CITY WIDE IMPLICATIONS

CITY OF HAMILTON

CITY MANAGER'S OFFICE
Strategic Initiatives Division

Report to:	Mayor and Members Committee of the Whole	**Submitted by**:	Glen Peace City Manager
Date:	April 25, 2006	**Prepared by:**	Stephen Robichaud ex5579

SUBJECT: Growth Related Integrated Development Strategy - Final Report (City Wide) (CM06015)

RECOMMENDATION:

(a) That the Growth Related Integrated Development Strategy – Final Report, attached as Appendix 1, be endorsed as the City of Hamilton's growth management strategy and incorporated through:

(i) the urban structure and associated policies into the new Official Plan for the City of Hamilton;

(ii) the Stormwater Master Plan, the Transportation Master Plan and the Water and Wastewater Master Plan; and

(iii) the preparation of a new development charges by-law for the City of Hamilton.

(b) That the Province of Ontario be requested to consider and incorporate the City's position on the growth management strategy in completing a growth management plan for the Greater Golden Horseshoe area, and in particular in the development of the Sub-Area Assessment applicable to the City of Hamilton.

Glen Peace
City Manager

EXECUTIVE SUMMARY:

The purpose of this report is to present the GRIDS Final Report, which identifies a recommended growth management strategy and associated urban structure for the City of Hamilton. The recommended growth management strategy will be implemented through:

1. the urban structure and associated policies into the new Official Plan for the City of Hamilton;
2. the Stormwater, Transportation and Water and Wastewater Master Plan; and,
3. the preparation of a new development charges by-law.

GRIDS is focused on the urban areas of the City of Hamilton. A parallel process for the rural areas is also being undertaken as part of the Official Plan review exercise.

In 2003, the City of Hamilton initiated the Growth Related Integrated Development Strategy study, as known as GRIDS. As noted in the study design, "GRIDS is a planning process to identify a broad land use structure, associated infrastructure, economic development strategy and financial implications for the growth options to serve Hamilton for the next 30 years".

The recommended urban structure was developed in three phases:

1. Development and evaluation of growth concepts;
2. Development and evaluation of growth options; and,
3. Refinement of the preferred growth option.

The growth concepts and growth options were evaluated using a Triple Bottom Line (TBL) evaluation to assess how each growth concept/option will lead toward or away from the desired social, economic and environmental results identified in *Vision 2020* and the *Nine Directions*.

Three comprehensive infrastructure Master Plans are also being undertaken as part of the GRIDS process (transportation, water/wastewater and stormwater). These teams have provided critical input to the GRIDS identification and evaluation of growth options so that the infrastructure requirements, costs and impacts associated with growth can be fully understood and considered in the GRIDS process. At key stages of GRIDS the public was encouraged to participate in the process. A series of workshops and open houses occurred at the end of Step 1 and Step 2. Findings from these consultation sessions were incorporated into GRIDS.

The recommended urban structure and associated growth option was developed in accordance with the Provincial growth forecasts, in accordance with the requirements of the *Places to Grow* plan. There are 2 components of growth: population and employment.

The City of Hamilton is projected to grow by about 72,000 households in the 2006-31 time period. Population growth will be accommodated through existing, but not developed areas of the City (29,900 units), residential intensification (26,500 units), lower Stoney Creek (SCUBE) (3,000 units) and a new community node located in area known as Elfrida (15,000 units). In this regard, by 2031 ninety percent of the total number of dwellings in the City of Hamilton will in fact be within the urban area as it presently exists. This is being achieved by directing seventy-five percent of the projected household growth to the existing defined urban area.

Employment growth is comprised of office employment, population-related employment and employment-lands employment. Office employment is directed to the downtowns of the former communities to reinforce these areas. Population related employment is accommodated with existing and planned neighbourhoods. The balance of the employment growth will be accommodated within the existing industrial business parks and the Special Policy Area to the west of Glancaster Road. This is consistent with the *Nine Directions* to guide development where office and population related employment is to be directed to areas in close proximity to residential areas but as noted in Consultation Report on the Building A Strong Foundation process, "*Many residents who participated in the Building A Strong Foundation process were very concerned about the impacts that industrial uses have on neighbourhoods and felt that such uses should be contained in industrial areas or business parks*".

Identification of the preferred growth strategy is required in order that the infrastructure master plans and development charges by-law can be finalized. Public consultation has been an important part of the GRIDS process and additional public consultation and input will be sought through:

- Open houses for the infrastructure master plans;
- Public meetings on a new development charges by-law;
- Open houses and public meetings for the new Official Plan and comprehensive zoning by-law ;
- Public consultation for the development of secondary plans and neighbourhood plans associated with residential intensification areas and new neighbourhoods.

In addition, the Province will be requested to consult with the public in the development of the Sub-Area Assessments as part of the Places to Grow initiative. This is because all municipal planning decisions must comply with the Places to Grow Plan and Sub-Area Assessments.

BACKGROUND:

In 2003, the City of Hamilton initiated the Growth Related Integrated Development Strategy study, as known as GRIDS. As noted in the study design, "GRIDS is a planning process to identify a broad land use structure, associated infrastructure, economic development strategy and financial implications for the growth options to serve Hamilton for the next 30 years".

GRIDS is focused on the urban areas of the City of Hamilton. A parallel process for the rural areas is also being undertaken as part of the Official Plan review exercise.

The City of Hamilton, like all municipalities in Ontario, must operate within the administrative, legislative and financial framework established by senior levels of government. Subsequent to the adoption of the GRIDS study design, the Province of Ontario has adopted a more proactive role in growth management and planning issues. The key initiatives are the following:

- Places to Grow;
- Greenbelt Plan;
- Provincial Policy Statement Update; and,
- Planning Act Reform.

The results of these initiatives will affect future growth in Hamilton and how the City plans to accommodate growth.

Under the current Provincial Policy Statement issued under the Planning Act, land-use patterns must provide for industrial, commercial, residential, recreational, open space and institutional uses to promote employment opportunities and for the appropriate range and mix of housing to accommodate growth projected for a time horizon of up to twenty years. In larger regions such as within the Greater Toronto Area it may be necessary to look at time horizons longer than 20 years to properly plan for infrastructure. The current provincial policies also require that municipalities have regard for the long-term economic prosperity to be supported by providing a supply of land to meet long term demographic and market requirements of the current and future residents. The current policy regime also requires that municipalities maintain at all times at least a 10-year supply of land designated and available for new residential development and residential intensifications; and at least a 3-year supply of residential units with servicing capacity in draft approved or registered plans.

In addition, the draft Places to Grow plan states that the population, household and employment forecasts contained in the Places to Grow plan will be used for the basis for planning and managing growth in the Greater Golden Horseshoe.

These requirements are reflected in the Final Report. However, growth forecasts are the starting point in developing a growth management strategy. Other factors/goals/objectives such as supporting/revitalizing existing neighbourhoods, brownfield redevelopment, creating mixed use, transit supportive communities and job:housing balance must also be considered. In this regard, the recommended urban structure was developed in three phases:

1. Development and evaluation of growth concepts;
2. Development and evaluation of growth options; and,
3. Refinement of the preferred growth option.

The growth concepts provided the building blocks for determining where growth might occur in the City of Hamilton – in effect the growth concepts defined alternative future urban structures for the City of Hamilton. The concepts represented different residential growth patterns for the City and reflect different urban density scenarios. The concepts were developed based on the Hemson population projections, the draft *Places to Grow Plan* and the *Nine Directions* adopted by Council in September, 2003.

The growth concepts adopted by Council in August, 2005, and were translated into "on-the-ground" options to identify potential areas for future growth based on projected population, household and employment growth. The growth options were presented to Council in November, 2005 and public consultation on the growth options occurred in November – December, 2005.

The growth concepts and growth options were evaluated using a Triple Bottom Line (TBL) evaluation. TBL is a structured methodology for integrated analysis, evaluating how each growth concept will lead toward or away from the desired social, economic and environmental results identified in *Vision 2020* and the *Nine Directions*. Sections 2.2.1 and 4.3 explain the TBL evaluation in detail.

Three comprehensive infrastructure Master Plans were undertaken as part of the GRIDS process (transportation, water/wastewater and stormwater). These teams have provided critical input to the GRIDS identification and evaluation of growth options so that the infrastructure requirements, costs and impacts associated with growth can be fully understood and considered in the GRIDS process. At key stages of GRIDS the public was encouraged to participate in the process. A series of workshops and open houses occurred at the end of Step 1 and Step 2. Findings from these consultation sessions were incorporated into GRIDS. Public consultation has been an important part of the GRIDS process and additional public consultation and input will be sought through:

- Open houses for the infrastructure master plans;
- Public meetings on a new development charges by-law;
- Open houses and public meetings for the new Official Plan and comprehensive zoning by-law ;
- Public consultation for the development of secondary plans and neighbourhood plans associated with residential intensification areas and new neighbourhoods.

Identification of the preferred growth strategy is required in order that the infrastructure master plans and development charges by-law can be finalized which will enable the development of the applicable portions of the new Official Plan. In addition, the Province will be requested to consult with the public in the development of the Sub-Area Assessments as part of the Places to Grow. This is because all municipal planning decisions must comply with the Places to Grow Plan and Sub-Area Assessments.

ANALYSIS/RATIONALE:

1. There are many portions of the City that are valued for their natural heritage and resource functions. These areas are not highly suitable for new growth and development, such as, but not limited to:

   - Provincially Significant Wetlands;
   - Areas of Natural and Scientific Interest;
   - Significant woodlands;
   - Regionally and/or locally significant wetlands; and
   - Environmentally Significant Areas.

   Based on the areas where growth cannot occur and should be discouraged, all of these geographic areas were put together on one map to provide a better understanding of where new growth could go. This information was presented to the public at the May, 2005 and the November-December, 2005 public consultation events on the Growth Concepts and Growth Options. What the map revealed was that there was more unconstrained area available for growth than is required for the next 25 years. The collection of growth constraints is common to all growth options.

   In addition, natural heritage mapping and policy directions that reflects the system of natural areas were presented to the public as part of the Official Plan consultations for the rural areas in January, 2006 and May, 2006.

2. An urban boundary expansion to accommodate residential land needs is not being required at this point in time or in the short term horizon because the majority of the projected household growth can be accommodated within the existing urban area of the City of Hamilton (i.e. through residential intensification and on existing vacant, but not developed, lands).

   In the short term, employment land needs can be accommodated through the resolution of localized servicing constraints as part of the “shovel-ready” industrial land program, opportunities to accommodate industrial land demands in the Stoney Creek, Ancaster and Glanbrook Industrial business parks are being created. However, to accommodate projected employment growth in the City of Hamilton, additional employment lands will be required.

   In August, 2005, Council established a Special Policy Area (SPA) to the west of Hamilton International Airport. The existing rural/agricultural designation of the lands within the SPA was retained. The purpose of the SPA is to create a study area for future industrial/manufacturing/logistics type uses once a Secondary Plan is completed identifying various infrastructure and environmental requirements (i.e. airport specific operations, transportation network, stormwater management facilities,

environmentally sensitive areas, woodlands, residential enclaves). The SPA was enacted to discourage residential land speculation and to provide greater certainty for the GRIDS process with respect to future employment land areas. Based on the Growth Outlook for the Greater Golden Horseshoe forecasts, total employment on employment lands in the City of Hamilton will increase by approximately 50,000 jobs in the 2001-31 time period. To accommodate the projected employment growth in the City of Hamilton to 2031, there is a need of approximately 1,000 gross hectares (2,600 acres) of additional employment land. This land need can be accommodated within the Airport SPA.

The staging of new growth areas is directly related to the realization of the type of community envisioned in *Vision 2020*. A more vibrant, compact, transit-efficient forms of development, the achievement of the 40 percent intensification objective of the draft *Places to Grow Plan*, and the co-ordination of infrastructure investments are directly linked to the phasing and staging of development.

The *Provincial Policy Statement* directs municipalities to maintain a range and choice of suitable sites for employment uses and to maintain at all times the ability to accommodate residential growth for a minimum through intensification and designated vacant lands. In addition to the above, a wide range of issues will affect the phasing of development over the next twenty five years, such as:

- evolution of job-housing mix;
- neighbourhood demographic changes;
- market demand for housing types;
- development market supply constraints; and,
- availability of infrastructure (water and wastewater, transportation and stormwater services).

Based on the existing land supply (subject to resolution of servicing constraints) an urban boundary expansion is not required in the short term, but would be required in the 2016-2021 time period to allow for sufficient time to complete the secondary planning process. Detailed staging and phasing policies and options will be developed as part of the Official Plan review process.

3. As noted in the GRIDS study design (adopted by Council in November, 2003), the Growth Related Integrated Development Strategy will serve as the point of departure for a number of plans. There are a number of tools available to the City of Hamilton to implement the overall growth and development strategy, including planning (Official Plan, Secondary Plan and Zoning By-law), infrastructure/capital projects, operation procedures, education, guidelines and informal policies and procedures. The overall growth management strategy will be implemented through a wide range of mechanisms including, but not limited to, the following:

- Official Plan;
- Water and Wastewater Master Plan;
- Stormwater Master Plan;
- Transportation Master Plan;
- Development Charges By-law and other financial programs (e.g. Main Street Housing Program);
- Social Development Strategy; and,
- Economic Development Strategy.

It is important to note that not all of these documents will be completed nor are the documents static, but rather are monitored and reviewed on a periodic basis (e.g. 5 year review of the Official Plan). However, in order that the master plans, the official plan review and the financial assessment proceed, it is necessary to adopt the growth strategy.

4. In the Summer, 2004, the Province of Ontario announced their intent to develop a regional plan for the Greater Golden Horseshoe known as *Places to Grow*. The information and knowledge that has been developed though the GRIDS process has been utilized both as inputs into the *Places to Grow* process and to access the implications of *Places to Grow* for the City of Hamilton.

In addition to *Places to Grow* initiative, the Province also initiated major reforms to the *Provincial Policy Statement* that governs municipal planning decisions throughout Ontario. The *Provincial Policy Statement* reforms came into effect on March 1st, 2005.

The third significant Provincial initiative was the *Greenbelt Plan* which came into effect in February, 2005. The *Greenbelt Plan* boundaries and configuration significantly affected the range of urban expansion options.

The recommended urban structure and growth management strategy reflects the requirements of the draft *Places to Grow* plan, the *Greenbelt Plan* and the *Provincial Policy Statement*. Comments received from the Ministry of Municipal Affairs on the growth options were a “checklist” (e.g. detailed information was requested on where intensification will occur by former community, by type and form). The final report reflects the requirements of the *Provincial Policy Statement* and draft *Places to Grow Plan* and reflects the *Greenbelt Plan* boundaries.

5. The recommended growth management strategy and urban structure provides for the designation of corridors and nodes. Corridors are mixed uses areas that serve a main street function that do/will provide locations for the retailing of goods and services, community and recreational uses. The nodes reflect existing areas of live, work and play activities and residential intensification opportunities will be directed/facilitated to occur

within the defined nodes to support public transit and the other objectives of the growth management strategy.

Through the preparation of the Official Plan and Zoning By-law, the detailed locations and amount of land use activities will be developed.

6. Throughout the GRIDS project, Triple Bottom Line (TBL) has been used as the evaluation framework.

TBL seeks to ensure value across all three bottom lines (community well-being, ecological well-being and economic well-being) and does not assume or require that there will be equal balance. The TBL evaluation process does not compare the options to each other, but rather considers the key outcomes to assess if the option is moving towards or away from the desired results.

The Growth Concepts developed in the first phase of GRIDS were assessed using TBL, and as a result of this evaluation the following concepts were identified to be carried forward:

- no urban boundary expansion;
- appropriately distributed development; and;
- downtown focus/nodes and corridors.

The results of the TBL evaluation was adopted by Council in August, 2005.

The growth concepts were translated into growth options (Step 2) and were presented to the public in November-December, 2005. The growth options were assessed using TBL in January, 2006. As a result of this assessment, the nodes and corridors option was identified as the preferred growth option.

7. During the GRIDS process, the public has suggested that the City take the lead in fostering a new kind of 'greenfield' development that encourages a greater mix of uses and social diversity, as well as providing for transit and walkable communities. Urban design considerations are equally, if not more important when considering residential intensification.

