start at a parking stall).
12. Continuous internal pedestrian walkways, no less than 8 feet in width, should be provided from the public sidewalk or right-of-way to the principal customer entrance of all principal buildings on the site. At a minimum, walkways should connect focal points of pedestrian activity such as, but not limited to, transit stops, street crossings, building and store entry points and should feature adjoining landscaped areas that include trees, shrubs, benches, flower beds, ground covers, or other such materials.
13. Sidewalks, no less than 8 feet in width, should be provided along the full length of the building along any facade featuring a customer entrance, and along any facade abutting public parking areas. Such sidewalks should be located at least six (6) feet from the facade of the building to provide planting beds for foundation landscaping, except where features such as arcades or entryways are part of the facade.
14. Weather protection features such as awnings or arcades in front of the main entrances and on each side of all customer entrances of the building are encouraged to cover 1/3 of the length of the facade of the building. This is not intended to extend into the driving aisles or parking areas.
15. All major pedestrian walkway crossings should be distinguished from driving surfaces through the use of durable, low maintenance surface materials such as pavers, bricks, scored concrete or stamped asphalt, in order to enhance pedestrian safety and comfort,
16. All commercial buildings greater than 5,000 sq.m should include an outdoor pedestrian plaza no less than 15 sq.m. within 15m of a main entrance with at least 2 benches, 3 caliper sized trees, shrubs, a bike rack, a garbage container and lighting.
17. A bike rack should be provided for all commercial developments with 1 bike space per every 500 sq.m. of commercial space.

Signage Guidelines

18. No more than one fascia or signboard sign per business should be erected unless the business has a storefront facing a second street.
19. Free-standing Pylon Signs are only permitted on Commercial lands east of the proposed new intersection into Town Hall
20. Free standing pylon signs cannot be larger than 8m high and cannot reference more than four (4) businesses.
21. Fascia signs should not occupy more than 10% (by area) of any building facade.
22. Billboards are not permitted.

Lighting

The intent and purpose of this section is to avoid forms of light nuisance and intrusion, such as light pollution, light trespass, and glare from adjacent areas which affects both people and wildlife. All outdoor light fixtures, other than fixtures on the building facade, emitting 2,050 or more lumens should be shielded as follows:

23. Within fifty (50) feet of the property boundary, should be full-cutoff, light fixtures.
24. All other outdoor lighting fixtures should be semicutoff or full-cutoff, light fixtures.
25. Alternative design solutions for those lighting requirements that meet and exceed the intent and purpose of this section may be approved by the Development officer.

ARCHITECTURAL DESIGN GUIDELINES (MIXED USE DEVELOPMENT)

For mixed use developments, the previous 'multi unit apartment or condominium' design guidelines and 'commercial' design guidelines should both apply.

LANDSCAPE GUIDELINES

1. Every 1000 sq.m. of commercial building area (or a ratio thereof) requires 5 caliper sized trees (>60 mm caliper) and 20 sq.ft. of landscape beds (shrubs, small trees, perennials, annuals, etc.). The beds should be mulched with at least 3" of bark mulch. Norway Maple and Austrian Pine are not permitted. Native plants are preferred over non-native species.
2. One caliper sized tree (>60mm) should be planted for each single family lot. Townhouses or semis require 1 tree for every 2 units. R3 units should plant 1 tree for every 60' of road frontage (2 trees for 60-120' of frontage, 3 trees for every 120-180' of frontage, etc.) Each street should adopt a tree standard to be installed. The tree should be planted within 3' of the front lot line. Wherever possible, the spacing of street trees should be consistent along the street and for every lot.
3. At least 15 sq.ft. of mulched shrub beds should be planted for each single family home lot. No less than 10 sq.ft. for each R2 lot and no less than 50 sq.ft. of bed for each R3 lot. Shrubs should be spaced no more than 3' apart for large shrubs and 2' for small shrubs or perennials. These beds should be located in the front yard. Planted 'islands', unless around the street tree, are not permitted. Beds should be located adjoining the house or driveway.
4. All parking lots greater than 24 cars require landscaped islands at the end of each row of parking (between the last stall and the travel lane). The island should be no less than 4' wide spanning the length of the parking stall. 1 tree (no less than 12' high) is required per island. The island should either be raised with a concrete curb, or the island should be designed to channel and store stormwater runoff as part of the overall stormwater management plan.
5. All free standing light standards in commercial developments should be fitted for hanging flower baskets. Each light should have no less than 2 sq.ft. of planting area. Baskets should be maintained with good quality plants from May 20 to September 20th each year.
6. Lawns should be sodded with no less than 8" of high quality topsoil using a minimum 90% Kentucky Bluegrass cultivar mix.
7. Ditch sides greater than 3:1 slope should be peg sodded. Vegetated swales are preferred over gravel ditches on all Town Centre Core Area development sites.
8. Naturalized meadows are preferred over maintained turf areas. A suitable native meadow mix should be used in this case.
9. All developments over 1000 sq.m. in the core area require a planting plan which should be stamped by a member of the Atlantic Provinces Association of Landscape Architects (APALA).

BEACHES

open spaces

parks

TRAIL NETWORK

play

diverse

greenspaces

BENEFITS

ACCESSIBILITY

SOCIAL AND ECONOMIC BENEFITS

PRESERVATION

COASTAL AREAS

ecosystem

MAXIMIZE LOCAL HEALTH

STRONG NEIGHBORHOOD CONNECTIONS

community

recreation

OPPORTUNITIES

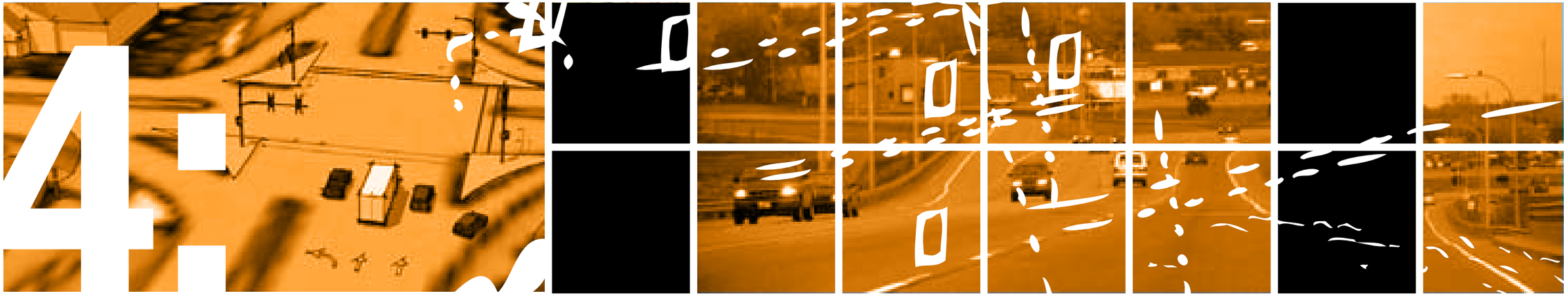
NATURAL

health

RAPIDLY GROWING

linkages

HEALTHY COMMUNITY



CHAPTER 4: MASON ROAD CORE AREA

The Mason Road Core Area, like the Waterfront Core Area, is a gateway to and from the Stratford Commercial Core and the Stratford Industrial Park. The current Mason Road intersection with the Trans Canada Highway has some serious safety and commercial expansion limitations which will be explained in more detail in this chapter; however, the need for a new intersection in this area is necessary to solve a myriad of transportation and community access issues and to create opportunities for commercial expansion. To be effective, the new intersection must:

- Provide safe, controlled access to and from the highway to access Mason Road, the Stratford Industrial Park, and Stratford/Georgetown Road
- Eliminate the current Stratford/Georgetown Road highway access
- Eliminate or resolve the current Dale Drive highway access
- Maximize commercial land potential while minimizing the need to remove existing buildings
- Provide adequate buffering capability to existing residential neighbourhoods (i.e. Dale Drive residents)

Over a dozen options for this new intersection have been explored in the year or so leading up to this study. Most recently, a concept for the new intersection was developed and was endorsed by the Provincial Department of Transportation and the Town of Stratford. The concept was challenged by Dale Drive residents during public consultation meetings held in 2005 and 2006 as part of a review of the options to determine the best intersection location. In January 2006, the Town approved the Dale Drive intersection option. In the spring of 2006, the plan was again revisited and discussed under a rezoning application for land in close proximity to the intersection at Dale Drive. The Town approved the rezoning application and the residents of Dale Drive appealed the rezoning approval to the Island Regulatory and Appeals Commission (IRAC). The resident appeal was upheld by IRAC and the "proposed" development has been shelved until the design and zoning issues are resolved.

1. Mason Road Core Vision

In 2020, the Mason Road Core Area will provide a safe and convenient larger scale, highway commercial core for Stratford and outlying communities. Smaller commercial pads will be visible along the highway corridor, screening larger parking lots for big box retail behind it. These smaller commercial developments will have high quality architecture and appropriately landscaped lots. Parking for these small commercial pads will be located between each pad site instead of between the highway and the building. Stratford's regional trail will be linked to the Confederation Trail along the highway corridor providing safe and convenient pedestrian access to the businesses in the Mason Road Core. Larger, big box establishments will be visible from the road and will be easily accessible via the reconfigured Mason Road - Trans-Canada intersection. Around the existing single family residences near Dale Drive, context sensitive open space, visual and acoustic buffers, mixed use and residential development will be located to buffer the residents from the neighbouring commercial activities. A park at the south end of Dale Drive will provide local residents with recreational amenities. The park will be directly linked to Stratford's open space network.

The Stratford Industrial Park entrance will be significantly enhanced. The industrial park will be home to some of the Island's most progressive industries. The Park itself will have expanded considerably from its meek beginnings in the 1990s and will be a model Eco-Industrial Park. Industries with strong environmental ethics and policies will have located in the park specifically because of the parks environmental commitment.

2. Mason Road Intersection Options

There is no denying the importance of a new intersection for Stratford in this location in the very near future. There is, however, some real debate about how to maximize the benefits and mitigate potential negative impacts. At the broadest scale, there are really only 3 options (and many derivatives of these options) for the new intersection. The opportunities and constraints of these options are presented below

DALE DRIVE EXTENSION

The Dale Drive extension option has been explored in detail, and while currently endorsed as the preferred location by Council, the resultant rezoning was rejected by local residents and IRAC (Island Regulatory and Appeals Commission).

The challenges with this alignment include:

1. The route brings the new collector road close (through) to existing residents via Dale Drive.
2. The route is convoluted (serpentine), and forces eastbound traffic from the Stratford Road and Mason Road to double back on itself to get highway access.
3. The Mason Road semi-controlled access (right in and right out only) is not the safest or most convenient option from a transportation planning standpoint.

Opportunities

- Like the other options, this option would remove the existing Georgetown Road / Stratford Road / TCH intersection.

MASON ROAD EXTENSION

The Mason Road extension option was also reviewed in some detail. The challenges with this alignment include:

1. The vertical highway profile and compound curve alignment of the highway east of the proposed intersection could benefit from improvements to the highway for 500-800 m east of the new intersection to make this intersection safe.
2. The varying scale and configuration of the surrounding land parcels remaining on each corner of the new intersection would only provide 1 suitable commercial lot. It is clearly the least suitable solution from a commercial development perspective.
3. The necessary lane expansions on the Mason Road (left turn lane into the Industrial Park, one or two through lanes and a right turn lane onto the Trans-Canada) would adversely effect the front of several businesses with the loss of approximately 7-10m of front yard and blocking of driveways (including the firehall and police station) due to exit lane stacking.
4. The proximity of the industrial park entrance and the new highway intersection may not provide adequate intersection separation. Inadequate separation will affect both safety and operation of the two intersections.

The opportunities with this alignment include:

- The Mason Road extension option is probably the most suitable option for Dale Drive residents. However, in closing the Dale Drive highway access and linking the collector to the existing commercial properties, there would still be a need for a commercial road (public or private) connection between Dale Drive residents and the highway. Unlike the previous option, however, this road would not be the collector road itself.
- This option maximizes the distance between the new intersection and the Jubilee/Kinlock intersection.
- The existing Georgetown Road / Stratford Road / TCH intersection would be removed by connecting Georgetown Road directly to Stratford Road and then connecting then to TCH at the proposed new Mason Road intersection.

So, while this option, at first glance, appears to be the most straight forward, it is probably the least suitable option for the Town and the Province due to the cost of upgrading the highway approach and the fact that it only would create 1 viable commercial lot.

MASON ROAD REALIGNMENT

The most promising option, the Mason Road Realignment, minimizes the constraints of the first two options while maximizing the opportunities. This option would realign the southernmost access of Mason Road to intercept the highway west of its current location along the back yards of the Fire Department and Norjohn Holdings Ltd.

The challenges with this alignment include:

- The alignment might compromise one dwelling on the south side of the highway.

The opportunities with this alignment include:

- The distance between the new intersection and the Jubilee/Kinlock intersection would be 660 m.
- The new intersection would create 4 viable commercial development parcels.
- The collector road would bypass the Dale Drive residents and provide significant separation. Like the Mason Road Extension Option, a smaller local road (or private access) would still be required to connect the collector with the Home Hardware parcel; however, this would not be the collector road itself like the Dale Drive Extension option.
- The existing Georgetown Road / Stratford Road / TCH intersection would be removed by connecting Georgetown Road directly to Stratford Road and then connecting then to TCH at the proposed new Mason Road intersection.

Another potential constraint with this option is that it aligns with Jenkins Avenue (currently a dead end). Short cutting through this neighbourhood would not be a problem unless Jenkins Avenue was extended in the future and connected to another road system. In this case, the layout of Jenkins Avenue would need careful consideration and application of traffic calming mechanisms to minimize neighbourhood short cutting. Since the land to the south of Jenkins Avenue is designated as Agricultural Reserve, it is not believed that short cutting will ever be a problem with this alignment.

The Mason Road Realignment option looks to be promising for Stratford and the Province of PEI, and Council should pursue this option as soon as possible. The remaining chapter describes the design of the Mason Road Core.

3. The Mason Road Core Vision

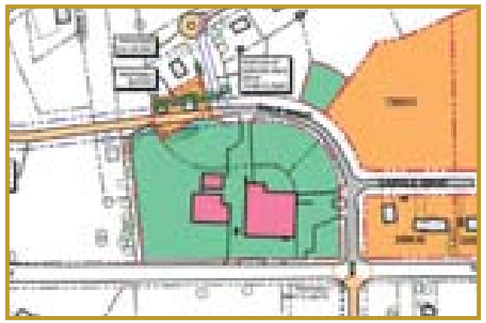
As one of the key gateways into and from Stratford, the Mason Road Core must be designed to maximize its eventual commercial potential, while preserving a character that is consistent with very high quality urban design standards of the other core areas. Typical highway strip development, with its endless acres of parking, monotonous buildings, lack of vegetation and proliferating signage, clearly will not satisfy these goals. However, the Mason Road Core is one of the Stratford core areas that will accept properly designed big box development. Design standards are presented at the end of this chapter to ensure compliance with high quality development in the Mason Road Core.