As part of the GRIDS project, conceptual Neighbourhood Plans were developed to demonstrate how more compact, mixed use communities could be planned and developed. Five key planning principles and objectives were established for new neighbourhoods. They are as follows:

(i) Focal Point: Each neighbourhood should consist of a central focal point with higher activity concentrated around that point. A focal point will contribute to a neighbourhood identity and create a sense of place. A mix of uses will be integrated at this focal point where residents can shop, eat and meet one another;

(ii) Neighbourhood Park: A park that is also a neighbourhood focus is a key element of the neighbourhood. Neighbourhood Parks are to be located close to High Density and be the centre of active recreation. Walkways and pedestrian/bicycle linkages also provide key elements;

(iii) Pedestrian and Bike Linkages: These linkages should be integrated along greenways, natural land patterns, corridors and buffers through the community to provide access to parks, open space and commercial uses;

(iv) Curvilinear Design: A curvilinear design be implemented to enhance existing landscape features and to allow for better flow of pedestrians and vehicles. In addition, there will be sensitivity and responsiveness to existing physical and cultural features. While there is a curvilinear design, local streets are established in a more traditional grid pattern, as shown on the concept plans; and,

(v) Transit: The configuration of the proposed development and road pattern should allow for better transit opportunities. The integration of transit stops would be integrated within 400 ft. (121 m) of proposed residential and designed to minimize walking distance for the greatest number of residents in each neighbourhood.

Design guidelines are an integral part of the Secondary/Community planning process and the creation of desirable communities. Design guidelines aid in the shaping and proper planning of a neighbourhood and deal with matters such as streetscape, building facades, parking areas.

8. During the public consultation process and TBL evaluation process, the revitalization of the City of Hamilton's existing built-up area through intensification was strongly supported and the benefits of intensification were noted (e.g. revitalizing core urban areas, fulfilling the principles of Vision 2020, supporting transit and mixed use communities). Support for intensification was qualified in that the public identified the need for the City develop a set of guiding principles for intensification, such as:

- the need for new development to maintain existing community character;
- building height, both existing and proposed must be considered;
- the importance of sufficient greenspace/open space and maintaining trees and attractive streetscapes;
- the allowance or even promotion of more varied uses (e.g. granny flats);
- the desire to protect public spaces for long term public use (e.g. redevelopment of school property into private residential use was given as an example of what not to allow);

- the need for more affordable housing and rental units;
- the importance of a strong and traceable planning process, community participation in the planning process and recognition of the importance of addressing the interests of the local community;
- infrastructure upgrades can be addressed when infill/redevelopment occurs. Stormwater management must be planned for as part of the intensification strategy; and,
- promoting pedestrian and transit friendly development to help improve quality of life.

In the development of the Downtown Secondary Plan and the Setting Sail Secondary Plan, the public articulated similar concerns regarding residential intensification. One of the guiding principles in the development of the Secondary Plans for these two areas was the importance of urban design and built form.

For the GRIDS process, there is general support for intensification, which is important given the Provincial direction in the draft Places to Grow plan that municipalities adopt a strategy to accommodate 40% of the planned growth through intensification. However, the public have qualified their support in that redevelopment must be sensitive to the neighbourhood context. The issues and comments submitted will be utilized in the development of the City of Hamilton's residential intensification strategy.

9. As previously noted, three master plans are being developed were undertaken as part of the GRIDS process (transportation, water/wastewater and stormwater). The master planning process allows the City to take a holistic look at its existing infrastructure in order to identify opportunities to optimize current capacities and to develop the most efficient means of securing future infrastructure requirements. The identification of the preferred growth option is required to complete the master plans in terms of identifying the preferred servicing scenarios to rectify existing deficiencies, provide security/redundancy in the system and developing a schedule for infrastructure investments.

9. As previously noted, employment growth is comprised of office employment, population-related employment and employment-lands employment. The majority of the projected employment growth in Hamilton will be in the employment-land category.

The protection of employment lands is important because of potential conflicts between residential uses and industrial type operations. In addition, additional employment lands are required to accommodate the projected employment growth in Hamilton. This is consistent with the *Nine Directions* to guide development where office and population related employment is to be directed to areas in close proximity to residential areas but as noted in Consultation Report on the Building A Strong Foundation process, "*Many residents who participated in the Building A Strong*

Foundation process were very concerned about the impacts that industrial uses have on neighbourhoods and felt that such uses should be contained in industrial areas or business parks".

ALTERNATIVES FOR CONSIDERATION:

A recommended urban structure and growth strategy has been identified by staff based on public consultation, technical agency circulation and triple bottom line evaluations.

As an alternative to the options presented, Council could choose to revise the option to add or delete lands from the recommended urban structure and growth strategy. This could result in a challenge at the implementation stage of GRIDS (i.e. upon finalization of the master plans and/or the Official Plan) and necessitate a reconsideration of all of the growth options which could result in additional cost to the City of Hamilton, uncertainty in the planning process and delay in securing approvals for infrastructure projects.

Alternatively, Council could choose to refer the matter back to staff. This would result in delay in proceeding with the official plan review process, completion of the infrastructure master plans, a delay in securing approvals for infrastructure projects and could jeopardize Federal and Provincial infrastructure funding for the stormwater, water and wastewater system improvements (e.g. treatment plan upgrades, CSO control program). In addition, there is an opportunity cost in not proceeding in that the completion of the master plans are required to assist in the development of the 2007 capital budget cycle and would delay resolution of localized servicing issues (e.g. development freeze in core area of Waterdown).

In addition, with the enactment of the Places to Grow plan by the Province of Ontario, and the subsequent Sub-Area Assessment process, the recommended urban structure and growth strategy is required to ensure that the City's requirements and needs are clearly articulated to the Province, especially in terms of the prioritization of Provincial investments.

FINANCIAL/STAFFING/LEGAL IMPLICATIONS:

There are no legal or staffing implications associated with this report as GRIDS related work has already been incorporated into departmental workplans.

As noted in the Background Section of this report, identification of the preferred growth strategy is required in order that the infrastructure master plans and development charges by-law can be finalized. CN Watson and Associates have been retained to complete the development charges background study/fiscal assessment study on the growth management strategy to quantify the costs of growth and identify the fiscal and economic impacts on the City (both capital and ongoing operating costs). An updated development charges by-law will be prepared to ensure long and short-term capital growth cost recovery quantums

and that the development charge policies adhere to GRIDS and the City's strategic vision. Once Council has decided upon a specific growth option, a new DC background study and by-law will need to be undertaken.

RELEVANT CONSULTATION:

Throughout the GRIDS process, there is ongoing consultation with all affected Departments, including Corporate Services, Public Works, Planning and Development, Community Services and Economic Development.

This report was circulated for review and comment to the following Departments for their review and comment: Finance and Corporate Services, Planning and Development Department (Economic Development Division and Long Range Planning Division), Community Services Department (Program Policy and Planning Division) and Public Works Department (Capital Planning and Implementation Division and Water and Waste Water Division).

Comments received were incorporated into this report.

Public consultation has been an important part of the GRIDS process and additional public consultation and input will be sought through:

- Open houses for the infrastructure master plans;
- Public meetings on a new development charges by-law;
- Open houses and public meetings for the new Official Plan and comprehensive zoning by-law ;
- Public consultation for the development of secondary plans and neighbourhood plans associated with residential intensification areas and new neighbourhoods.

CITY STRATEGIC COMMITMENT:

By evaluating the **"Triple Bottom Line"**, (community, environment, economic implications) we can make choices that create value across all three bottom lines, moving us closer to our vision for a sustainable community, and Provincial interests.

Evaluate the implications of your recommendations by indicating and completing the sections below. Consider both short-term and long-term implications.

Community Well-Being is enhanced. ☑ **Yes** ☐ **No**

The recommendation enhances community well being because the public have been involved in the definition and development of local solutions and the growth options through the public participation process for GRIDS. In addition, consideration has been given to ensuring that: opportunities for physical activity are supported and enhanced, partnerships are promoted, public services and programs are delivered in an equitable manner, coordinated, efficient, effective and easy accessible to all citizens, that shelter, care and satisfying employment opportunities are accessible to all Hamiltonians and that arts, culture, archaeological and cultural heritage are enhanced in the development of the growth options.

Environmental Well-Being is enhanced. ☑ **Yes** ☐ **No**

The GRIDS growth concepts and options were evaluated using triple bottom line. With respect to this report, the recommended urban structure and growth management strategy has been developed to achieve the objectives and principles of creating a sustainable transportation network that provides many options for people and goods movement and that vehicle-dependency is reduced. In addition, human health and safety are protected, consumption of all natural resources are reduced based on the urban form of development and arrangement of land uses, ecological functions and the natural heritage system are protected, the consumption of energy is reduced and that the air quality and water quality and quantity are protected.

Economic Well-Being is enhanced. ☑ **Yes** ☐ **No**

The GRIDS growth concepts and options were evaluated using triple bottom line. With respect to this report, the recommended urban structure and growth management strategy options reflect the concepts of balancing the ratio of residential growth and employment growth, supporting investment in Hamilton, attracting and retaining a skilled, innovative and diverse workforce, maintaining and enhancing Hamilton's high-quality environmental amenities, diversifying the City's economic base, creating compact mixed-use communities that minimize land consumption and servicing costs.

Does the option you are recommending create value across all three bottom lines?
☑ **Yes** ☐ **No**

Triple Bottom Line has been adopted as the evaluation framework for GRIDS. In the evaluation of the GRIDS growth concepts and options, TBL was applied. The recommended urban structure and growth management strategy was identified as a result of the TBL process as the option that creates value across all three bottom lines, in particular .

- The recommended structure will support the delivery of community services in a socially equitable manner;
- The recommended structure will enhance employment opportunities in Hamilton, and ensure they are accessible to all Hamiltonians;
- Human health will be protected and enhanced through the recommended urban structure;
- The recommended structure will help to attract and retain a skilled, innovative and diverse workforce;
- The recommended structure will position Hamilton as a regionally competitive centre of economic growth;
- The recommended structure will maintain and enhance Hamilton's high-quality environmental amenities;
- The recommended structure will ensure that Hamiltonians share equally in the benefits of a healthy natural environment;
- The recommended structure will deliver on economic development in a resource-efficient manner; and,
- The recommended structure will protect and enhance eco-system health.

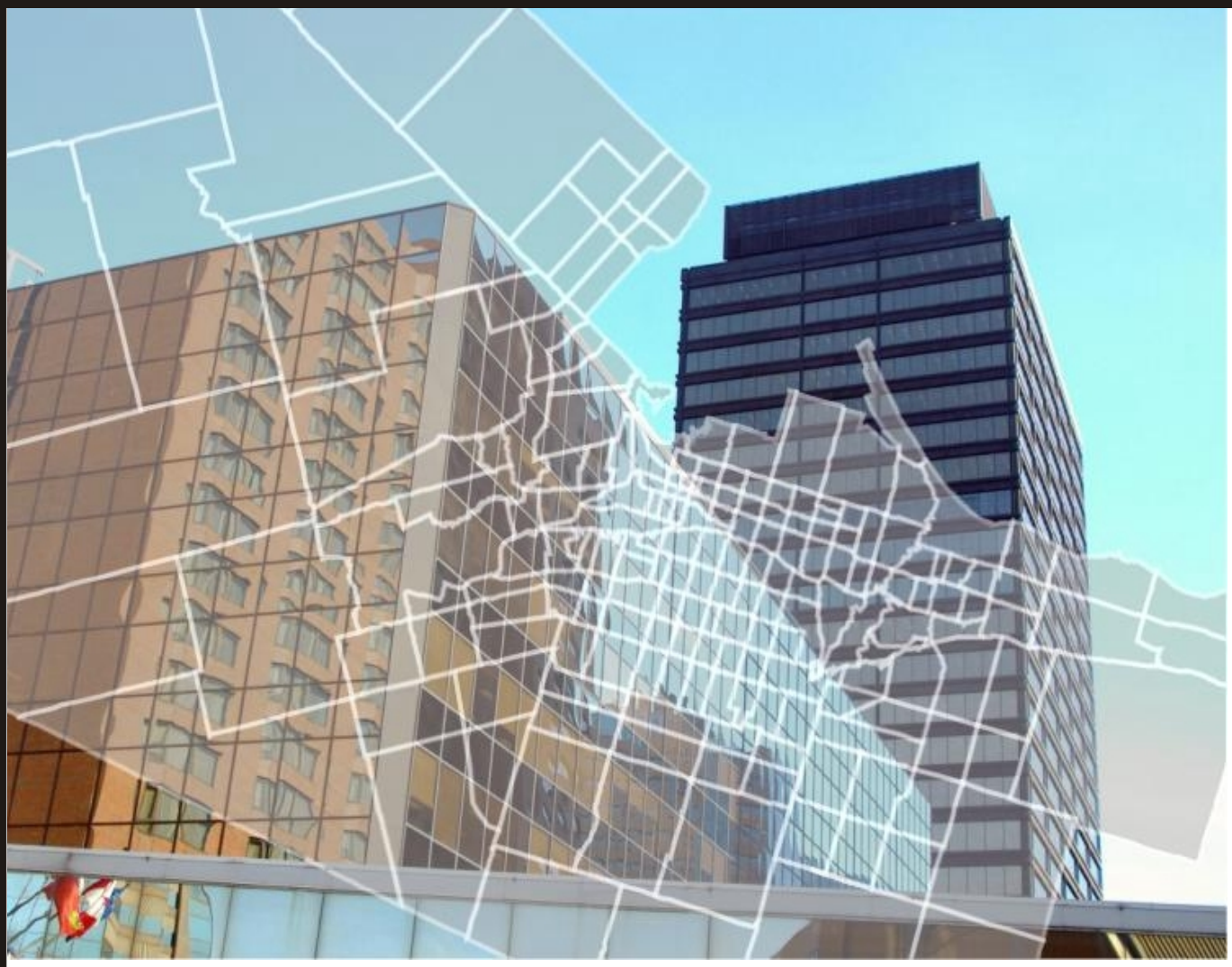
Do the options you are recommending make Hamilton a City of choice for high performance public servants? ☑ **Yes** ☐ **No**

Life-long learning is supported in that the GRIDS process provides for City of Hamilton staff to identify and apply best practises and creative solutions to growth management issues such as the development and application of a TBL decision aiding process in a growth management strategy context.

SR
Attachments

Growth Related Integrated Development Strategy:

Growth Report



May 2006

Hamilton

BUILDING A STRONG FOUNDATION HAMILTON

DILLON CONSULTING

Table of Contents

Page

List of Tables **Page**

List of Figures

List of Appendices

1.0 Background

1.1 Introduction to GRIDS

In 2003, the City of Hamilton initiated the Growth Related Integrated Development Strategy study, known as GRIDS. The GRIDS Study Design explains that "GRIDS is a planning process to identify a broad land use structure, associated infrastructure, economic development strategy and financial implications for the growth options to serve Hamilton for the next 30 years"[1].

GRIDS is an integrated planning process because all of the activities related to development have been brought together to enable a coordinated, time and cost efficient investment strategy for the public and private sectors.

The City of Hamilton is committed to the principles of sustainability and GRIDS is one part of the City's overall approach to implementing *Vision 2020*. In this regard, *Nine Directions to Guide Development* were identified at the beginning of the GRIDS study and these *Directions* have served as the reference point for the development of the growth concepts and growth options for the City of Hamilton.

GRIDS is focused on the urban areas of the City of Hamilton. A parallel process for the rural areas is also being undertaken as part of the development of a new Official Plan for the City[2]. These processes recognize that rural and urban land use planning are not mutually exclusive, but rather both are interrelated. The economic development strategy recognizes the importance of agriculture as well as other urban industries and services in the local economy. Rural areas are also part of the water and wastewater, transportation and stormwater master plans that are being undertaken as part of the GRIDS process.

The GRIDS process is part of the City's Building a Strong Foundation (BASF) initiative. **Figure 1** on the following page outlines how the GRIDS process fits into this and

Nine Directions to Guide Development

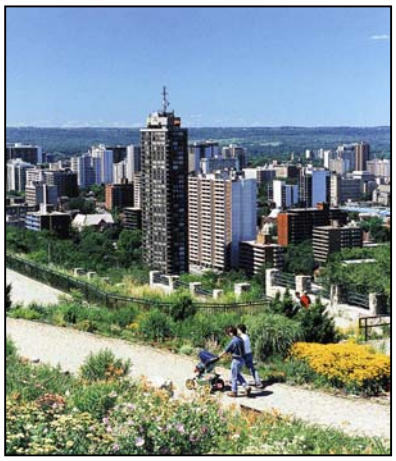
1. Encourage a compatible mix of uses in neighbourhoods that provide opportunities to live, work and play.
2. Concentrate new development within existing built-up areas and within a firm urban boundary.
3. Protect rural areas for a viable rural economy, agricultural resources, environmentally sensitive recreation and enjoyment of the rural landscape.
4. Design neighbourhoods to improve access to community life.
5. Retain and attract jobs in Hamilton's strength areas and in targeted new sectors.
6. Expand transportation options that encourage travel by foot, bike and transit and enhance efficient inter-regional transportation connections.
7. Maximize the use of existing buildings, infrastructure and vacant or abandoned land.
8. Protect ecological systems and improve air, land and water quality.
9. Maintain and create attractive public and private spaces and respect the unique character of existing buildings, neighbourhoods and settlements.

1 GRIDS Study Design, 2003.

2 The primary concern of this exercise is to develop a rural area Official Plan policy and involves the identification of prime agricultural and rural areas.

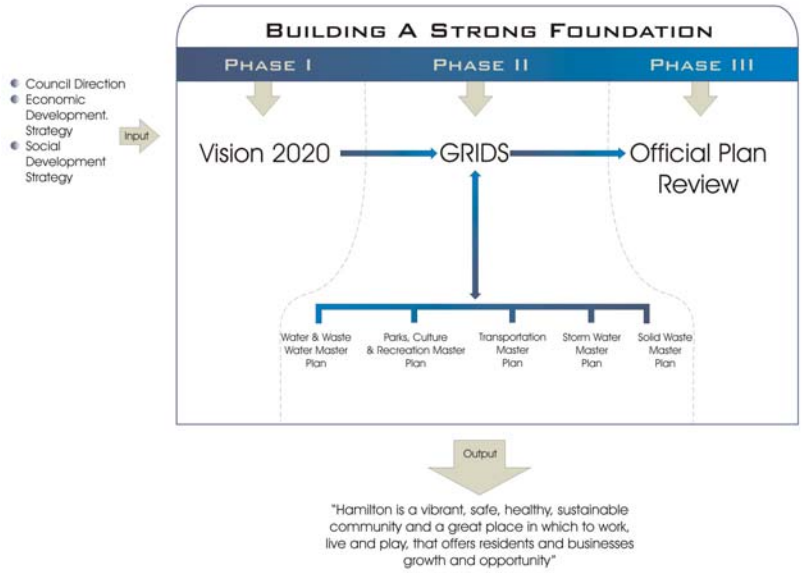
other initiatives, such as *Vision 2020* and the development of a new Official Plan.

The purpose of this report is to provide an account of the GRIDS process and how the City of Hamilton selected its preferred growth strategy[3].



Dennis R. McGreal

Figure 1: GRIDS Process



The following sub-section provides a detailed description of the GRIDS process.

1.2 GRIDS Process, Public Consultation & Triple Bottom Line Evaluation

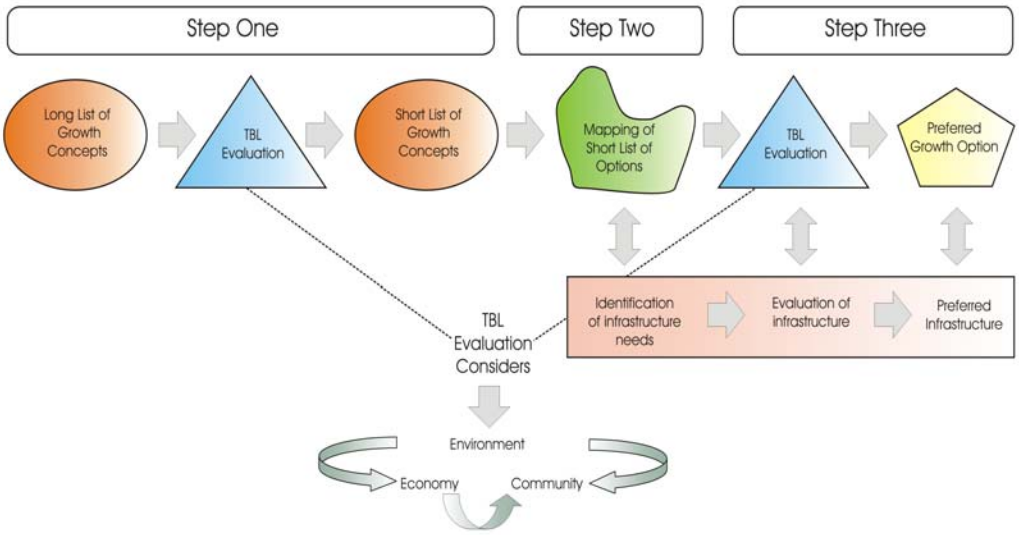
In Section 1.1 the GRIDS process was explained in terms of several other City initiatives such as *Vision 2020* and the development of a new Official Plan. It is also important to understand the details of the GRIDS process itself, as this report is organized around the steps in this process. The process will answer and assess the questions of how, where and when the projected growth will be planned.

There are three steps in the GRIDS process.

1) Development and evaluation of growth concepts;
2) Development and evaluation of growth options; and,
3) Refinement of the preferred growth option.

3 The GRIDS project team was comprised of staff from the City Manager's Office, Public Works, Planning, Economic Development, Finance and Public Health and Social Services departments.

Figure 2 depicts the steps within the GRIDS process.



The growth concepts and growth options were evaluated using a Triple Bottom Line (TBL) evaluation. TBL is a structured methodology for integrated analysis, evaluating how each growth concept will lead toward or away from the desired social, economic and environmental results identified in *Vision 2020* and the *Nine Directions*. Sections 2.2.1 and 4.3 explain the TBL evaluation in detail.

Three comprehensive infrastructure Master Plans are being undertaken as part of the GRIDS process (transportation, water/wastewater and stormwater). These teams have provided critical input to the GRIDS identification and evaluation of growth options so that the infrastructure requirements, costs and impacts associated with growth can be fully understood and considered in the GRIDS process.

At key stages of GRIDS the public was encouraged to participate in the process. A series of workshops and open houses occurred at the end of Step 1 and Step 2. Findings from these consultation sessions were incorporated into GRIDS. Sections 2.2 and 4.1 discuss the detailed findings of these consultation sessions.

The following sub-sections provide additional background information on the provincial planning context, growth forecasts, local demographic trends and residential and employment growth.

1.3 Provincial Context

The City of Hamilton, like all municipalities in Ontario, must operate within the administrative, legislative and financial framework established by senior levels of government. Subsequent to the adoption of the GRIDS study design, the Province has adopted a more proactive role in growth management and planning issues. The key provincial initiatives are the following:

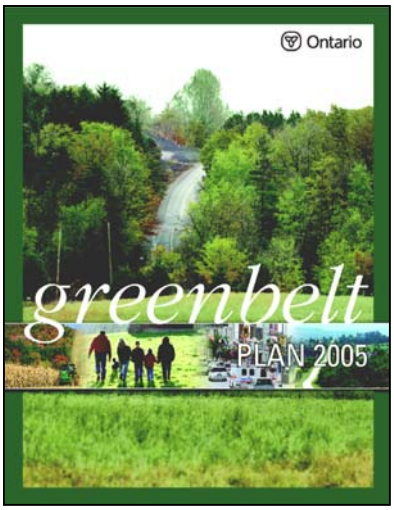
- *2005 Provincial Policy Statement;*
- *Places to Grow Plan;*
- *Greenbelt Plan;*
- *Planning Act Reform.*

The results of these initiatives directly affect future growth in Hamilton and the City's policies to accommodate growth. In addition, the Province also has other initiatives such as Source Water Protection that will have future implications for planning and growth[4]. Although these Provincial initiatives support many of the best practices already in place in Hamilton, they also shape the range of options and decision-making choices for the City's future.

Under the current *Provincial Policy Statement* issued under the *Planning Act*, land-use patterns must provide for industrial, commercial, residential, recreational, open space and institutional uses, promote employment opportunities and the appropriate range and mix of housing to accommodate growth projected for a time horizon of up to twenty years. In larger regions such as the Greater Toronto Area it may be necessary to look at time horizons longer than 20 years to properly plan for infrastructure. Current provincial policies also require that municipalities have regard for long-term economic prosperity by planning for a supply of land to meet long term demographic and market requirements of the current and future residents. The current policy framework also requires that municipalities maintain at all

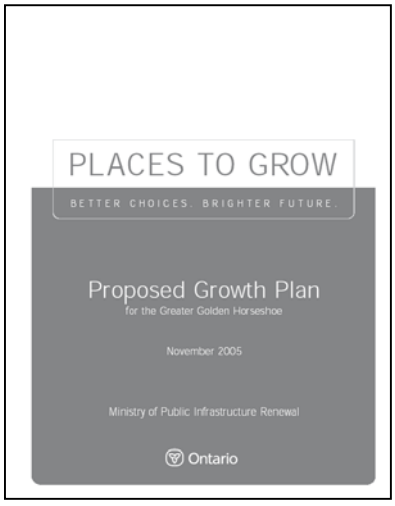
4 The Source Water Protection legislation could have implications for any future expansion to City's current urban boundary.

times at least a 10-year supply of land designated and available for new residential development and residential intensification; and at least a 3-year supply of residential units with servicing capacity in draft approved or registered plans of subdivision.



In February of 2005 the Province released its *Greenbelt Plan*. The *Greenbelt Plan* identifies area around the Greater Golden Horseshoe where urbanization should not occur. The *Greenbelt Plan* includes the areas of the *Oak Ridges Moraine Conservation Plan*, *Niagara Escarpment Plan* and the *Parkway Belt West Secondary Plan.* Areas within the *Greenbelt Plan* are considered to not be suitable for future development. The Greenbelt Plan is considered to be the foundation upon which the Province's growth strategy, *Places to Grow*, is built.

In addition, the draft *Places to Grow Plan* states that the population, household and employment forecasts contained in the *Places to Grow Plan* will be used as the basis for planning and managing growth in the Greater Golden Horseshoe which includes Hamilton.



The draft *Places to Grow Plan* defines that by the year 2015 and for each year thereafter, a minimum of 40 percent of all residential development occurring annually within each upper and single-tier municipality will be within the built-up area[5] (i.e. through residential intensification). Hamilton also contains a designated urban growth centre, and as such specific minimum gross density targets are defined for numbers of residents and jobs combined.

Municipal planning decisions must be "consistent with" the *Provincial Policy Statement* and must "conform to" the *Places to Grow Plan* that is anticipated to come into effect in Spring, 2006. Therefore, the recommendations of GRIDS must be consistent with the *Provincial Policy Statement* and must also conform to the *Places to Grow Plan*.

5 The built-up area is to be defined by the Province for Hamilton. *Places to Grow* defines intensification as "the development of a property, site or area at a higher density than currently exists" , however, the 40 percent requirement may include some greenfield development.

1.4 Growth Forecasts for Hamilton

In 2005, the Province released growth forecasts for the Greater Golden Horseshoe and one of these forecasts has been incorporated into the draft *Places to Grow Plan*. Population, household and employment forecasts represent the cornerstones for the GRIDS planning process.

The growth forecasts for Hamilton, as contained in the draft *Places to Grow Plan*, are as follows:

Table 1: Places to Grow Forecasts for Hamilton[6]

Year	Population	Households	Employment
2001	510,000	190,000	210,000
2011	540,000	210,000	230,000
2021	590,000	240,000	270,000
2031	660,000	270,000	300,000
Change 2001-31	150,000	80,000	90,000

Growth must not only be considered in terms of the total amount of growth, but also the components of growth. For example, household growth is comprised of new single detached dwelling, semi-detached dwellings, row house dwellings (townhouses) and apartment dwellings. Within each of these sub-groups, there will be a different amount of growth as shown below:

Table 2: Forecasts for Household Type, City of Hamilton (Compact Scenario)[7]

Year	Singles	Semis	Row	Apts.	Total
2001	113,000	6,000	16,000	54,000	189,000
2011	125,000	6,000	20,000	58,000	209,000
2021	136,000	10,000	26,000	67,000	239,000
2031	146,000	13,000	33,000	77,000	269,000
Change 2001-31	33,000	7,000	17,000	23,000	80,000

Forecasts for the Greater Golden Horseshoe contain Current Trend, Compact and More Compact scenarios. The Current Trend forecast assumes growth under earlier policy trends and is not displayed for this reason. **Table 2** depicts the Compact Scenario and **Table 3**

6 Places to Grow: Proposed Growth Plan for Greater Golden Horseshoe, 2006.

7 The Growth Outlook for the Greater Golden Horseshoe, Hemson Consulting, 2005.

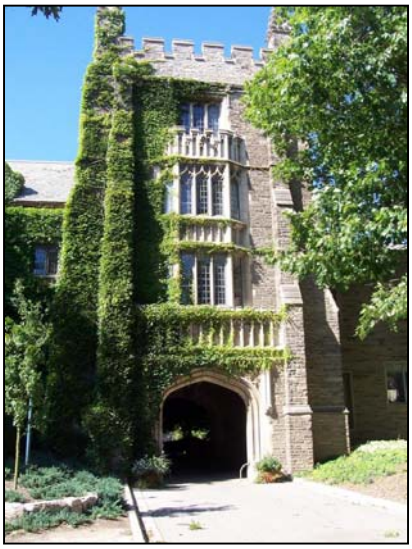
depicts the More Compact Scenario[8]. The figures from the Compact Scenario were incorporated into the draft *Places to Grow Plan*.

Table 3: Forecasts for Household Type, City of Hamilton (More Compact Scenario)[9]

Year	Singles	Semis	Row	Apts.	Total
2001	113,000	6,000	16,000	54,000	189,000
2011	126,000	6,000	20,000	57,000	209,000
2021	138,000	10,000	28,000	69,000	245,000
2031	144,000	16,000	39,000	90,000	289,000
Change 2001-31	31,000	10,000	23,000	36,000	100,000

It is important to note that both of the above scenarios reflect similar trends. Over time, the growth rate for single-family dwellings declines and the growth rate for row and apartment dwellings increases. These trends reflect anticipated demographic changes (e.g. age and household size).

As discussed in Section 1.2, municipalities must plan for not only the total projected household growth, but must also plan for the full range and mix of households in the development of their growth management strategies. This means that the GRIDS growth options must provide for the full range of housing demand for singles, semis, rows and apartments as contained in the Provincial growth forecasts discussed above. The draft *Places to Grow Plan* forecasts are the starting point for GRIDS.



Dennis R. McGreal

The City of Hamilton must also plan for the full range of employment growth for the next 25 years in developing a growth strategy. Employment is comprised of 3 parts: office employment, population-related employment and employment-land employment. A breakdown of employment, by type, is presented below for each scenario:

8 These forecasts are based on a newer policy regime stemming from the strategies outlined in Places to Grow, the 2005 *Provincial Policy Statement*, Planning Act and Greenbelt Plan and assume growth must occur at higher average densities. The More Compact scenario assumes a higher overall portion of growth in Hamilton than the Compact Scenario, with more semis, rows and apartment dwelling units.