MASON ROAD INTERSECTION

The Mason Road Realignment is the preferred intersection option for this part of the Core Area. The intersection should be designed to the following design standards:

a. Since volumes on TCH east of this location are expected to approach 19,000 vpd within the next 20 years, the intersection should be designed with two through lanes on TCH Route 1 for each direction of travel.
b. Concrete medians with appropriate landscaping should be provided on TCH to separate opposing traffic flows and to provide refuge for pedestrian crossings.
c. Left turns lanes on TCH for both directions of travel
d. Right turn lanes with right turn channels will probably be required at the four corners
e. Mason Road should have two approach lanes to the intersection; one for through and right turning vehicles, and one for left turning vehicles
f. Mason Road Extension may need a dual left turn lane due to the short through length. As such, three intersection approach lanes may be needed.
g. Actuated traffic signals, with separate left turn phases for all approaches, will be required at this intersection

The TCH width in this area is currently a narrow single lane TCH standard. Considering the volumes that are projected, the entire section of TCH in the Core Area from the Bridge to east of the Mason Road intersection will eventually require two through lanes for each direction of travel, an appropriate median, and turning lanes at all intersections similar to the Kinlock / Jubilee intersection. Highway setbacks for two through lanes, walking trails and a central median is shown on the concept. It is important to understand that the intersection design depicted in this plan is conceptual only. The final design and specific locations will be determined via a detailed engineering design exercise and final property acquisition negotiations.



Early 2006 Mason Road intersection plan

Commerical Block Plan of Mason Road Core

Stopping Sight Distance

The section of TCH from about 600 metres east of the Georgetown Road intersection and throughout Stratford is posted at 70 km/h. Considering the upgrade on the westbound approach to the Georgetown Road intersection, and the pavement marking and signing at the intersection, it is expected that the prevailing westbound approach speed will be about 80 km/h. While the westbound TCH approach from the Georgetown Road intersection towards Mason Road is downhill with an estimated -5% grade, the section of TCH from Mason Road to the Kinlock / Jubilee intersection is essentially flat.

Stopping sight distance (SSD) for a highway intersection is measured using a 1.05 m driver's eye height and a 150 mm object height. The required SSD varies with approach speed and whether the approach is on an upgrade or downgrade. Typical SSDs for a -5% grade and a level approach for several approach speeds are included in Table 1. These distance were calculated using methodologies included in the Geometric Design Guide for Canadian Roads (Transportation Association of Canada, 1999).

While stopping sight distances were not measured in the field, photos taken during site visits indicate that SSD for eastbound traffic should be available from the Georgetown Road intersection towards Mason Road. Assuming a -5% grade on the TCH, the available 190 m from the Georgetown Road intersection to the existing Mason Road intersection is suitable for a 90 km/h approach speed. Since the proposed 'New' Mason Road intersection is on an approximately level section of road and is an additional 115 m east of the existing intersection, there is expected to be over 300 m of available SSD, which is considerably greater than required for intersection approach speeds.

Conceptual Plan of Mason Road Core

TABLE 1: REQUIRED STOPPING SIGHT DISTANCE

Approach Speed (km/h)	Required Stopping Sight Distance for Various Speeds (metres)	
	Minus 5%	Level
60	91	83
70	120	109
80	153	117
90	190	169
100	219	194

Source: Geometric Design Guide for Canadian Roads (Transportation Association of Canada, 1999)

Conclusions

1. The stopping sight distance at the proposed 'Mason Road Realignment' intersection is considerably greater than required for prevailing approach speeds.
2. The geometry of the proposed Mason Road realignment should provide good accessibility for existing Mason Road traffic, including large trucks serving the Stratford Business Park.
3. The relocation of the Georgetown Road access about 300 m west of the existing location, and the reasonably short and direct connector between Stratford Road and TCH at the "new" Mason Road intersection, should provide dramatically improved and safe service for Georgetown Road traffic.
4. The elimination of both the existing Georgetown Road and Mason Road intersections, and restriction of Dale Drive to right-in / right-out movements, will provide almost complete control of access from east of the existing Georgetown Road intersection to the Hillsborough River Bridge.

COMMERCIAL BLOCK 1

Commercial Block 1 is located in the south eastern corner of the proposed new intersection. This block is nominally 8 acres in size, assuming preservation of the existing structures in the eastern end of the site. The site is now predominantly used as pasture land but is not part of the agricultural reserve. This area could easily accommodate a 5000 sq.m. anchor development, 300 parking spaces, and two commercial or mixed use pad sites. Access should be directly from the new Mason Road extension collector road. Service bays should be located on the Stratford Road (south) end of the site for ease of access for delivery trucks. Despite the perpendicular orientation of this development to the highway, the highway 'face' of the development should be designed with a high quality facade. At least 20% of the highway face of this development should be glazing. Since the Back of this development will be highly visible for westbound traffic entering Stratford, the developer should devise a strategy to make the back of the development as appealing as possible. This could include an integrated landscape and architectural design strategy.

A commercial pad location should be preserved for the north west corner of commercial block 1. This building and its associated landscaping will break up the large commercial parking lot from the new Mason Road intersection. No service bay facilities (garbage, loading facilities, etc.) should be allowed on the highway face of this development.

A second, optional, mixed use site is shown in the south corner of Commercial Block 1 where the new collector road meets Stratford Road. A 3 storey maximum building should be allowed on this site provided the building is designed to high quality architectural design. The ground-floor and upper stories could be residential or commercial. The building should compliment the character of existing buildings on Stratford Road.

The access to Block 1 will require left turn lanes on the Mason Road Extension. The need for traffic signals at the Block 1 access will depend on the volume on Mason Road Extension, the volume generated by Block 1, and the volume on the collector road opposite Block 1 access.

Costs for collector roads, in ground services, landscaping, etc, could come from a combination of municipal, provincial, and federal funding programs, as well as capital cost contributions from adjacent land owners for added value to their development lands. Cost of the signals for Block 1 would probably shared by the Province and the Block 1 developer.

COMMERCIAL BLOCK 2

Commercial block 2 is located in the south western corner of the new intersection. The site could be bisected by an access road, creating 2 development sites. The north development site provides room for a medium sized (roughly 4,000 sq.m) commercial development, assuming the existing former Southport Hardware store is repurposed.

A second, smaller, mixed use development site is located on the south side of the Dale Drive extension. This site could contain a medium density development (900 sq.m. footprint), a mixed use development or a commercial development. A 3 storey maximum should be placed on any development on this parcel. A minimum 10-13 m. landscape buffer should be placed between the existing buffer bounding residential properties on Dale Drive.