9 The Growth Outlook for the Greater Golden Horseshoe, Hemson Consulting, 2005.

Table 4: Projected Employment for Hamilton, Compact Scenario[10]

Year	Office	Population Related	Employment Land	Total
2001	13,000	92,000	100,000	205,000
2011	15,000	102,000	116,000	233,000
2021	20,000	113,000	133,000	266,000
2031	24,000	123,000	149,000	296,000
Change 2001-31	11,000	31,000	49,000	91,000

Table 5: Projected Employment for Hamilton, More Compact Scenario[11]

Year	Office	Population Related	Employment Land	Total
2001	13,000	92,000	100,000	205,000
2011	16,000	103,000	116,000	235,000
2021	21,000	116,000	134,000	271,000
2031	27,000	129,000	152,000	308,000
Change 2001-31	14,000	37,000	52,000	103,000

Office employment as defined in Hemson's report is "employment in free standing office buildings of 20,000 sq.ft. or greater". Population related employment is defined as "employment which provides services to a resident population in retail and institutional establishments…(and) also includes those who work from home". Employment land employment is "the range of employment uses in industrial type buildings, typically concentrated in business parks and other designated employment areas"[12]. Office and Employment land jobs are considered to be more desirable for regional economic growth as these types of jobs are associated with higher wages and a diverse tax base. By contrast, population-related employment is typically associated with lower wage jobs and is dependent on local conditions such as housing growth and the overall economic climate of the area to sustain them.

10 Hemson, 2005.

11 Hemson, 2005.

12 Hemson, 2005.

The provincial forecasts discussed above are the starting point for the City's growth strategy. In addition to the forecasts, there are also several demographic trends that will shape how the City grows over the next 25 years.

1.5 Our Neighbourhoods and Communities are Changing

When planning for long-term growth it is important to recognize that the City of Hamilton is experiencing several demographic trends, which will change the composition of the communities and neighbourhoods from what exists today.

Neighbourhoods change over time, and the number of people living in a neighbourhood changes as both mature. Building on the Provincial growth forecasts, detailed population, household and employment projections were developed to better understand what has been, and what will happen within existing neighbourhoods and communities over the next 25 years. To do this, it was necessary to develop detailed population, household and employment projections based on existing planned development, and changes in household size.

Using the forecasts in the *Growth Outlook for the Greater Golden Horseshoe*, Hemson Consulting provided the City with a series of more detailed population values for Hamilton. The City's Long Range Planning Diversion updated these detailed forecasts for its small areas (i.e. Dundas, Flamborough, Lower Stoney Creek, Upper Stoney Creek, Ancaster, Glanbrook, Lower Hamilton and Upper Hamilton) based on existing and planned development trends to develop a base case scenario for growth. The results of this exercise show the population of Hamilton (both rural and urban areas) increasing by approximately 68,843 people from 500,217 in 2001 to 569,061 in 2031. If traditional growth patterns continue, this growth will not be uniformly distributed across the City of Hamilton but rather will be concentrated primarily in Flamborough (i.e. Waterdown), Glanbrook (i.e. Binbrook), and Upper Hamilton.

Table 6 shows the projected population growth in Hamilton under a current trend built-out with no urban boundary expansion. The table reveals that without

proper growth planning and local policy initiatives to support it, the City will fall short of its growth potential as projected by the draft *Places to Grow Plan* and Hemson Consulting by approximately 91,000 people (see **Table 1**).

Table 6: Current Trend Population Growth (Urban and Rural), 2006-31[13]

Urban Area	2001 Population	2001 Units	2031 Population	2031 Units	Population Growth	Unit Growth
Ancaster	30,155	9,664	39,565	14,224	9,410	4,560
Dundas	24,042	8,965	24,783	10,207	741	1,242
Flamborough	39,122	12,600	54,366	19,280	15,244	6,680
Glanbrook	13,685	4,926	34,515	13,9565	20,830	9,039
Lower Stoney Creek	42,028	14,437	47,354	17,774	5,326	3,337
Upper Stoney Creek	18,319	5,860	30,153	10,492	11,834	4,632
Lower Hamilton	190,184	78,844	191,081	85,742	897	6,898
Upper Hamilton	142,682	52,390	148,442	58,308	4,562	5,918
TOTAL	500,217	187,686	569,061	229,992	68,843	42,306

As mentioned earlier, the challenge of meeting the long-term growth forecasts are compounded by several demographic trends that the City of Hamilton is experiencing. The major trends are as follows:

- Slight rural population decline;
- Declining household size;
- Aging population;
- Steady increase in immigration and migration[14].

Hamilton's rural areas are expected to experience slight population decline by 2031. It was determined that over the next 25 years Hamilton's rural areas need to maintain a population of at least 40,000 people in order to meet the long-range forecasts. The rural areas of Hamilton account for about 8% of the total population, with the rural population being 43,992 in 2006 and projected to

13 City of Hamilton, Long Range Planning, 2005.

14 Canadian Labour and Business Centre, 2005.

decrease to 42,586 by 2031. More detailed information on the rural areas can be found in the *Rural Hamilton Profile* prepared by the Planning and Economic Development Department. A separate strategy for maintaining the vibrancy of the City's agricultural and rural areas is being undertaken as part of the Official Plan review and is not contemplated further in this report. In addition, the City is also developing an Agriculture Action Plan to ensure the long term economic viability of agricultural and farming activities in Hamilton. It is not anticipated that new growth in the rural settlement areas will have a significant impact on the long-term housing demand for the City of Hamilton.

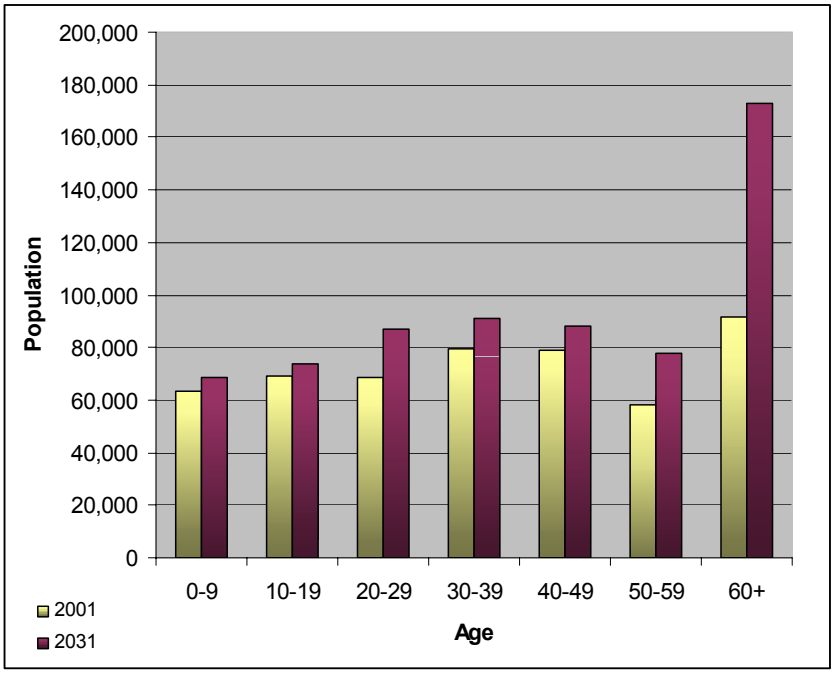
Between 2006 and 2031 the average household size is projected to decrease by approximately 11 percent. When looking at the urban area and how growth will occur within each of sub-areas, the effect of a declining household size highlights the importance of residential intensification.

A declining household size means that more dwelling units are required to accommodate the same overall population. Alternatively, if additional dwelling units are not created within a neighbourhood, then the population within that neighborhood will decrease, which creates pressure to close schools as a result of declining enrollment. Also, with a declining population, the viability of retail, other commercial services and recreation, health and social services within a neighbourhood can result in the loss of local services and create competition between areas for new and improved services.

A declining household size is reflected in the fact that the Census data reports that 18% - 20% of all bedrooms in low density housing in the City are currently unused. The overwhelming majority of unused bedrooms are in single detached dwellings and other forms of family-oriented housing that are not occupied by the large households for which they were designed. By creating opportunities for new housing that is more suited to the changing lifestyle needs of the residents of existing communities, and at the same time freeing up family-oriented housing, it may be possible to reverse the effects of declining household size within existing neighbourhoods.

Between 2001 and 2031 the age structure of Hamilton's population will also change. **Figure 2** displays Hamilton's 2001 population by age cohort (left) compared against the 2031 age cohort. **Figure 2**[15] reveals that the City will have a larger number of residents older than 50 and fewer residents younger 4 which also creates a number of challenges for planning for the future.

Figure 2: Population by Age Cohort, 2001 & 2031



Increasingly migration and immigration have become the key means to sustaining long-term population growth in Canadian cities. In GTAH, future growth over the next 25 years will be driven through this combination of migration and immigration (as opposed to natural increase). Historically, the GTAH's share of immigration has been steadily rising, accounting for approximately 80 percent of the provincial total in 2005 and shows no signs of changing[16].

Hamilton has been receiving approximately 2,500-3,500 immigrants annually since 1994. The majority of immigrants moving to Hamilton have been skilled workers, comprising of approximately 40 percent of all

15 Hemson Consulting, cohort data, 2005

16 Hemson, 2005.

immigrants between 2001 and 2003. The table below displays the top ten places of birth for recent immigrants living in Hamilton (2001).

Table 7: Top Ten Places of Birth for Recent Immigrants Arriving in Canada between 1991- 2001 and Living in Hamilton, 2001[17]

Place of Birth	Number	Percentage
Yugoslavia	2,725	7.7%
Poland	2,310	6.5%
India	2,285	6.4%
People Republic of China	1,910	5.4%
Philippines	1,855	5.2%
Iraq	1,835	5.2%
Bosnia and Herzegovina	1,575	4.4%
Pakistan	1,405	4.0%
United Kingdom	1,395	3.9%
Croatia	1,320	3.7%
Total of Top 10	18,615	52.4%
All Other Countries	16,925	47.6%
Total	35,540	100%

The composition of projected population growth for Hamilton poses a set of interesting challenges and opportunities for the City's neighbourhoods, employment market and delivery of municipal services.

1.6 Accommodating Growth

When considering the implications of the projected growth, the starting point is to ask the following questions:

1) How much growth can be accommodated based on existing plans? (i.e. vacant lands within the existing urban area in various stages of development approvals);
2) What are the infill and redevelopment opportunities and how much growth can be accommodated with these opportunities? (i.e. residential intensification, brownfield redevelopment); and,
3) If all of the projected growth cannot be accommodated within the existing urban area, then what form and where should this growth outside existing urban areas occur?

Dennis R. McGreal

17 From Canadian Labour and Business Centre, 2005.

1.6.1 Vacant Land Supply

Within the existing urban area of the City of Hamilton, new units will continue to be built. This is because there are existing planned but vacant lands within the urban area. These areas will contribute to the overall population growth as development occurs over the next 25 years. A breakdown of the supply is shown below:

Table 8 Projected Housing Supply (Vacant Land Inventory)[18]

	Single	Semi	Row	Apt.	Total
2001-11	2,541	126	1,615	259	4,541
2011-21	9,905	1,114	4,361	644	16,024
2021-31	6,187	1,623	2,700	836	11,346
TOTAL	18,633	2,863	8,676	1,739	31,911

One of the challenges is to ensure that the City's land supply is developed in an efficient and timely manner. Land development is affected by a variety of factors such as fragmented land ownership, neighbourhood resistance to change and local sewer and water constraints that can have an effect on whether or when lands develop. These constraints can result in perceived land shortages and put pressure on the City of Hamilton to expand the urban boundary to respond to short term land needs. Without major changes to City policy and development industry practices, much of this vacant land will have problems developing in a timely and efficient fashion.

1.6.2 Residential Intensification

Generally speaking, intensification is the process by which areas within an existing built-up urban area become redeveloped. The result of intensification is an increase in density in the area.

Over the last decade, intensification has increasingly been promoted by stakeholders and policy makers alike,

18 Vacant land inventory (VLI) provided by Long Range Planning, February 2006. Note that this VLI figure will differ from values previously seen in other public documents, such as the Methodology Report. The values in Table 8 were updated in February 2006 and are therefore more recent than any other figures found in earlier documentation.

as a potential means of reducing urban sprawl and protecting natural heritage and rural areas from urban expansion.

The Province of Ontario, through the *Places to Grow Plan* is requiring municipalities to accommodate a portion of new growth through intensification. Section 2.2.3 of the *Plan* states that by "2015 and for each year thereafter, a minimum of 40 per cent of all residential development occurring annually within each upper and single tier municipality will be within the built-up area"[19].

The City of Hamilton, through the BASF and GRIDS process is also encouraging a policy of intensification, through its *Nine Directions to Guide Development*. Number 7 directs the City to "maximize the use of existing buildings, infrastructure and vacant or abandoned land".

There are a number of potential benefits associated with a carefully designed policy of intensification, which are:

- Optimization of existing infrastructure as roads, sewer and water services are usually already in place (although they may require improvements and upgrades);
- An increase in the choice of housing options within some neighbourhoods;
- Facilitating transportation choices through easier access to work, shopping and entertainment on foot and by transit;
- A more efficient use of land;
- Reduced pressure on farm land and natural areas outside the existing urban boundaries;
- New residents to support revitalization of downtowns, community services and other urban areas which may be in decline.

While the benefits of intensification are well known, there are also a number of challenges to successful implementation. One of the main challenges is to educate the public on the wide variety of forms in which intensification can take place. The term may initially conjure up images of tall apartment buildings and

19 Places to Grow, 2005.

crowded city streets, however, there are many forms of intensification depending on local opportunities and conditions. The following examples demonstrate several different forms of intensification. On the right hand side are actual examples of intensification within the City of Hamilton.

Infill housing - Infill involves new housing units on small parcels of vacant or under-utilized land within the City. These opportunities could be building lots that were never developed, under-utilized parking lots or large side or rear yards that could accommodate additional building space.

Infill: West 2nd St., detached houses

Redevelopment - Intensification through redevelopment involves replacing an existing land use with new residential or mixed use development. There are a number of possibilities including changing older industrial properties (often referred to as brownfield) to residential, redeveloping older shopping centres by adding housing (referred to as greyfields), replacing single family houses and low-rise apartments with mid or high-rise apartments and adding new mixed use buildings along main streets.

Redevelopment: City Places, King William St.

Adaptive reuse - Industrial, commercial or institutional buildings can be rehabilitated for residential use. These conversions can provide unique living space, typically close to the centre of the City. A number of adaptive re-use buildings have recently been completed which have created approximately 1,020 new units in Downtown Hamilton and there is available building stock in many other areas of the City.

Adaptive Re-Use: Core Lofts, former office

Additions to existing buildings - Additional residential units can be added to existing buildings, either through renovations and conversions within the existing structure or by construction of a building addition. These additions are typical small in size and blend into established streetscapes and neighbourhoods. Opportunities exist to improve the upper floors of buildings in downtown areas.

Addition: Dundas St. apartment above

With a declining average household size, all of the existing urbanized portions of the City of Hamilton will experience a net loss of population. Net population growth in the urbanized areas will only occur where there

are vacant, but undeveloped lands, or through residential intensification. Population growth within the former City of Hamilton is primarily dependent on residential intensification.

1.7 Household Growth

In order to calculate projected population and household growth, an update of the City of Hamilton vacant land inventory and a residential intensification opportunities analysis wasundertaken to answer the first 2 questions posed in Section 1.6. Based on this analysis, it was determined that about 75 percent of the projected growth could be accommodated within the existing urban area. However, the full range of housing needs cannot be accommodated, in particular the demand for single detached and semi-detached dwelling units.

Table 9: Projected Household Growth, Hamilton[20]

Unit Type	Vacant Land	Intensi-fication	Total Supply	Demand	Net Supply
Singe & Semi	21,496	1,730	23,226	41,000	-17,774
Row	8,676	7,267	15,943	17,000	-1,057
Apt	1,739	17,805	19,544	22,000	-2,456
Total	31,911	26,802	58,713	80,000	-21,287

A strategy for the additional 21,300 households is required that must address how the City of Hamilton will plan for this growth, where this growth will occur and when.

Overall, the analysis indicates that based on the existing planned development and infill/redevelopment opportunities, the City of Hamilton cannot accommodate the full range of housing types in accordance with the 25-year growth forecasts in the draft *Places to Grow Plan* and the requirements of the *Provincial Policy Statement*.

1.8 Employment Growth

Household growth is only one aspect of growth planning, as the City must also plan for long term employment. The

20 Long Range Planning, City of Hamilton.

following sub-section outlines some of key issues related to employment growth in the City.