COMMERCIAL BLOCK 3

Commercial block 3 bounds the Dale Drive area north of the existing residents (east of where Dale Drive meets the TCH). The concept shows Dale Drive forming a T-intersection with a new commercial road linking the new collector to the new Southport Home Hardware development. The Dale Drive link between this new road and the highway is optional. If the Dale Drive - TCH connection is preserved, it should be limited access with a right turn in and right turn out only and suitable acceleration and deceleration lanes designed for the 70 km/h speed limit on TCH Route 1. These road improvements would be cost shared between the Province and the developer. A more likely scenario would see the Dale Drive - Trans Canada Highway connection severed to limit access to the new intersection to the east. This would free up the current road right-of-way for redevelopment

A small park should be preserved for residents at the Dale Drive intersection as shown on the concept. A mixed use development and a multi-unit residential development west of this park would buffer existing residents from additional commercial development in Block 3. The residents should help decide the fate of

COMMERCIAL BLOCK 3

COMMERCIAL BLOCK 4

connecting their residential street (Dale Drive) to the new east west commercial connector road (either cul-de-sac as shown on the concept or connecting road). A big box anchor development could be sited in this parcel as generalized on the concept if adequate buffering is provided. Commercial property along the highway corridor should be preserved for smaller commercial pad developments.

The east west road which runs through Block 3 will most likely be a private road connecting the new collector road to the Southport Home Hardware store. The road should have curb and gutter and street trees on a 60' interval on both sides up to the existing Southport Home Hardware property. Speed bumps or raised cross walks should be required to provide safe access to the commercial developments from the parking lots. If this road is constructed, the Southport Home Hardware entry road should be realigned to match the Sobey's entry. Small commercial pad sites should be encouraged bordering the highway to break up the large parking lots.

A midblock open space area could be introduced to break the continuity of this long commercial corridor. The drawing shows a central open space to service the commercial or residential areas, although this area could be additional parking if it is warranted for the commercial area. Most municipalities now require stormwater ponds to ameliorate runoff from large parking lots associated with big box developments. This area may be suitable for an engineered stormwater pond as well. Instead of the typical engineered, rip rap lined stormwater pond, the pond should be designed for wildlife habitat and/or park use. If the pond is seen as an amenity instead of a liability, there is the potential of introducing several mixed use development sites backing onto this open space corridor. The north and south sides of the highway could be linked with a 'daylighted channel' instead of hiding stormwater runoff in pipes.

COMMERCIAL BLOCK 4

Commercial Block 4 extends from Jubilee Road to the new Mason Road intersection (approximately 13.7 acres as drawn). A new road should link Jubilee and Mason Road to the north of the commercial corridor. This road should be aligned with the new intersection into the Stratford Industrial Park. A setback for highway widening should be observed along the entire north side of the highway in this area, matching the right-of-way width west of Jubilee.

The remaining commercial land between the highway and the new connector road will provide ample room for medium sized commercial development. One of the real limitations with this parcel will be some of the wetlands and watercourses which are found throughout the parcel. Big box development may pose challenges to this area because of space and environmental constraints. Future developers would have to clearly demonstrate how such a development could fit into this area. This area seems to be better suited to medium scale office or retail/commercial development.

Like Block 3, a midblock open space corridor has been preserved to break up the long stretch of commercial development and provide a central green corridor to connect the mason Road Core to the neighbourhoods to the south and north. A linear greenway should run along the entire length of the north side of the highway. The buildings designed on both sides of the open space corridor should be extremely high quality and could be designed to benefit from frontage on the stormwater/park space. A small existing stream in the vicinity of the proposed open space corridor could be relocated through the park to provide stormwater control for the commercial development. The park could double as a stormwater feature for storms of greater than 5 year recurrence interval.

Along Jubilee and Mason Road (where they meet the TCH), the concept shows buildings brought to the street to provide a mixed use corridor along the entry roads. This arrangement would be more favourable than bringing parking lots right to the corner of main intersection entries into the core. The buildings would have to be designed to be double sided fronts.

Trees (from Plant List A) should be planted at a minimum of 20 m intervals along all roads bounding these two sites including the highway. The Town should work with the Department of Transportation and Public Works to initiate the greenway corridor.

Commericel Block 5 concept

Overview of Mason Road Core concept

COMMERCIAL BLOCK 5

Commercial Block 5 is located in the north east corner of the new intersection. This block includes the existing Fire Hall and Police Station and one private business. The block is approximately 1.6 acres in size. Consolidation of these properties could provide a high quality, medium sized commercial property in the future. In the short term, the buildings could be retained and would function as normal. Determination of the best future use of this parcel should be part of the intersection design process.

The existing Mason Road - TCH intersection would be eliminated and the land could be sold to adjacent land owners or developed as a small commercial property. A new entrance into the Stratford Industrial Park would intercept with the new commercial road connecting Jubilee Drive (just west of the existing John Deer property). This new Industrial Park gateway should be landscape designed to a very high standard. New signage should use the civic sign standards recommended in this Vision. The Town will need to work with the property owners to see the new intersection realized. The value created by this intersection would benefit the adjacent property owners (commercial properties are much more valuable on highway intersections). The current conceptual design of this intersection will need to be refined in detail during the design stage to account for a myriad of factors.

4. Challenges to Implementation

Compared to the Waterfront Core, the Mason Road Core has relatively few challenges to implementation. This development should be an early priority for the Town, especially if developers are enthusiastic to implement any of the Block 1-5 developments. Still, there are several challenges to implementation as noted below.

HIGHWAY INTERSECTION

Although final designs have not been prepared for the new Mason Road Realignment intersection and the Mason Road Extension to Stratford Road, it is recognized that portions of several properties will need to be acquired. The Department of Transportation and Public Works needs to complete survey and design, property acquisition and funding for this project. The Town will also need to work with Dale Drive residents to demonstrate that this new concept is a viable option to preserve their neighbourhood character. Residents may have some suggestions on fine tuning the concept.

Current view of Kinlock/Jubilee/TCH interesection

Conceptusal view of Kinlock/Jubilee/TCH interesection

SERVICING

When examining future sanitary infrastructure requirements to support the development envisaged in the Vision, it is important to understand that the development will not occur all at once. Although existing sanitary sewers and water mains have extensive capacity for new development in most parts of Stratford, there will always be challenges to these systems from certain types of development and from the overall growth of the community. This is normal, and healthy, as long as it is understood that there will be a need for commensurate growth in water and sewer services as the community experiences residential, commercial, and industrial growth.

STORMWATER MANAGEMENT

The Town should implement a no-net runoff approach to developing the commercial properties in the Mason Road Core. The details should be spelled out as part of the Town's Stormwater Management Plan. This means that the 5-year post-development runoff curve should match the 5-year pre-development runoff curve. Flood conveyance is not recommended as the sole civil design treatment. Instead, the projects should be designed to store 5 year floods onsite using a wide variety of modern approaches to design.

PEDESTRIAN ACCESSIBILITY

Walkability and pedestrian safety should be an important consideration for the Mason Road Core Area. This includes sidewalks to connect existing neighbourhoods to the Core, a highway greenway corridor on the north side of the highway, and sidewalk connections between public roads and adjacent commercial properties. Consideration should be given to a future transit network in Stratford and any street design should be transit friendly. Transit stops and terminals should be considered in the application stage for any new development in this area and reasonable measures should be taken to ensure future transit compliance.

RESIDENTIAL BUFFERING

Five or six residential properties bordering the Mason Road Core Area in the Dale Drive area will be impacted by the Mason Road Core development. All reasonable steps should be taken to minimize the impacts including creating a landscape buffer between existing properties and providing a community park for residents. The community should decide if they want Dale Drive cul-de-sac'd or extended to connect to the new commercial connector road.

Five or six residential properties bordering the Mason Road Core Area in the Dale Drive area will be impacted by the Mason Road Core Area development. The Town should take all reasonable measures to protect this neighbourhood from conflict created by adjacent commercial development. It is equally important, however, that Council seek to maximize the commercial development potential of the Town and to provide the commercial services which are required by the residents of Stratford. The final land use concept should seek to balance these competing interests in an equitable fashion.