Where we live, work and play are all important elements of a complete community. During the *VISION 2020* renewal process, the importance of a strong, diverse and sustainable economy was recognized. In addition, the importance of balancing population/household growth with employment growth was reinforced, not only for well-being and standard of living reasons (e.g. income, improvement of tax base), but also for quality of life considerations (e.g. commuting times and distances). Improving the housing-jobs balance in Hamilton over the next 25 years will be a critical issue, as the City seeks to reverse a quarter century trend of job stagnation stemming from a combination of restructuring in the manufacturing sector and growth pressures for increased residential expansion.

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In Section 1.4 of this report, the Provincial employment forecasts for Hamilton were presented, and the 3 categories of employment growth were highlighted: office employment; population-related employment; and, employment land employment.

In accordance with the *Nine Directions to Guide Development, e*mployment growth, and where this growth occurs, should be directed to support existing communities and new communities.

Dennis R. McGreal

In addition, employment growth can also be a factor in achieving other elements of a growth strategy. For example, the experience in other municipalities is that successful intensification programs are linked to strong employment growth and the draft *Places to Grow Plan* polices also link population and employment growth. Therefore to build a complete community it is essential to link employment and residential growth.

One way to link residential and employment growth is through the promotion of downtown development. The City of Hamilton and the Province recognize the importance of promoting and fostering vibrant downtowns. Employment growth plays a key role in this. The Official Plan directs new office employment to the Downtown, and the Secondary Plan and Zoning By-Law

presently allow for new office development in the downtown.

Commercial services are chiefly population related and driven by local needs in new and existing neighbourhoods. Retail uses are market dependent which normally means that a minimum population within a given area is required before a retail business is established. Equally important, a minimum population is also required to maintain and support existing retail areas. Forecasted decline in household populations means that retail services in existing neighbourhoods will become vulnerable unless residential intensification occurs in some form. As new neighbourhoods are planned and developed, the growth in retail operations and the needs of the planned population will be addressed.

The City is currently undertaking a *Commercial Strategy Study*. Preliminary results of this study highlight the important role that intensification can play in supporting existing retail areas and promoting new ones. Additional population located within trade areas through intensification can support new and existing commercial retail areas. Also, increased population concentrated on greyfield sites can help reinvigorate struggling commercial strip areas, fostering a more sustainable economic climate and stable community structure[21].

In addition to planning for job growth in office and population-related employment, the City will also have to plan for employment land job growth. This process will be important considering that the majority of Hamilton's forecasted job growth will be the types of jobs normally found in industrial parks. The Provincial growth forecasts recognize the importance of industrial type development and that within the GTAH, manufacturing, followed by trade, are the 2 largest employment categories. In fact, the GTAH is "one of the most heavily industrialized metropolitan economies in North America."[22]

In August, 2005, Council established a Special Policy Area (SPA) to the west of Hamilton International Airport.

21 Draft Hamilton Commercial Strategy Study, Sorenson Gravely Lowes, 2006.

22 Hemson Consulting, pg 10.

Dennis R. McGreal

The existing rural/agricultural designation of the lands within the SPA was retained. The purpose of the SPA is to create a study area for future industrial/manufacturing/logistics type uses once a Secondary Plan is completed identifying various infrastructure and environmental requirements (i.e. airport specific operations, transportation network, storm water management facilities, environmentally sensitive areas, woodlands, residential enclaves). The SPA was enacted to discourage residential land speculation and to provide greater certainty for the GRIDS process with respect to future employment land areas.

The adoption of a SPA was based on Council's previous direction in June, 2004 that for the purpose of the GRIDS process it is essential to accommodate the projected employment growth and that the following employment land components be included in the growth options:

"iii) *that the minimum employment land needs be established at 285 ha;*

iv) *that to facilitate the development of the Hamilton International Airport as a economic growth node within the City of Hamilton and Golden Horseshoe area, that an additional 400ha – 800ha employment lands be incorporated into the development and evaluation of the growth scenarios"*[23].

The rationale for inclusion of additional employment lands to accommodate projected employment growth was based on the results of the 2002-03 review of the City's industrial business parks (*Providing Employment Lands in Hamilton – Financial Options*, Hemson Consulting Ltd.). The study concluded that the projected demand for land to 2021 will exceed the current designated supply by about 285 ha (700 acres).

In addition, Council directed that based on the results of the "*Hamilton Airport Gateway Opportunities Study*" (HAGOS), to stimulate economic development in and around the airport/airport IBP (Industrial Business Park)

23 Staff Report, June 4, 2005 (Report CMO04017 "Growth Related Integrated Development Strategy – Project Status Update").

and to support long-term airport operations, between 830 – 1,295 ha (2,050 – 3,200 acres) of land are required to be evaluated for employment related uses (this would include the 285 ha of airport related land identified in the Hemson IBP report).

The third important factor was the opening of the Highway 6 in the fall of 2004. There was a need to determine future land use along this corridor in order to provide enhanced access to the airport, and to build upon the locational advantages provided by this road connection[24].

With the release of higher employment forecasts for Hamilton in 2005 in the Growth Outlook for the Greater Golden Horseshoe, it was recognized that there was a need to update the 2002-03 review undertaken Hemson Consulting study (discussed above). In 2005-06, a comprehensive employment study was undertaken to quantify the amount of employment land required for the City of Hamilton for the 2006-2031 planning horizon. The study looked at the existing vacant land supply, brownfields and locational requirements for industry. **Table 10** below summarizes Hamilton's long term

Table 10: Estimate of Total Employment Land Need City of Hamilton 2006 to 2031[25]

	Land Area Ranges[26]	
Range of Net Land Need to Accommodate Employment Land Employment (acres)	1,380	1,920
Additional Net Land Need to Accommodate Other Uses (acres)	165	
Range of Net Total Land Need (acres)	1,550	2,080
Net to Gross Factor	80%	
Total Gross Additional Land Need (acres)	1,930	2,610
Total Gross Additional Land Need (ha)	780	1,050

24 Note that the Airport SPA was determined prior to the release of Greenbelt Plan. Portions of the provincial Greenbelt overlap the SPA and therefore some boundary adjustments to the SPA will likely be required.

25 City of Hamilton, Long Range Planning, 2005 (from Hemson Consulting, Draft Comprehensive Employment Study, City of Hamilton, Phase 1 Working Document).

26 Range based on 13 to 15 employees per acre.

employment land needs.

Based on the Growth Outlook for the Greater Golden Horseshoe forecasts, total employment on employment lands in the City of Hamilton will increase by approximately 52,000 jobs in the 2001-31 time period. As indicated above, to accommodate the projected employment growth in the City of Hamilton to 2031, there is a need of approximately 1,050 gross hectares (2,600 acres) of additional employment land. This land need can be accommodated within the Airport SPA.

2.0 Growth Concepts

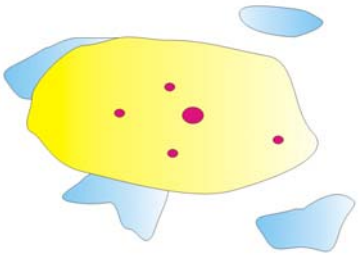
2.1 Development of Growth Concepts

As the first step in creating geographically based growth scenarios, a series of development/density concepts and associated land requirements were identified. These concepts provided the building blocks for determining where growth might occur in the City of Hamilton – in effect the growth concepts defined alternative future urban structures for the City of Hamilton. These concepts were developed based on the Hemson population projections, the draft *Places to Grow Plan* and the *Nine Directions* adopted by Council in September, 2003.

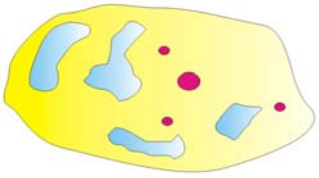
The concepts represented different residential growth patterns for the City and reflect different urban density scenarios. Two of the concepts were based on the principle of maintaining the existing urban boundary and the remaining concepts required some form of an urban boundary expansion[27]. The concepts were:

1. Status quo;
2. No expansion;
3. Distributed Development;
4. Downtown Focus;
5. Nodal/corridor focus; and,
6. Build to the Limit and Stop.

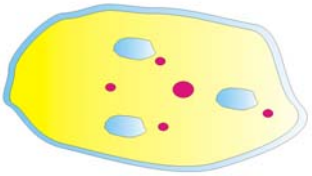
A detailed description of each concept is contained in **Appendix A**.



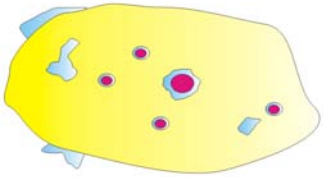
Status Quo



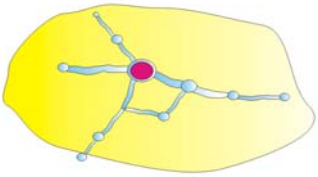
No Expansion



Distributed Development



Downtown Focus



Nodes and Corridors

Built to Limit and Stop

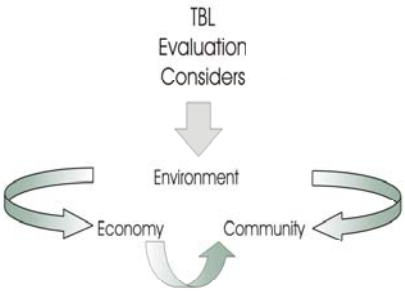
2.2 Public Consultation & Evaluation of Growth Concepts

Public consultation on the growth concepts took place in Spring 2005 and consisted of a public open house, stakeholder workshop, technical circulation to agencies and a TBL evaluation of the growth concepts with City staff. In addition to the formal events, the GRIDS team also received a number of letters, emails, faxes and phone calls from members of the public. For details on the TBL and public consultation please refer to **Appendix B**.

27 The idea of no expansion of the urban boundary only pertained to residential development. All concepts assumed an urban boundary expansion for employment lands surrounding the airport.

2.2.1 TBL Background

Triple Bottom Line (TBL) is a strategic planning tool that links current decisions to long term desired results, legislative requirements, and detailed strategic goals. TBL is a decision-assisting mechanism that reveals how decisions might have a range of positive and negative social, economic and environmental implications that will ultimately lead toward or away from the desired results and legislative requirements. TBL seeks to ensure value across the three bottom lines and does not assume that there will be equal balance.



"Desired Results" are the long term, strategic outcomes and legislative objectives that Hamilton identified in the Building a Strong Foundation process (articulated in *Vision 2020* and the *Nine Directions to Guide Development*) and in Provincial legislation (*2005 Provincial Policy Statement, Greenbelt Plan and* draft *Places to Grow Plan*). **Table 11** lists the series of desired results that were used in the TBL evaluation.

Table 11: GRIDS Desired Results

1. This growth Option will support the delivery of public services in an equitable manner.
2. This growth option will enhance employment opportunities in Hamilton and ensure they are accessible to all Hamiltonians.
3. Human health will be protected through this Growth Option.
4. This Growth Option will help to attract and retain a skilled, innovative and diverse workforce.
5. This Growth Option will position Hamilton as a leading centre of economic growth.
6. This Growth Option will maintain and enhance Hamilton's high quality environmental amenities.
7. This Growth Option will ensure that Hamiltonians share equally in the benefits of a healthy natural environment.
8. This Growth Option will enhance economic development in an eco-efficient manner.
9. This Growth Option will protect ecosystem health.

The TBL evaluation does not compare options to each other, but rather considers the key outcomes to see if the option is moving towards or away from the desired results. The process reveals a range of social, economic and environmental pros and cons. This allows decision-

makers to see which option creates value across all three bottom lines while acknowledging possible negative impacts that may need to be mitigated or at least understood.

2.2.2 Results

A team of 30 evaluators were drawn from many different City departments and divisions so that a multi-disciplinary perspective would be integrated into the evaluation of the growth concepts. Evaluators were asked to rank each of the six concepts based on how well each meets the desired results. The following is a brief summary of findings from the TBL evaluation and consultation program.

Of the 6 growth concepts, Concept 1 (Status Quo) was not supported as an appropriate concept to proceed with for GRIDS. The status quo was not seen as an acceptable growth concept because of concerns that this option would lead to high costs (when measured relative to all three of the triple bottom lines) and is unlikely to rectify existing social, environmental and economic problems of the community.

Both Concepts 2 (No Expansion) and 6 (Build to the Limit and Stop) were viewed positively in concept but questioned in practice. These concepts were seen as being consistent with the *Nine Directions* but may cause a sharp increase in land values, adversely affecting affordability and would not likely be supported by the development community because they would not accommodate the projected housing growth for Hamilton. However, it was recognized that Concept 2 had the potential to offer a base case for future analysis.

There were arguments for and against Concept 3 (Appropriately Distributed Development) moving forward. The concerns with this concept were that it would be difficult to determine what would qualify as “appropriately distributed development”, but that if the development can be distributed in a fashion that supported the nodes and corridors concept, then this concept has merit for further consideration in the GRIDS process.

Concepts 4 (Downtown Focus) and 5 (Nodes and Corridors) were generally supported. It was suggested

these two concepts should be combined because a hybrid of these concepts would support initiatives intended to reinforce the role of the downtowns into centres where people can live, work, play and worship and that a nodes and corridors urban structure would help to build vibrant mixed use communities.

The results of the TBL growth concept evaluation were presented to the public through a series of public open houses and a stakeholder workshop. The public was asked for feedback on the findings of the TBL and also for ideas on mapping the options to assist in translating the growth concepts into mapped growth options. The following highlights some key ideas from the consultation program:

- Nodes and corridors should be located around specific features such as major recreational hubs, transportation hubs and arterials, existing built up areas, areas of decline (as an opportunity for revitalization), newer growth areas, existing dense areas and employment areas. Employment areas should be located along major transportation routes;
- Nodes and Corridors/Downtowns should include not only primary nodes such as downtown Hamilton, and secondary nodes such as Stoney Creek, Dundas and Ancaster, but also sub nodes based on employment, institutional and recreational opportunities;
- Appropriately distributed development could be allocated to each community (rural settlements too). This was perceived to reduce stress on transportation systems;
- Areas that should be avoided for future development included:
    - Niagara Escarpment (specifically Dundas and Red Hill Valley);
    - Prime agricultural land.
- Connections among nodes should be a key attribute of option selection (transportation and socio-economic).

2.3 Description of Recommended Growth Concepts

Dennis R. McGreal

The TBL evaluation and public consultation program recommended that the following growth concepts be considered for the short list evaluation:

- No Urban Boundary Expansion;
- Appropriately Distributed Development; and,
- "Downtown Focus"/"Nodes and Corridors".

Hamilton City Council adopted these recommendations in August, 2005 and the concepts were carried forward into the next step in the GRIDS process. The next section describes the development of the short list growth options.

3.0 Mapping the Concepts: Creating the Short List of Growth Options

Based on the TBL evaluation and input from the public consultation program, the GRIDS working team translated the three growth concepts into five different growth options. The growth options are as follows:

- Option 1: No Expansion;
- Option 2-4: Appropriately Distributed Development (with 3 variants);
- Option 5: Nodes and Corridors.

Although each of the growth options is intended to represent the three recommended distinct growth concepts, the options were developed giving consideration to five common components. These common components are growth considerations, employment, intensification, greenfield development (where applicable) and the build out of the vacant urban residential lands. The following sub-sections describe these common components.

3.1 Growth Considerations

There are many portions of the City that are valued for their natural heritage and resource functions. These areas are not highly suitable for new growth and development. The Province provides guidance for the identification of areas to be protected from urban uses/growth through the *Provincial Policy Statement* (PPS). With the PPS guidelines in mind, the following areas were determined to be least suitable for future development:

- The Greenbelt Plan (which incorporates the Niagara Escarpment Plan and Parkway Belt West Plan[28]);
- Provincially Significant Wetlands;
- Areas of Natural and Scientific Interest;

28 The pre-existing status of planning policies set forth by the Parkway Belt West Plan have been maintained in the Greenbelt Plan and therefore the provisions of the Parkway Belt West Plan prevail over the provisions of the Greenbelt Plan. The Parkway Belt West Plan permits some development in the Pleasantview Area.

- Prime agricultural lands, as defined by the City of Hamilton's Land Evaluation and Area Review (LEAR) Study;
- Significant woodlands (significance defined by the City);
- Regionally and/or locally significant wetlands (significance defined by the City);
- Aggregate resource areas;
- Environmentally Significant Areas; and
- Airport noise contours (28 NEF in Year 1996)

For the growth options, woodlots, wetlands and similar features fall within the "urban uses cannot occur" category while prime agricultural lands are in the "urban uses should not" occur category. Prime agricultural lands are considered to be very important, but Provincial Policy allows urban uses in these areas if they are outside of the Greenbelt Plan area and there are no reasonable alternatives which avoid prime agricultural areas and no alternatives on lower priority agricultural lands. It should be noted that the Greenbelt Plan specifically restricts expansion of urban areas into areas designated "Specialty Crop".

The City of Hamilton recently completed a Land Evaluation Area Review (LEAR). LEAR is a state-of-the-art methodology for identifying viable prime agricultural areas and rural areas. In the evaluation, soil capability is combined with other area review factors, including surrounding agricultural land use, presence of conflicting land use, and land fragmentation. The results showed that Hamilton has two distinct and contrasting types of agricultural land bases. The larger land base is characterized by soil and climatic conditions suitable for common field crop production. The second land base is significantly smaller, representing approximately 1500 hectares near the Niagara Escarpment in Stoney Creek that have unique climatic conditions which support the production of specialty crops (vinifera grapes, pears, plums etc.)[29]. Based on these two agricultural land bases, the City's LEAR study delineated prime agricultural lands. The Province also undertook a LEAR study as part of it's land assessment for the *Greenbelt Plan* which also delineated a specialty crop area for

29 City of Hamilton, Long Range Planning, Land Evaluation Area Review, 2005.

Hamilton. The Province's specialty crop area was incorporated into the *Greenbelt Plan*.

GRIDS considered agricultural land priorities within the context of overall growth management objectives. The *Provincial Policy Statement* states that when considering growth options, new development should occur adjacent to the existing built up area and shall have a compact form and mix of uses and densities that allows for the efficient use of land and infrastructure. In this regard, an expansion into prime agricultural lands may occur if there are no other reasonable alternatives on lower priority agricultural lands. It is important to note that all of specialty crop lands (tender fruit and grape) are located within the Greenbelt Plan area and were not considered to be suitable for future development.

Based on the areas where growth cannot occur and should be discouraged, all of these geographic areas were put together on one map to provide a better understanding of where new growth could go. What the map revealed was that there was more unconstrained area available for growth than is required for the next 25 years. The collection of growth constraints is common to all growth options. **Figure 3** depicts the growth considerations described above.

It is also worth noting that **Figure 3** received endorsement from both the public and stakeholder groups during the spring 2005 consultation program when it was presented alongside the six growth concepts.

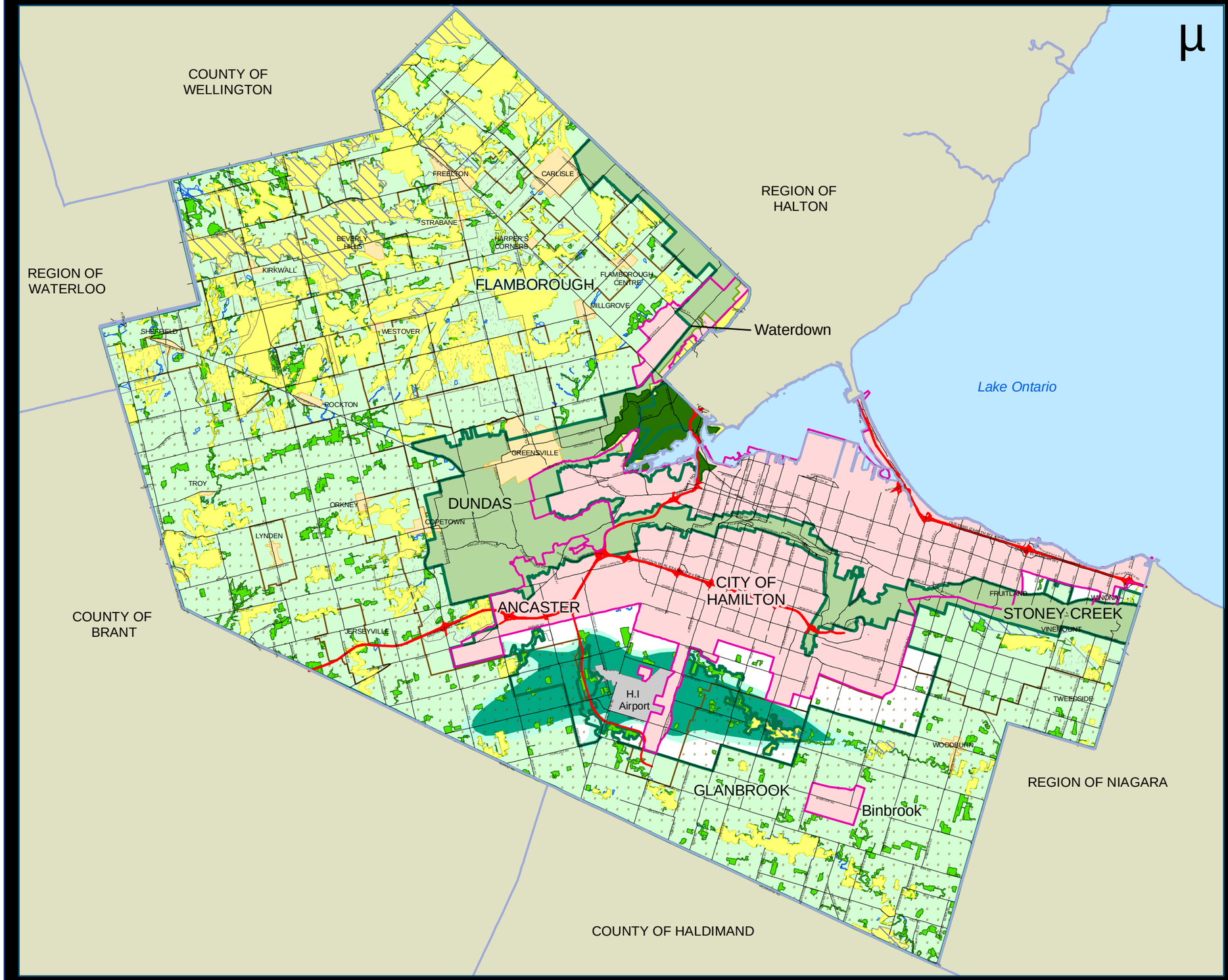


Figure 3:Growth Considerations

Map Features

- Municipal Boundary
- Urban Area
- Settlement Area
- Greenbelt Plan Area[1]
- Parkway Belt West Secondary Plan Area[2]
- Niagara Escarpment Commission Regulated Area[3]
- ANSI[4]
- Aggregate Resource Area[5]
- Prime Agricultural Land[6]
- Significant Wetland[7]
- Significant Woodland[8]
- ESA[9]
- Hamilton Airport NEF/NEP Noise Contours[10]
  - 28 NEF/NEP, 1996
  - 25 NEF/NEP, 1996

Scale

0 1.25 2.5 5 7.5 Kilometers

Map Notes

[1]Greenbelt layer derived from mapping found on Ministry of Municipal Affairs and Housing website.
[2]Parkway Belt West layer provided by City of Hamilton.
[3]Niagara Escarpment Commission layer provided by City of Hamilton.
[4]ANSI layer provided by City of Hamilton. Derived from MNR.
[5]Aggregate Resource Area provided by City of Hamilton (Regional Offical Plan).
[6] The Prime Ag layer was derived from the LEAR study.
[7]THIS LAYER IS DRAFT. Significant Wetlands are a combination of Provincially Significant Wetlands (MNR) and locally significant wetlands. Please refer to City of Hamilton for more detail.
[8] THIS LAYER IS DRAFT. Significant Woodlands layer provided by City of Hamilton. Please refer to City for more details.
[9]ESAs provided by City of Hamilton.
[10] NEF/NEP noise contours derived from City of Hamilton's Airport Master Plan.

March 2006

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3.2 Employment

For the most part, the approach to employment is the same for all of the mapped growth options. Employment consists of three types of job categories, which are, major office, employment lands and population-related employment. Employment land refers to employment in employment lands/industrial parks. Major office refers to employment in major offices, such as those located in Hamilton's downtown. Population-related employment describes the diverse jobs which primarily serve and normally occur in proximity to Hamilton's residential population. These include most retail, health, education and government jobs together with home-based businesses of all types.

The number of jobs for employment lands and major office is the same for all growth options. All options include new employment lands for the new Airport Special Policy Area (Airport/Highway 6 Employment Area) as well as for 16 existing designated business industrial parks and major office areas. The total number of jobs varies from option to option because the population-related employment is different for each option. Also, Option 1 uses Compact scenario figures for employment land and major office jobs due to land restrictions and Options 2-5 use the More Compact scenario for employment land and major office jobs. **Table 12** below shows the total number of jobs (new and existing) by 2031.

Hamilton's ERASE Program

The City of Hamilton's Environmental Remediation and Site Enhancement (ERASE) Community Improvement Plan is a set of programs designed to encourage and promote brownfield redevelopment in the older industrial area of the City. The Plan is designed to "erase" brownfields by providing financial incentives to clean them up and replace them with productive economic land uses, thereby improving both economic opportunities and environmental conditions in the City. Properties within the 3,400 acre ERASE Community Improvement Project Area are eligible for ERASE programs. The inventory of brownfield sites represents an opportunity for additional employment uses in the downtown and some limited opportunity of residential intensification.

Table 12 : Employment and Major Office Projection to 2031[30]

	Compact	More Compact
Total number of jobs in employment lands:	149,000	152,000
Total number of major office related jobs:	24,000	27,000

3.3 Build Out of Vacant Residential Lands

On lands within the existing urban area boundary, new growth will be accommodated through intensification and building out of vacant lands already designated for new

30 GRIDS, Identification of Short List of Growth Options: Methodology Report, Dillon Consulting Limited, November 2005.

growth. The lands already designated for growth are located in the area between the existing built up area and the current urban boundary.

As mentioned in Section 1.6, City staff undertook an analysis of vacant residential lands which could support growth. The lands included all registered, draft approved, and pending development applications, as well as lands which are designated for development but which are not currently subject to a development application. Each parcel's development potential and constraints were evaluated to determine a timeframe for its likely development based on current capital programs, development/owner performance and relationships. Build-out timing and densities were applied to the forecasted demand in a five-year time increments. The approach described above applies to all five growth options. **Table 13** displays the projected build out of vacant residential lands by unit type.

Table 13: Projected Build Out for Vacant Residential Lands [31]

Unit Type	Projected Build Out by 2031 Supply
Single & Semi	21,500
Row	8,700
Apt	1,700
Total	**31,900**

The build-out of vacant residential lands and existing planned development is the same for all options. It is noted that 190 net hectares of new growth was allocated to Stoney Creek Urban Boundary Expansion area (SCUBE) to recognize a Council approved urban boundary expansion[32]. The allocation of growth to the SCUBE area is also consistent for all options but is not accounted for in the 31,900 units of planned development because it is technically an urban expansion area.

Stoney Creek Urban Boundary Expansion (SCUBE) Lands

As part of the five year review of the former Region of Hamilton-Wentworth Official Plan (1999) City staff considered the issue of urban expansion. The former City of Stoney Creek undertook an analysis of urban land needs and concluded there was a need for the designation of additional urban lands and recommended an urban boundary expansion in southern Stoney Creek (SCUBE lands). It is important to note that these lands are considered to be an anomaly, as is it rare to find rural lands that are fully serviced with water and sanitary infrastructure. The municipal services are not being used to their full capacity, as the area is either vacant or occupied with a mix of hobby or commercial agricultural operations. In June 2003 Hamilton City Council approved the expansion of urban boundary in two areas, one east of Winona and the other west of Winona. The urban boundary expansion was appealed at the Ontario Municipal Board. At the time of publication, the OMB was in the process of finalizing its decision.

3.4 Intensification

All five options contain an increase in the level of intensification for Hamilton's built-up area, with varying

31 City of Hamilton, Long Range Planning

32 The SCUBE lands are outside of the existing urban boundary as the expansion is currently under appeal at the Ontario Municipal Board.

degrees for each. The differences in intensification levels is meant to capture the essence of each growth concept. For an example, the Nodes and Corridors Option has a high level of intensification located around key areas whereas the Distributed Development Option has a much lower level of intensification (as these option rely more heavily on urban boundary expansion to satisfy the residual growth). Although the levels of intensification vary, all options assume a fixed amount of intensification in and around Hamilton's downtown (approximately 10,000 units). The fixed level of intensification for Downtown Hamilton recognizes the importance of the City's key initiatives for this area, such as Setting Sail, (Downtown Secondary Plan and ERASE (which is actually a city-wide plan).

Dennis R. McGreal

In order to determine the appropriate level of intensification for each option, City staff initiated a Residential Intensification Opportunities Study. The study identified areas across the City that had the potential to accommodate residential intensification activity. Existing arterial and mainstreet corridors, community cores, existing commercial, greyfield and brownfield areas, and areas that had been recently subject to secondary planning were identified. Other sites were also identified based on staff knowledge and a reconnaissance survey of the City. All areas identified were then analyzed to estimate the number of intensification units that could reasonably be constructed in each area over the long term with a proactive intensification policy. This work culminated with the development of an intensification opportunities area map. Generally speaking, the location of intensification doesn't vary from option to option, rather it is the scale and densities of these locations that change. For an example, a block of abandoned warehouses might be seen to have potential for 75 units under the Distributed Development Option while the same area under the Nodes and Corridor Option might envision 150 units. It is important to note that this approach focused on the potential for intensification.

Dennis R. McGreal

Dennis R. McGreal

The five options include a level of intensification that ranges from 28,000 to 62,000 units. The intensification range approaches the 40 percent intensification level expressed in the Province's draft *Places to Grow Plan*.

3.5 Greenfield Development

Greenfield development is a term used to describe new urban development in areas that were formerly rural. The approach to greenfield development for all growth options was the same. Unconstrained lands were the primary focus of greenfield development. The areas needed for greenfield development were calculated by subtracting the population allocated to intensification and vacant land build out within the current urban boundary from the desired 30 year projected population. The remaining population was then assigned to a range of greenfield areas that reflect the three growth concepts identified earlier in the GRIDS process. A mix of housing types and densities were assigned to meet the projected needs identified by the Province and to build complete communities that accommodate a range of housing types, incomes and market needs. The land required for urban expansion also incorporated lands for parks, commercial and mixed uses, schools and other institutional uses. **Table 14** displays the land needs analysis for each option. Note that the figures in this table reflect an analysis that was completed in August 2005. Since that time there have been subsequent updates and minor refinements to some of the inputs (such as intensification figures and the vacant land inventory), and so the figures in this table will differ from the numbers in later sections of this report.

Table 14: Land Needs for Urban Expansion

Growth Option	Unit Type[33]	2031 Demand (units)[34]	Total Supply (units)[35]	Supply of Vacant/ Planned (units) [36]	Supply of Intens. (units)[37]	Residual Demand (units)	Aver. Greenfield Density Per net hectare[38]	Res. Lands New Growth (acres)	Non Res. Supply (acres)[39]	Total Res. Lands Required (acres)
Option 1: No Residential Expansion	**Low**	40,000	27,740	24,060	3,680	12,260	9	N/a	N/a	N/a
	Med	17,000	18,790	10,020	8,770	(1,790)	22	N/a	N/a	N/a
	High	23,000	51,390	1,730	49,660	(28,390)	30	N/a	N/a	N/a
	Total	*80,000*	*97,810*	*35,810*	*62,000*	*(17,920)**	*N/a*	*0*	*0*	*0*
Options 2,3 & 4: Appropriately Distributed Development	**Low**	41,000	25,980	24,060	1,920	15,020	9	1,670	560	2,230
	Med	23,000	18,570	10,020	8,560	4,430	22	200	70	270
	High	36,000	19,550	1,730	17,830	16,450	30	550	180	730
	Total	*100,000*	*64,100*	*35,810*	*28,310*	*35,900*	*N/a*	*2,420*	*810*	*3,230*
Option 5: Nodes and Corridors	**Low**	41,000	25,880	24,060	1,820	15,120	9	1,680	560	2,240
	Med	23,000	19,160	10,020	9,140	3,840	22	170	60	230
	High	36,000	33,640	1,730	31,910	2,360	30	80	30	110
	Total	*100,000*	*78,680*	*35,810*	*42,870*	*21,320*	*N/a*	*1,930*	*640*	*2,570*

33 Low includes both singles and semis; Med includes townhomes; High includes apartments

34 Hemson Consulting, 2005.

35 Hemson Consulting, 2005.

36 City of Hamilton, Long Range Planning, August 2005. Note that subsequent updates to the VLI inventory bring the total to 32,000.