The current Town of Stratford Official Plan calls for "significant physical buffering" between Highway Commercial uses and adjacent residential areas. The residents of Dale Drive have correctly stated that this standard is not met simply by the provision of parkland or open space. Transitional buildings or structures which provide effective visual and acoustic buffering are required.

With this standard in mind the development concept being proposed will see the existing Dale Drive residences buffered from any large box commercial developments or adjacent commercial collector roads by either multi-unit residential developments, mixed use buildings, office buildings, parks, and physical buffers including berms and solid walls or fences which provide both visual screening and sound barriers. It is important to understand that it is not the degree of physical separation which is critical, rather it is the effectiveness of these structures in buffering views, noise and other nuisances. All commercial yards in the Mason Road Core Area which are adjacent to a residential zone shall be kept free of outside storage, loading facilities, trash compactors, etc.

ENVIRONMENTALLY SENSITIVE AREAS

There appear to be several environmentally sensitive areas north of the TCH in the Mason Road Core Area. These areas need to be delineated and environmental plans created to preserve sensitive areas. A perennial stream system may be located in this area which runs into culverts and ditches crossing the highway. The new vision shows the water feature relocated and a naturalized stream cross section created. Permits will be required for work in these areas.

TCH CORRIDOR IMPROVEMENTS

The Department of Transportation's highway standards must be altered to incorporate contextual highway design solutions which fit for Stratford. These should include trail(s) on one or both sides of the highway, highway corridor tree planting, corridor landscaping, corridor lighting standards and median landscaping. The Town should work with the DOTPW to ensure a sensitive contextual design approach for the corridor as described in the previous chapter (the Highway Corridor Enhancement Project).

5. Phasing & Implementation

Unlike the Waterfront Core, there are no clear stages of development required to see the Mason Road Core Area realized except for construction of the Mason Road realignment. Implementation of the vision will depend on the order of development as dictated by developers and working with the Dale Drive community. Still, the Town should adopt the new vision for this area, work with the Province to see the intersection realized and work with land owners to minimize concerns using all reasonable means.

Since much of the land is in private ownership, there is no clear phasing strategy for the Mason Road Core lands except for the areas where the Town can effect change. There are several things the Town can do to effect change in the near-term, these include:.

1. The Town should actively pursue the proposed intersection implementation (Mason Road Realignment) on the TCH. This will take negotiation with both DOTPW and adjacent land owners. The addition of this intersection, coupled with the proposed new land use bylaw changes for new core areas zones, will create immediate commercial and residential demand. Work with one or more developers to fine tune the road layouts to maximize commercial potential of the new development parcels.
2. The Town should continue to work with land owners and Dale Drive residents as part of the intersection alignment process. This should include determining the fate of the TCH / Dale Drive intersection. If controlled access is not feasible, close the highway connection when the new collector road is connected to Dale Drive.
3. The Town should assemble a community led committee to pursue the Highway Corridor Enhancement Program. The group should establish their mandate (with help from Council and staff) and the Town should facilitate discussions with DOTPW. The Town should begin dialogue with other communities in PEI who have gone through a similar process (Charlottetown, etc). The Town should identify potential funding and revenue sources for implementing the program. The committee and Council should consider encouraging the community to help construct various aspects of the project (tree planting, trails, etc.). The Town should also work with the DOTPW to ensure a sensitive contextual design approach for the TCH corridor.
4. The Town should undertake a comprehensive stormwater management strategy. The Mason Road Core Area will play a prominent, direct role in this strategy since the area will contain many acres of parking and impervious surfaces. A pond or series of ponds may be required as part of this concept. Single purpose engineering structures should be avoided in favour of multi-purpose community and wildlife amenities.
5. Work with the DOTPW to determine an equitable cost sharing arrangement for the new intersection.
6. Prepare designs for the new Stratford Industrial Park gateway and determine the optimal alignment of this intersection as part of the TCH Mason road Realignment.
7. Implement the Official Plan and Development Bylaw amendments for the Mason Road Core Area.
8. Implement the Signage Design Standards
9. Ensure that short-cutting through Huphrey Drive is minimized when the Mason Road Collector is extended through to Stratford Road.

Mason Road Core stormwater pond concept

6. Design Guidelines

Adequate architectural, landscape and signage design standards should be implemented for the Mason Road Core Area. These are outlined below.

ARCHITECTURAL DESIGN GUIDELINES (MULTI-UNIT APARTMENT OR CONDOMINIUM)

1. All groundfloor units facing the street should have individual front door entries providing direct access to the street.
2. No parking between the building and the street is permitted.
3. 'Projecting' patios/decks are not permitted on the street face of the apartment. All patios/decks on the street side should be recessed into the building at least 2' if they are used, with no patio extending more than 3' beyond the facade. Any patios/decks facing the street should be screened using the prevalent facade material (brick, shingles, etc.) to at least 36" above the floor elevation.
4. The building should be designed to clearly conform to an architectural 'style' (Victorian, Prairie, Craftsman, Georgian, etc). Exterior details should support the selected style (windows, roof, porticos, trim, shingles, entries, etc.).
5. All windows should have mullions and proportions which are appropriate and reflect the architectural style of the building.
6. Vinyl siding may be approved where the architectural details are appropriate to traditional building design.
7. Low-flush toilets and low-flow shower heads are encouraged in all bathrooms.
8. Fence designs should be appropriate for the architectural style of the building. Chain link fences are not permitted.

ARCHITECTURAL DESIGN GUIDELINES (MIXED USE DEVELOPMENT)

For mixed use developments, the previous 'multi-unit apartment or condominium' design guidelines and 'commercial' design guidelines should both apply.

COMMERCIAL DESIGN GUIDELINES

Roof Lines

Variations in roof lines should be used to add interest to, and reduce the massive scale of, large buildings. Roof features should compliment the character of any site built adjoining a neighborhood.

1. Rooflines should be varied, with a change in height every 15 linear metres in the building length. Parapets, mansard roofs, gable roofs, hip roofs, or dormers shall be used to conceal flat roofs and roof top equipment from public view. All rooftop equipment will be concealed from public right-of-way view adjacent to the property.

Detail Features

Buildings should have architectural features and patterns that provide visual interests at a pedestrian scale, reduce massive aesthetic effects, and recognize the character of the local area. The elements in the following standard should be integral parts of the building fabric and not superficially applied through trim, graphics, or paint.

Mason Road Core open space concept

2. Building facades should include a repeating pattern with no less than three of the elements listed below. At least one of these elements shall repeat horizontally. All elements shall repeat at intervals of no more than twelve (12) metres, either horizontally or vertically.
   - Color change
   - Texture change
   - Material module change
   - Expression of architectural or structural bay through a change in plane no less than 12 inches in width, such as an offset, reveal, or projecting rib.

Commercial Loading & Storage Areas

Loading areas and outdoor storage areas have visual and noise impacts on surrounding neighborhoods. These areas, when visible from adjoining properties and/or public streets, should be screened, recessed or enclosed. Appropriate locations for loading and outdoor storage areas include areas between buildings, and on those sides of buildings that do not have customer entrances.