37 City of Hamilton, Long Range Planning, 2005.

38 Planning and Engineering Initiatives Ltd.

39 Planning and Engineering Initiatives Ltd(for 75/25 split) .

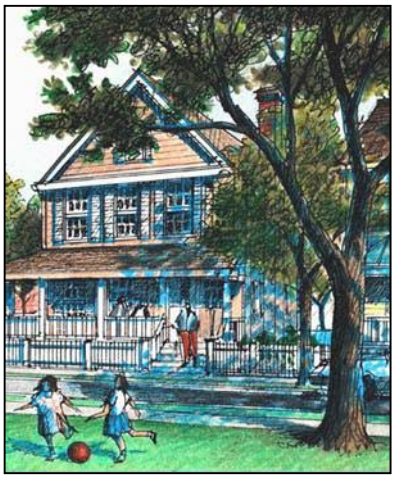
*Option 1 does not meet the forecasted housing demand. There is an oversupply of high density units and an undersupply of low density units, and policy intervention, shift in the market and cultural preferences associated with built form would be required. The oversupply of high density units is provided to meet the Province's housing forecasts.

This process not only considered the amount of new urban land required for greenfield development, but also the shape and form of development. Recognizing that earlier forms of development, which are characterized by car-dependent single-family sub-divisions is not sustainable, a series of neighbourhood concepts were developed. These concepts were used as templates for a different form of development in greenfield areas and are intended to demonstrate how new growth can be done in a manner which is more economically viable, environmentally sustainable and can foster stronger, richer more diverse and complete communities.

Planning and Engineering Initiatives Ltd. (PEIL) was retained by the City to develop a new neighbourhood concept plan for greenfield development. The neighbourhood concept plan is more dense, more compact and contains a variety of land uses to facilitate transit linkages and to provide opportunities for live, work and play. Based on the Provincial Growth forecasts and the *Nine Directions*, these concepts show a shift in housing mix over time. The range of densities in these areas will increase over time with lower density areas becoming less prevalent and medium and high density residential uses becoming more prominent after 2015. The concepts include some underlying principles which are listed below.

Table 15: Planning Principles for New Greenfield Development[40]

1. *Focal Point*: Each neighbourhood should consist of a central focal point with higher activity concentrated around that point, contributing to a neighbourhood identity and creating a sense of place. A mix of uses will be integrated at this focal point where residents can shop, eat and meet one another;
2. *Neighbourhood Park*: A park that is a neighbourhood focus is a key element of the neighbourhood. Neighbourhood parks are to be located close to higher densities and be the centre of active recreation and connected to pedestrian and bike linkages.
3. *Pedestrian and Bike Linkages:* These linkages should be integrated along greenways, natural land patterns, corridors and buffers through the community to provide

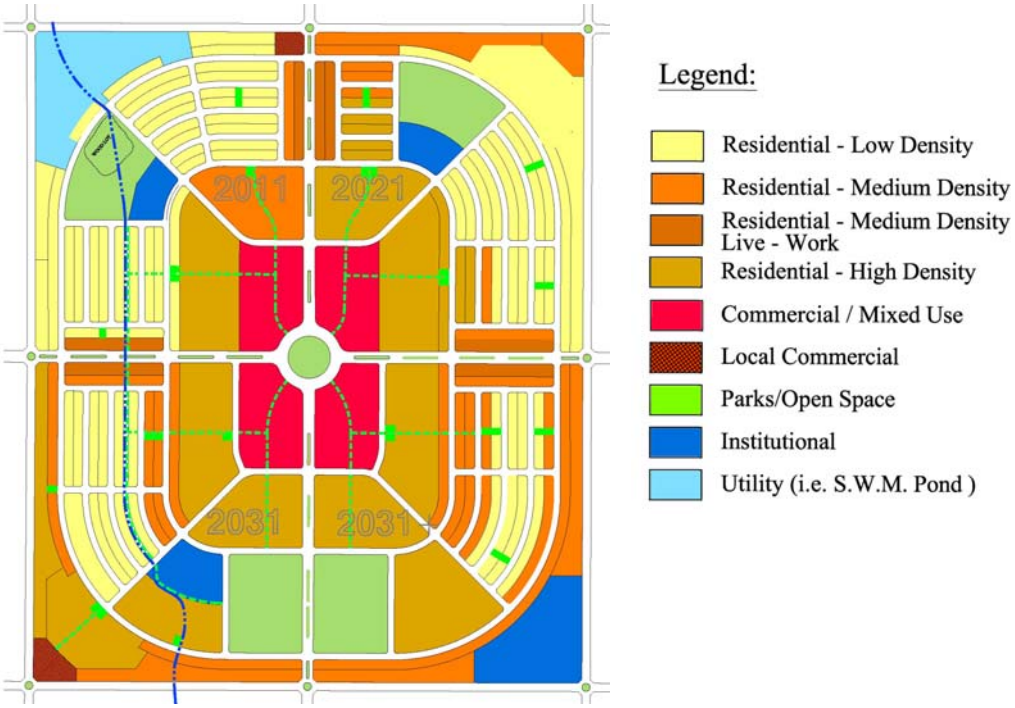


40 Planning and Engineering Initiatives, Conceptual Neighbourhood Plan, 2005.

Table 15: Planning Principles for New Greenfield Development[40]
access to parks, open space and commercial uses; 4. *Curvilinear Design:* A curvilinear design should be implemented to enhance existing landscape feature and to allow for better flow of pedestrian and vehicles. Local street are established in a more traditional grid pattern;
5. *Transit:* The proposed road development and road pattern should allow for better transit opportunities. Transit stop would be integrated within 400 ft. (121 m) of proposed residential and be integrated to minimize walking distance for the greatest number of residents in each neighbourhood.

Figure 4 below shows the overall neighbourhood concept development plan. **Appendix C** contains further details on the Neighbourhood Concept Plan. In developing these concepts, it became evident that the implementation of smart growth principles required large, contiguous areas to create transit-oriented communities with a central focal point, as opposed to smaller, less dense areas.

Figure 4: Neighbourhood Concept Plan



3.6 Creation of Growth Options

The growth options provide for choices as to where growth can occur, both within the existing urban area and in terms of identifying potential new growth areas.

Essentially, there were two steps involved in creating the growth options. The first was to map each growth option based on the three concepts adopted earlier. The second step was to translate the rough sketches into GIS layers so that each option could be evaluated by the technical teams in planning, social services, transportation, water and wastewater and stormwater.

The growth options were sketched out during several workshops held in the summer of 2005. The working team included staff and consultants from long range planning, transportation, water and wastewater, stormwater and social services Departments. The creation of the mapped options was based on input provided by the working group and also from comments that arose in the Spring consultation program on the growth concepts. With these sketches in hand, the next step was to translate them into the GIS layers.

The process of translating the sketched options into GIS features involved three phases of work, which are described below:

- *Phase 1*: Determine the supply of potential residential units on lands within the urban area boundary, including both vacant/designated lands and residential intensification, and compare this to the 30-year forecasted demand for new development;

- *Phase 2:* Map the new growth areas, identify the location of new neighbourhoods, and calculate the resulting number of units, acreages of land use, and jobs, by 10-year increments; and,

- *Phase 3:* Assign the data from *Phase 2* into geographic area small enough to enable the infrastructure Master Plan team to evaluate the growth options.

Additional information on this process is supplied in **Appendix D** of this report.

3.7 Description of Growth Options

The following section also includes two inserts that address some site specific issues in Waterdown and Pleasantview.

3.7.1 Option 1: No Residential Expansion to the Urban Area Boundary

By maintaining the existing urban boundary, growth is accommodated through the development of the City's vacant land supply and aggressive new policy of residential intensification (62,000 units).

The population of Hamilton would increase by 150,000 persons and there would be 96,000 new jobs in Hamilton. The projected growth of 40,000 households in single and semi-detached dwelling units would not be achieved because there is not sufficient vacant or infill land within current urban areas to accommodate the forecasted needs of housing forms and development would have to occur at higher densities (i.e. more apartments and condos) to accommodate the growth in households. Option 1 cannot not accommodate the future housing mix and growth forecasts for the City. **Figure 5** and associated table depicts Option 1 and a summary of advantages and disadvantages.

Waterdown

OPA No. 28 to the Town of Flamborough Official Plan was approved by executive Council of the Provincial Government of Ontario on June 19, 2002, which permitted the expansion of the Waterdown urban area to accommodate residential growth to the year 2021 subject to certain conditions. One of the conditions is the completion of a Master Environment Assessment Transportation Study (currently being undertaken). Future growth in Waterdown envisioned by OPA 28 is to occur in three places, Upcountry, Waterdown North and South.

Additional future growth in Waterdown beyond those considered in OPA No. 28 is severely limited by transportation, water and wastewater servicing, sensitive environmental and topographical conditions. Although all options consider some intensification in Waterdown, no further urban expansion is considered in any of the options for the reasons cited above.

Figure 5: Option 1

Community

Focusing growth downtown helps promote increased transit and facilitate the development of a cohesive community where people can live and work. High intensification requires strong building design guidelines and may make it difficult to provide a full range of housing choice.

Transportation

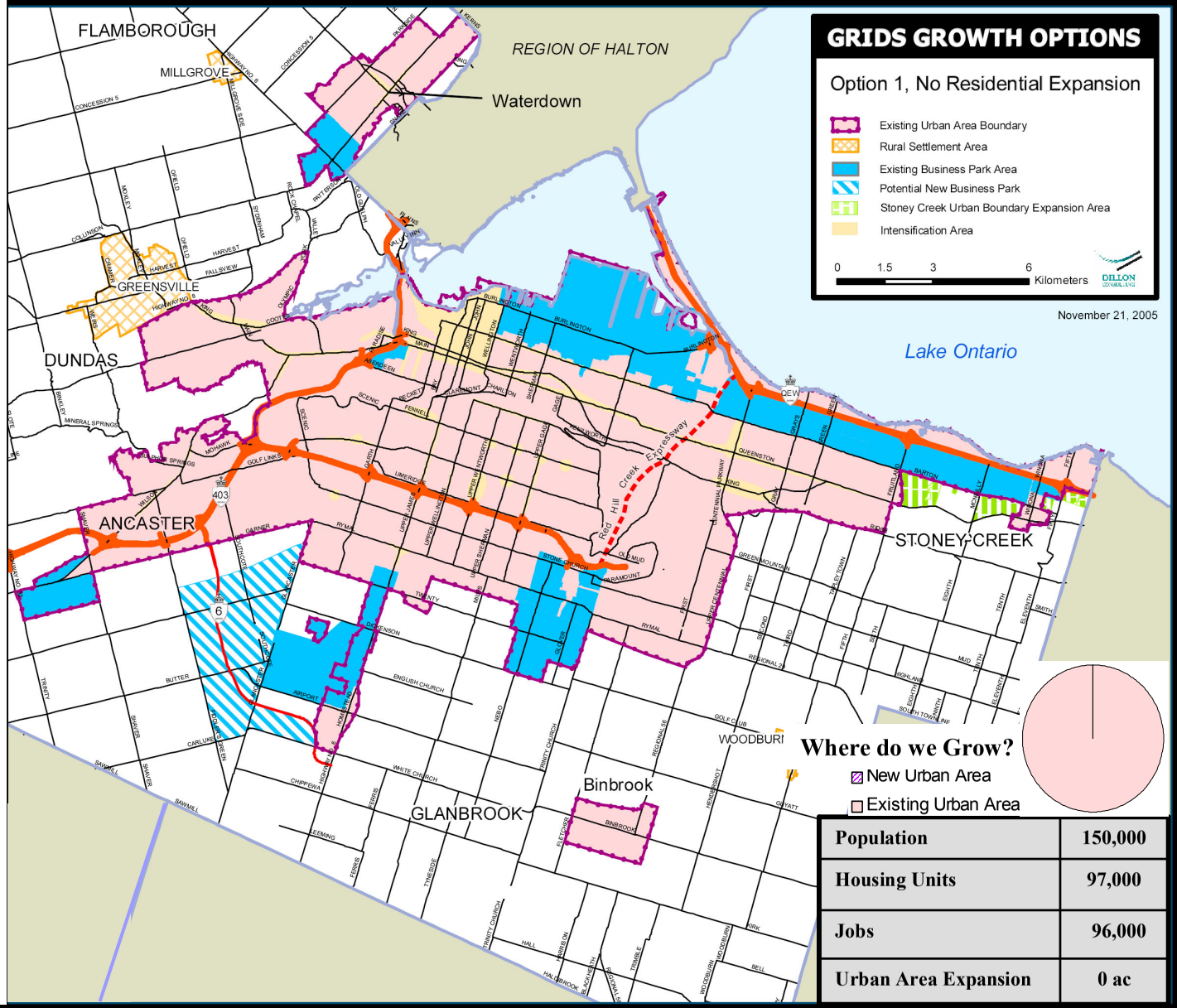
Opportunity for expanded transit and improved pedestrian movement in urban area. Transit may be needed up the escarpment to serve employment areas.

Water &Wastewater

All options need water and wastewater mains across the escarpment to service employment growth. This option does not capitalize on these mains to serve residential growth. Infrastructure upgrades will be required within developed urban boundary.

Stormwater

Lowest overall impact on the environment for stormwater but highest cost for storm sewer upgrades needed for intensification. Approximately 15% of the existing storm sewer network may need to be upgraded/replaced to service intensification. All Options have potential for some impact on the quality or quantity of water in the creeks. The location of the residential intensification may result in potential impacts to Red Hill Creek, Chedoke Creek and Stoney Creek.



Population	**150,000**
Housing Units	**97,000**
Jobs	**96,000**
Urban Area Expansion	**0 ac**

Table 15: Option 1, No Residential Expansion

	Key Advantages	Key Disadvantages	Key Challenges
Community Well Being	• Potential to facilitate live-work, community cohesion.	• Potential for increased traffic infiltration. • Significant short term disruption to neighborhoods from construction of infrastructure and housing in urban area. • May not provide mix of housing types and projected population needed over 30 year plan. • House price inflation due to restricted land supply which will adversely affect housing affordability.	• High intensification requires high quality building design to attract residents and reinvigorate neighborhoods. • High intensification raises challenges in provision of range of housing types at the right time. • Market and demand challenges for some intensification units.
Ecological Well Being	• Reduces trip lengths and auto use. • Minimizes new road corridors. • No impacts to rural/agricultural areas with no expansion of urban boundary.	• Significant potential for stormwater impact on erosion and water quality as a result of intensification (concentrated in Chedoke Creek, Red Hill Creek, and Stoney Creek).	• Location of specific infrastructure services to minimize impacts on environment and specific ecological features. • Implementing stormwater retrofit in dense urban areas.
Economic Well Being	• Reduces road expansion costs.	• Increases congestion. • Significant construction in urban area will have higher unit costs. • Less flexibility for servicing alternatives given that growth is within the already confined urban area. • Most expensive option for storm sewer system upgrades. • Lower population and jobs accommodated than other options.	• Higher level of economic risk due to reliance on success of policy intervention to attract intensification development and market.

3.7.2 Options 2-4: Appropriately Distributed Development

There are three variants of the appropriately distributed development option, in which growth is appropriately distributed along the existing urban area boundary to make efficient use of existing infrastructure including transit and social services. It is noted that The *Provincial Policy Statement* states that growth should be directed away from prime agricultural lands unless there are no other reasonable alternatives. As such, three different distributed development options (Options 2, 3 and 4[41]) were prepared to assess the implications of growth on or in the vicinity of Prime Agricultural areas identified in the LEAR study. An urban boundary expansion is incorporated into these options.