As a guide:

3. No areas for outdoor storage, trash collection or compaction, loading, or other such uses should be located within 20 feet of any public street, public sidewalk, or internal pedestrian way.
4. Loading docks, truck parking, outdoor storage, utility meters, HVAC equipment, trash dumpsters, trash compaction, and other service functions should be incorporated into the overall design of the building and the landscaping so that the visual and acoustic impacts of these functions are fully contained and out of view from adjacent properties and public streets.
5. Areas not inside a building for the storage and sale of seasonal inventory should be permanently defined and screened with walls and/or fences. Materials, colors, and designs of screening walls and/or fences and covers should conform to those used as predominant materials and colors for the building. If such areas are to be covered, then the covering shall conform to those used as predominant materials and colors on the buildings.
6. Temporary sales/display areas of seasonal materials such as Christmas trees and seasonal landscape plant material, loading areas and outdoor storage areas should not restrict the traffic flow onto or through the site.
7. All exterior shopping cart carrels should be designed to match the character of the main commercial building.

Pedestrian Amenities

Pedestrian accessibility opens auto-oriented developments to adjacent neighborhoods, thereby reducing traffic impacts and enabling the development to project a friendlier, more inviting image. Public sidewalks and internal pedestrian circulation systems can provide user-friendly pedestrian access as well as pedestrian safety, shelter, and convenience within the commercial property.

To accommodate pedestrian flow:

8. Sidewalks at least 1.5m in width should be provided along all sides of the lot that abut a public road right-of-way.
9. All sidewalks should be concrete with appropriately spaced contraction joints (2m max.) and expansion joints (10m max.).
10. In the winter, sidewalks should be maintained with the same frequency and to the same standards as parking lots.
11. Sidewalks on public right-of-ways should be linked to commercial sites via a 1.5 m minimum sidewalk. These connecting sidewalks should be placed to minimize crossing internal roads or parking lots. There should be at least one sidewalk linkage per adjacent street frontage (e.g. flankage yards require 2 connecting sidewalks, properties with 1 road frontage require 1 connecting sidewalk). Linking sidewalks from the TCH should be no less than 6' wide. Where the connecting sidewalk connects to a parking lot, the sidewalk should extend to the travel lane (i.e. it shouldn't end or start at a parking stall).
12. Continuous internal pedestrian walkways, no less than 8 feet in width, shall be provided from the public sidewalk or right-of-way to the principal customer entrance of all principal buildings on the site. At a minimum, walkways shall connect focal points of pedestrian activity such as, but not limited to, transit stops, street crossings, building and store entry points and shall feature adjoining landscaped areas that include trees, shrubs, benches, flower beds, ground covers, or other such materials.
13. Sidewalks, no less than 8 feet in width, shall be provided along the full length of the building along any facade featuring a customer entrance, and along any facade abutting public parking areas. Such sidewalks shall be located at least six (6) feet from the facade of the building to provide planting beds for foundation landscaping, except where features such as arcades or entryways are part of the facade.
14. Weather protection features such as awnings or arcades in front of the main entrances and on each side of all customer entrances of the building, are encouraged to cover 1/3 of the length of the facade of the building. This is not intended to extend into the driving aisles or parking areas.
15. All major pedestrian walkway crossings shall be distinguished from driving surfaces through the use of durable, low maintenance surface materials such as pavers, bricks, scored concrete or stamped asphalt, in order to enhance pedestrian safety and comfort,
16. All commercial buildings greater than 5,000 sq.m should include an outdoor pedestrian plaza no less than 15 sq.m. within 15m of a main entrance with at least 2 benches, 3 caliper sized trees, shrubs, a bike rack, a garbage container and lighting.
17. A bike rack should be provided for all commercial developments with 1 bike space per every 500sq.m. of commercial space.

Signage Guidelines

18. No more than one fascia or signboard sign per business shall be erected unless the business has a storefront facing a second street.
19. Free-standing Pylon Signs are appropriate on Commercial Blocks 1-4.
20. Free standing pylon signs cannot be larger than 8m high and cannot reference more than four (4) businesses.
21. Fascia signs must not occupy more than 10% (by area) of any building facade.
22. Billboards are not permitted

Lighting

The intent and purpose of this section is to avoid forms of light nuisance and intrusion, such as light pollution, light trespass, and glare from adjacent areas, which affects both people and wildlife.

All outdoor light fixtures, other than fixtures on the building facade, emitting 2,050 or more lumens should be shielded as follows:

23. Within 16m of the property boundary, should be full-cutoff, light fixtures.
24. All other outdoor lighting fixtures should be semicutoff or full-cutoff, light fixtures.

Alternative design solutions for those lighting requirements that meet and exceed the intent and purpose of this section may be approved by the Development Officer.

LANDSCAPE GUIDELINES

1. Every 10,000 sq.ft. of commercial building area (or a ratio thereof) requires 5 caliper sized trees (>60 mm caliper) and 20 sq.ft. of landscape beds (shrubs, small trees, perennials, annuals, etc.). The beds should be mulched with at least 3" of bark mulch. Norway Maple and Austrian Pine are not permitted. Native plants are preferred over non-native species.
2. At least 50 sq.ft. of mulched shrub beds should be planted for each R3 development. Shrubs should be spaced no more than 3' apart for large shrubs and 2' for small shrubs or perennials. These beds should be located between the building and the street or as a buffer between existing residential properties. Planted 'islands', unless around the street tree or in the buffer, are not encouraged. Beds should be located adjoining the building wherever possible.
3. All parking lots greater than 24 cars require landscaped islands at the end of each row of parking (between the last stall and the travel lane). The island should be no less than 4' wide spanning the length of the parking stall. 1 tree (no less than 12' high) is required per island. The island should either be raised with a concrete curb, or the island should be designed to channel and store stormwater runoff into it as part of the overall stormwater management plan.
4. All free standing light standards in commercial developments should be fitted for hanging flower baskets. Each light should have no less than 2 sq.ft. of planting area. Baskets should be maintained with good quality plants from May 20 to September 20th each year.
5. Lawns should be sodded with no less than 8" of high quality topsoil using a minimum 90% Kentucky Bluegrass cultivar mix.
6. Ditch sides greater than 3:1 slope should be peg sodded. Vegetated swales are preferred over gravel ditches on all Mason Road Core Area development sites.
7. Naturalized meadows are preferred over maintained turf areas. A suitable native meadow mix should be used in this case.
8. All developments larger than 1000 sq.m. in the core area require a planting plan which must be stamped by a member of the Atlantic Provinces Association of Landscape Architects (APALA).

STRONG NEIGHBORHOOD CONNECTIONS

linkages

community

parks

MAXIMIZE LOCAL HEALTH

greenspaces

BEACHES

ecosystem

diverse

OPPORTUNITIES

TRAIL NETWORK

recreation

RAPIDLY GROWING

health

SOCIAL AND ECONOMIC BENEFITS

play

HEALTHY COMMUNITY

valuable open spaces

COASTAL AREAS

NATURAL

PRESERVATION

BENEFITS

ACCESSIBILITY

CHAPTER 5: SIGNAGE

1. Introduction

As mentioned previously, branding will play an important role for the Stratford and Southport areas. Not only will branding create a positive and visually energetic environment, it will also help visitors and those living in the area to navigate the many special areas of interest available. This will be made possible through the use of pageantry, community kiosks, informational signage, parks signage and civic building signage. Examples are as follows:

STRATFORD / SOUTHPORT LOGO

Shown to the right are the proposed logos for the greater Stratford Township and the Southport Waterfront Core Area. A similar visual treatment has been used for each, which involves the use of Naval Semaphore flags, elegant classical typography and rich colors. The colors specifically have been derived from Stratford's current Town Crest although different values of each have been assigned to the Stratford and Southport logos. Stratford's color palette contains a darker and more authoritative color scheme, including the blue Pantone 2935C, green Pantone 348C, and yellow Pantone 138C. Colors for the Southport logo include the blue Pantone 2935C, green Pantone 362C, and yellow Pantone 1235C.

Each logo has at its upper region a strong "framing" square which houses and pronounces the Naval Semaphore array. The message carried forth via this visual treatment is one that is representative of both the rich and refreshing seaside lifestyle that Stratford has to offer but it is also intended to evoke a connection to past maritime history and the contemporary water uses we see in the area today. Given that the logos' Semaphore treatment is imparted with a sense of wind movement, this also should evoke connotations to healthy living, fitness, and synergy with Stratford's natural beauty. Also shown below each logo is the supporting 'static' Semaphore array, in each case spelling out either S.T.R.A.T.F.O.R.D. or S.O.U.T.H.P.O.R.T. This is intended to be a complimentary branding instrument but also one that can be used to impart, communicatively, some of the same pre-mentioned connotations. With the establishment of a new branding identity firmly established in Stratford, this second branding instrument could be used in places that the other 'full' logo may work as effectively. Having such additional branding tools in use also will serve to reinforce and further the reach of a newly -established Stratford identity, and the refreshing aesthetic it brings.

Proposed branding execution via signage and other means, is explained in the following sections.

EXTERIOR STREET BANNERS: STRATFORD EXAMPLE

To create a strong and cohesive visual identity for the Stratford community, pageantry has the potential to play a major role. The examples shown here are three concepts for exterior street banners. In each case visual treatment from the Stratford Township logo has been utilized. The banners are complimented by the S.T.R.A.T.F.O.R.D semaphore array, which runs up the bottom portion of the street pole. The use of this array in flag form has also been investigated and could be a viable compliment to the regular street banners. With the streets of Stratford lined with banners a very strong sense of continuity, color, and identity will be readily enabled.

DIRECTIONAL INFORMATION SIGNAGE: STREET BLADES

As part of the renewal of the Stratford and Southport areas, it will be important for navigation in the area to be as simple as possible. It is thus recommended that as part of the greater signage and branding program that two types of street-blade signs be introduced. These include regular “street-name” street blades and “informational” street-blades. Street-blades, presenting names, would be placed as they are today, at intersections throughout the Stratford community. With continuing developments in the area it will be required for additional street-blades to be introduced. Functioning in a similar way, albeit with less frequency, specific road and pathway intersections should have also have “informational” street-blade signs. Instead of street and road names, these signs would present names of businesses, civic buildings, parks, restaurants, and other areas of interest. Although they would not allude to specific street addresses in the township as with the “street-name” signs, these “informational” signs would aid in direction to areas of particular interest and popularity, especially to tourists who may not know the area. Support structures have been designed to reflect a ship’s mast, and the sign itself reinforces this notion with a shape resembling a sail. These forms can be seen across many of the sign concepts within the proposed signage program.

COMMUNITY KIOSK:

Shown is an example of a Southport Community Kiosk. This example also serves to illustrate the Stratford equivalent.Two of the Community Kiosk's four sides are shown. The architectural treatment of the proposed Community Kiosk would reflect the surrounding buildings surrounding it but it would also include the S.T.R.A.T.F.O.R.D semaphore array, the proposed Stratford and/or Southport branding effects. As with, and in addition to other proposed branding instances, these items would aid in creating continuity and cohesion throughout their given environments. On an additional note, these kiosks will add to and support a strong sense of community in the Stratford and Southport areas, acting as a readily accessible venue for public opinion, announcements and communication.

DIRECTIONAL INFORMATION SIGNAGE: AREA PROMPTS

Shown are the Stratford and Southport examples one of "Area Prompt" signage. These signs would be placed strategically throughout the Township area in order to provide visible and clear direction to larger areas of interest within the greater Stratford Township. These include Stratford itself as well as the Southport Waterfront Core area, the Town Core area, and Mason Road areas, for example. Although less specific in terms of directional information, these signs would still play a helpful role in aiding navigation throughout Stratford's main areas of activity and interest.

DIRECTIONAL INFORMATION SIGNAGE: PICTOGRAM CONCEPT

This directional sign concept has been designed to be very simple. Signs such as these would be introduced to many areas in the Township, directing visitors to a wide range of services and amenities. The signs' communication has been broken down into visual pictograms instead of text, allowing the information to become more accessible and to a wider audience. Signs such as these would play a vital role not only for those who are not literate in English, but are they are also useful as a subtle way to communicate where important amenities and services are located. A strong wood support is proposed yet the sign itself would likely work successfully in a wide range of materials. Both Stratford and Southport examples are shown.

CIVIC BUILDING SIGNAGE

In order to help pronounce and increase visibility of civie buildings in the greater Stratford and Southport areas, it is recommended that respective new signage be developed. Three exterior concepts in this regard have thus been developed for use. These include small plaque-like civic signs for affixing to the buildings themselves, stand-up signs displaying civic building names, and major civic signs to be placed as a the main presentation of specific buildings. Via the implementation of these sign types, civic buildings in Stratford will carry forth the cohesive identity seen throughout the township and across the many sign types, allowing for an increased acknowledgement of these buildings as active, important, useful parts of Stratford's daily running.

PARK SIGNAGE

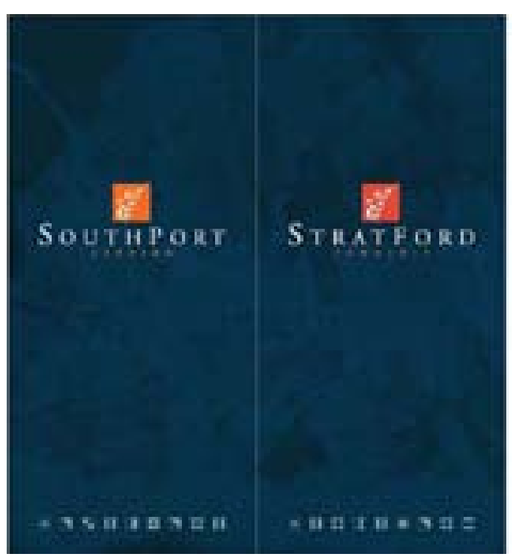
Because of the many parks and connecting pathways throughout the town of Stratford, it is important as part of the proposed branding program, that partk signage is addressed. Currently each park has its own signage system autonomous from the other parks and as a result clear, identifyable connections between them, and a sense of belonging within Stratford's identity, may not clear. Because Stratford's parks operate as conduits for outdoor recreation, positive healthy living, and community activity, it is recommended that new signage be introduced to make an improved semiotic connection to the Stratford community. Four sign concepts have been designed in this regard. These include Major and Minor gateway signs, regulatory signage, and pictogram based directional signage. With such concepts in place navigation and information should be clearly visible to visitors to aid in their experience in the park, and with the Major and

Minor gateway signs particularly, these parks will pronounce themselves in an improved and refreshed way. Wood supports and routered wood signs have been designed in such a way that their aesthetic should operate well against the parks' natural beauty.

2. Signing the Town

The Town should implement the civic signage strategy outlined in this Vision. The concepts in this Vision need to be flushed out further to create schematic designs which can be constructed efficiently. As well, a signing schedule needs to be created to identify locations for signs (to improve wayfinding) before going to tender with a signage manufacturer.

The first phase of the signage program should have a budget of roughly $200,0000. The civic signage strategy would cost about $15,000-$20,000 in consulting fees to prepare.



parks

community

STRONG NEIGHBORHOOD CONNECTIONS

PRESERVATION

greenspaces

ACCESSIBILITY

play

MAXIMIZE LOCAL HEALTH

linkages

diverse

ecosystem

OPPORTUNITIES

health

valuable open spaces

BENEFITS

BEACHES

TRAIL NETWORK

NATURAL

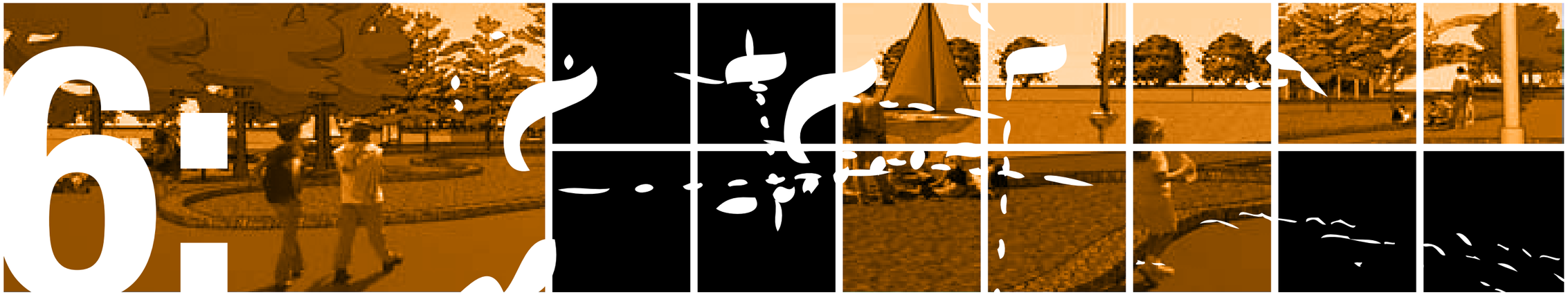
COASTAL AREAS

SOCIAL AND ECONOMIC BENEFITS

RAPIDLY GROWING

recreation

HEALTHY COMMUNITY



CHAPTER 6: CONCLUSION

Figure (6.1) shall be referred to as the Core Area General Land Use Plan and shall form a legal component of this Subsidiary Official Plan. The Core Area Official Zoning Map shall conform to the Core Area General Land Use Plan.

The "Concept Plans" as presented in this Plan for each separate core area are intended to illustrate how each area could be optimally developed and how the design and development standards should be applied. These concept plans are indicative rather than definitive. In all likelihood the final development patterns could vary significantly from these concepts. All land uses must, however, conform with the General Land Use Plan. This Subsidiary Plan shall be implemented via a range of municipal actions, primary among them will be a series of amendments to the Town of Stratford Zoning and Subdivision Control (Development) Bylaw.

This Vision describes both a long term vision and achievable short term plans for the Town of Stratford Core Area. The concepts and proposals are consistent with the objectives described for the Town of Stratford. Taking positive and visible small steps at the beginning is important to gather momentum for the larger vision. Initiatives with a high profile and ease of implementation should be given the highest priority, especially where cost is not prohibitive.

Initial priorities for the Core Area should be placed on gathering momentum for the Waterfront Core, marketing the core areas (particularly the Waterfront Core), partnering with CADC on various waterfront projects including the waterfront trail, resolving short term servicing priorities, working with Provincial authorities on the two proposed interchanges, implementing the civic signage strategy, gathering land for the Civic Core proposal and working with existing property owners to ensure a level of understanding of the Core Area Vision objectives.
Setting priorities for implementation should be based on the following criteria:

1) Potential for greatest initial positive impact
2) Ability to link other open spaces and sites
3) Status of land ownership or construction readiness
4) Opportunity to facilitate partnerships (i.e. private sector.)
5) Coordinating with other ongoing municipal projects
6) Logical design and construction sequence
7) Creation of gateways and nodes

SERVICING

When examining future sanitary infrastructure requirements to support the development envisaged in the Vision, it is important to understand that the development will not occur all at once and although it appears as if it could one day be realized, it is still a conceptual design. The existing sanitary sewers and water mains have extensive capacity for new development in most parts of Stratford for the next ten years, but there will always be challenges to these systems from certain types of development, and from the overall growth of the community. This is normal and healthy, as long as it is understood that there will be a need for commensurate growth in water and sewer services as the community experiences residential, commercial, and industrial growth. The sewer and water infrastructure has to be able to not just keep up, but be a little bit ahead of development.

The sanitary sewer collection system is reasonably complete and, in general, has a significant residual capacity for growth on most of the Town lands for the next five to ten years. This cannot be said for the sewage treatment plant, although the Utility has recognized this and is focusing energy on how to best upgrade the capacity of the treatment plant. There will be a need to do something soon with the lagoons, probably some form of cell creation using membranes to create partitions. In the longer term, around 2017, the City of Charlottetown will be in the process of examining upgrades to its regional sewage treatment facility. That sewage treatment plant discharges to the same receiving water as Stratford's.

If Stratford can make do until 2017, then at that time the Town should plan to be in a position to make an informed decision on whether to commit to a share in the expansion of a Regional facility, or to redo its own sewage treatment plant using state of the art technology. By then, there should be new, potentially valuable technologies available for consideration that do not exist now.

A similar situation applies to the water supply. Water supply is, like most of PEI, from a well field in a protected zone. The existing well field production is nearing capacity and planning needs to begin now to identify, protect, and develop a safe and secure supply. The Utility has initiated some work in this regard, but it is paramount that this work be fully supported, as it is almost impossible to establish good well field protection areas after development has taken place.

There are measures that the Town can put into place that, over time, can greatly reduce the amount of water needed from a central supply. These include policies related to residential and commercial landscape irrigation, groundwater recharge, plumbing fixture codes, and restrictions on the types of industry and their water use requirements that are welcomed to the Town. Incentive programs can work to reduce water, but normally they only work if there is some relationship established between usage and cost. This can easily be done though metering the Core Area. Most people who complain about metering a water supply are those who have been abusing an unmetered system to the detriment of their neighbours. It is a fundamentally fair way to provide water, and one that demonstrates that the Town has reached a level of sophistication and capability in order to be able to do it.

The higher elevation parts of the Town, in particular the far corners to the northeast and southeast, may require some form of booster pump station as demand grows and reduces system pressure through water use. This may change depending on the location of a new well field.

General policies, such as requiring the looping of water transmission pipes whenever possible, funded as part of on lot development requirements for large developments, should continue to be enforced in the Municipal Servicing Standards.

In areas where the gravity sewer collection system becomes close to or over capacity, it may be advantageous to consider techniques such as pumped storage, or off peak use of capacity, if the development capacity in the catchment is also absorbed. This can present a valuable substitute for sewer main replacement or twinning.

Caption to be defined

Pumping station upgrades, including wet well enlargement, pump upgrade or replacement, and more coordinated and sophisticated controls can also create capacity by more efficient use of the capacity that exists. It is advisable, however, to reserve these options for the benefit of the Town, and not for the benefit of a private developer. After all, the capacity being utilized belongs to the town.

In the short term, the Town should:

a. Continue to work to upgrade the sewage treatment plant, while considering a long term approach of a process up-grade, or pumping to a regional facility;
b. Initiate work to identify, acquire, and develop a new well field and protection area;
c. Maintain control over development such that ,in as much as is possible, developers pay the true cost of the support services required for their projects;
d. Think big. This Vision presents big concepts, but given the time span of the Vision, they become very realistic. Servicing should not become a limiting factor to growth unless it is used to do so with intent.