Options 2, 3 and 4 are based on a forecasted population increase of 190,000 persons and 100,000 new households. Growth would be accommodated through residential intensification (28,000 units), the development of the existing vacant land supply (30,000 units) and in new neighbourhoods (42,000 units).

The three variants for distributed development are described below:

Option 2 Appropriately Distributed Development

- 3,400 acres of new growth allocated to an urban expansion area south-east of the current urban boundary and bounded by Golf Club Road to south, Mud Street and Highland Ave to the north, Upper Centennial Parkway and Trinity Church Road to the west and Hendershot Road to the east;

- This option concentrates growth in essentially one new growth area to facilitate mixed use, higher density, transit friendly development that optimizes existing infrastructure. Some prime agricultural land is lost by this option. Although agriculture is highly valued in the City, it was found that it was

41 Option 2, 3 and 4 were formally known as Option 2A, 2Bi and 2Bii. Prior to evaluation of the short-list, the three distributed development options were renamed as Option 2, 3 and 4 for the purposes of clarity. Option 3 Nodes and Corridors is now referred to as Option 5.

impossible to identify a concentrated new growth area without impacting prime agricultural land because of the extent of such land in the City;

- 190 net hectares of development on SCUBE lands.

Figure 6 and associated table depicts Option 2 and key advantages and disadvantages.

Figure 6: Option 2

Community

Focuses new urban area growth providing opportunity for building a distinctive, vibrant, mixed, high quality community that is pedestrian/transit oriented. Intensification levels are considered reasonable with appropriate policy intervention. Removes approximately 2500 acres of agricultural land.

Transportation

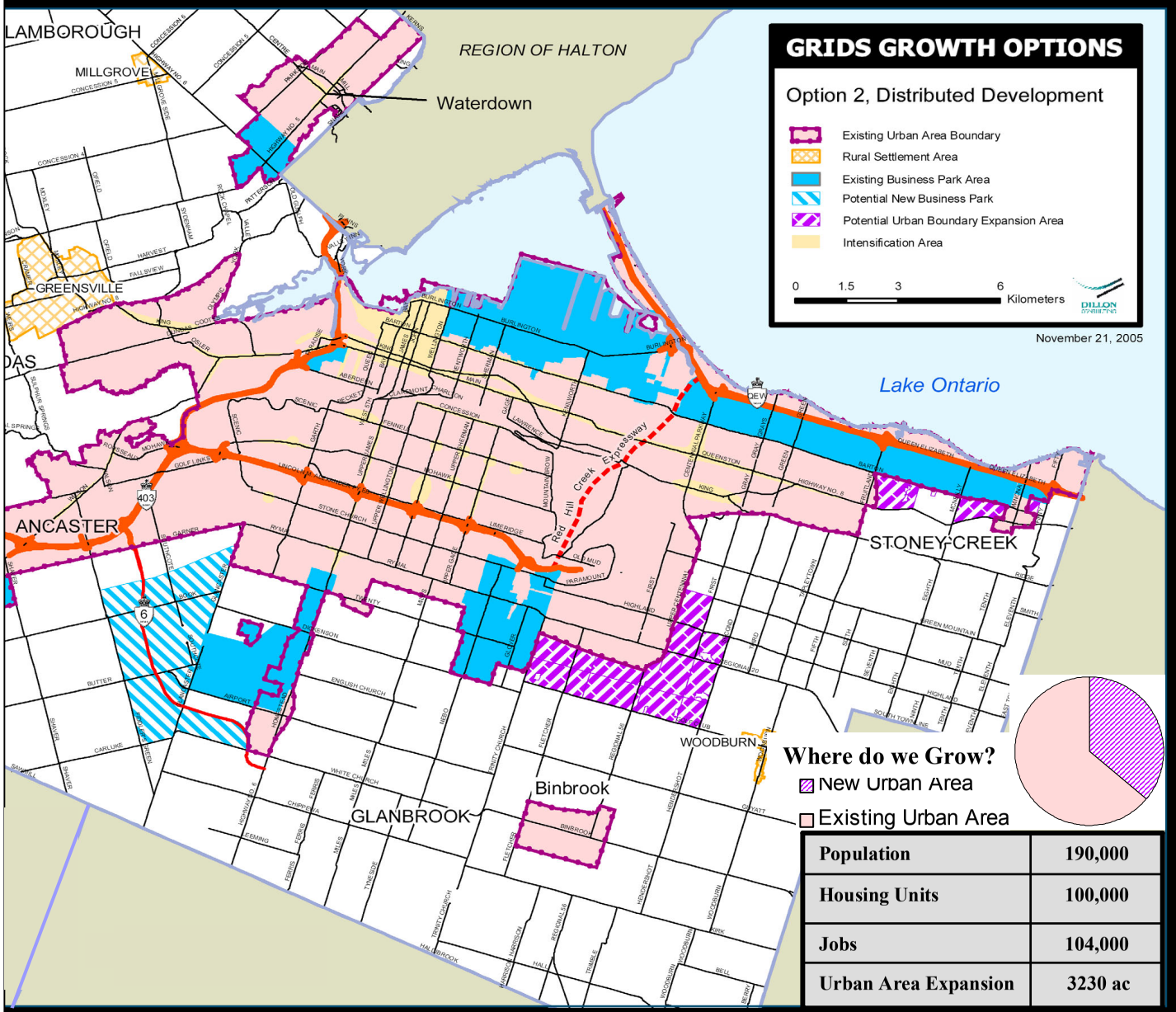
Options 2, 3 and 4 will all require expanded Transit Service Area on the Mountain. These options also result in a potential need for additional transportation capacity north-south across the escarpment and an expanded local collector road system in south east.

Water &Wastewater

All options need water and wastewater mains across the escarpment to service employment growth. This option results in significant water and wastewater demand in the southeast. Servicing for the residential and employment areas could be integrated with an east escarpment crossing.

Stormwater

Approximately 8% of the existing storm sewer network may need to be upgraded/replaced to service intensification for Options 2, 3 & 4. These options will require stormwater management for the new urban areas, however, new development areas are typically easier and less costly to service. All Options have potential for some impact on the quality or quantity of water in the creeks. Option 2 may result in impacts on Twenty Mile Creek and Stoney Creek.



Population	**190,000**
Housing Units	**100,000**
Jobs	**104,000**
Urban Area Expansion	**3230 ac**

Table 17: Option 2, Distributed Development

	Key Advantages	Key Disadvantages	Key Challenges
Community Well Being	• New communities can be designed for walking, cycling and transit. • Option 2 focuses greenfield growth in one area providing opportunity for building a distinctive, vibrant, mixed, high quality community that is pedestrian/transit oriented.	• Potential for moderate disruption to neighourhoods from construction of infrastructure and housing.	• Intensification levels are considered reasonable with appropriate policy intervention.
Ecological Well Being	• Least expensive option for storm sewer retrofit and upgrades in existing urban areas.	• Lower potential to decrease trip lengths. • Development has moderate potential for impact on downstream flood hazards, wetlands and geologic features in Twenty Mile Creek watershed. Some impacts on other watersheds also possible as a result of development. • Removes 2500 acres of prime agricultural area.	• Locating specific infrastructure services to minimize impacts on environment and specific ecological features.
Economic Well Being	• Reduces congestion on inner area roads. • Lower unit cost for servicing as greenfield unit costs are less than intensification unit costs. • Opportunity for integrating water and wastewater servicing needs for employment and residential. • Options 2, 3 and 4 accommodate maximum growth forecast.	• Potential for increased road costs. • Highest cost for drainage & stormwater works in Urban Boundary Expansion Areas.	• Feasibility relating to development in rural watersheds needs to be addressed.

Options 3 & 4, Appropriately Distributed Development

Two additional Distributed Options were identified. These options spread out most greenfield growth areas into the unconstrained lands adjacent to the existing urban boundary, as follows:

- 3,200 acres of land are identified for growth along the southern existing urban area boundary for Option 3. In addition, approximately 200 acres of land in the Pleasantview area (lands on the east side of the former Town of Dundas) are identified for growth. Although the Pleasantview area is within the Greenbelt Plan area, the Greenbelt Plan has retained the policies of the Parkway Belt West Secondary Plan. As a result, an application could be brought forward to permit limited residential development in this area. Inclusion of the Pleasantview area in the growth options allowed for an assessment of the implications of permitting limited development to occur in this area; and

- Option 4 differs from 3 only in that the Pleasantview lands are not considered for appropriately distributed growth. 2,730 acres of land are identified for growth. The land need is accommodated by expanding the area at the southeast edge of the current urban boundary southward to increase the connection to the Glanbrook industrial park near Trinity Church Road and Golf Club Road. The objective is to increase opportunities for live/work and non-auto modes of travel.

- 190 net hectares of development on SCUBE lands.

Figures 7 and **8** and associated tables depicts Options 3 and 4 and a summary of advantages and disadvantages.

Pleasantview

Pleasantview is located within the Parkway Belt West Secondary Plan area and the Greenbelt Plan area. Future development of these lands is guided by the provisions of the Parkway Belt West Secondary Plan. Section 5.5.1h of the plan permits some limited infilling in existing settlement areas, subject to certain conditions. One of the conditions is that future development "encourage additions which will not create a need for additional public services". In light of this, future development in Pleasantview is considered in Option 3 as a means of analyzing the potential impacts of future development in Pleasantview.

Results of this analysis are discussed in Section 4.4.

Figure 7: Option 3

Community

New growth is dispersed to minimize impacts to agricultural land. Removes 1070 acres of agricultural area. Intensification levels are considered reasonable with appropriate policy intervention.

Transportation

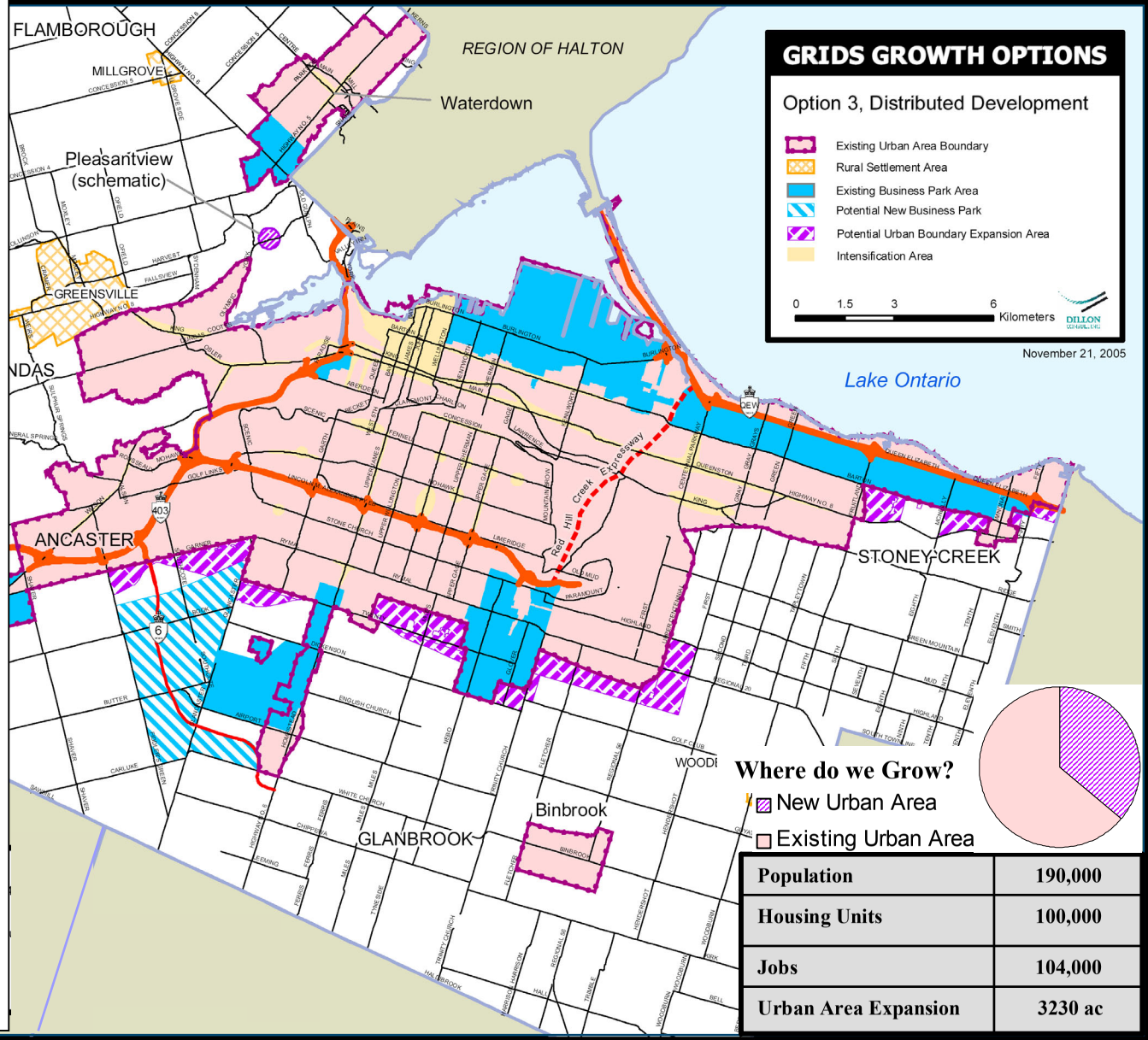
Options 2, 3 and 4 will all require expanded Transit Service Area on the Mountain. These options also result in a potential need for additional transportation capacity north-south across the escarpment and an expanded local collector road system in south east.

Stormwater

Approximately 8% of the existing storm sewer network may need to be upgraded/replaced to service intensification for Options 2, 3 & 4. These options will require stormwater management for the new urban areas, however, new development areas are typically easier and less costly to service. All Options have potential for some impact on the quality or quantity of water in the creeks. The location of Options 3 and 4 widely distribute new growth resulting in potential to effect Twenty Mile Creek, Stoney Creek, Borer's Creek, Spencer Creek, Sulphur Creek, and Red Hill Creek.

Water & Wastewater

All options need water and wastewater mains across the escarpment to service employment growth. This option results in significant water and wastewater demand in the southwest. Servicing for the residential and employment areas could trigger west trunk infrastructure upgrades and be integrated with a west escarpment crossing. This option includes servicing Pleasantview which is a very challenging area to service due primarily to topography.



Population	**190,000**
Housing Units	**100,000**
Jobs	**104,000**
Urban Area Expansion	**3230 ac**

Table 18: Option 3, Distributed Development

DRAFT	Key Advantages	Key Disadvantages	Key Challenges
Community Well Being	• New communities can be designed for walking, cycling and transit. • New growth is dispersed to minimize impacts to agricultural land.	• Potential for moderate disruption to neighourhoods from construction of infrastructure and housing. • Options 3 and 4 are quite dispersed providing less opportunity to create a new urban area with distinctive character.	• Intensification levels are considered reasonable with appropriate policy intervention.
Ecological Well Being	• Least expensive option for storm sewer retrofit and upgrades in existing urban areas.	• Lower potential to decrease trip lengths. • Moderate potential for some impact on water quality and quantity in downstream watersheds as a result of development. • Removes 1070 acres of prime agricultural area. • Most expensive option for drainage works in urban expansion areas.	• Location of specific infrastructure services to minimize impacts on environment and specific ecological features.
Economic Well Being	• Reduces congestion on inner area roads. • Lower unit cost for servicing as greenfield unit costs are less than intensification unit costs. • Opportunity for integrating water and wastewater servicing needs for employment and residential. • Options 2, 3 and 4 accommodate maximum growth forecast.	• Potential for increased road costs. • Highest cost for drainage & stormwater works in Urban Boundary Expansion Areas. • Includes 200 acres of growth in Pleasantview which is difficult and costly to service • Additional capacity for water and wastewater trunk infrastructure required. These upgrades would be within existing developed areas. • Most expensive option for drainage works in urban expansion areas.	• Feasibility relating to development in rural watersheds needs to be addressed.

Figure 8: Option 4

Community

New growth is dispersed to minimize impacts to agricultural land. Removes 1240 acres of agricultural area. Intensification levels are considered reasonable with appropriate policy intervention.

Transportation

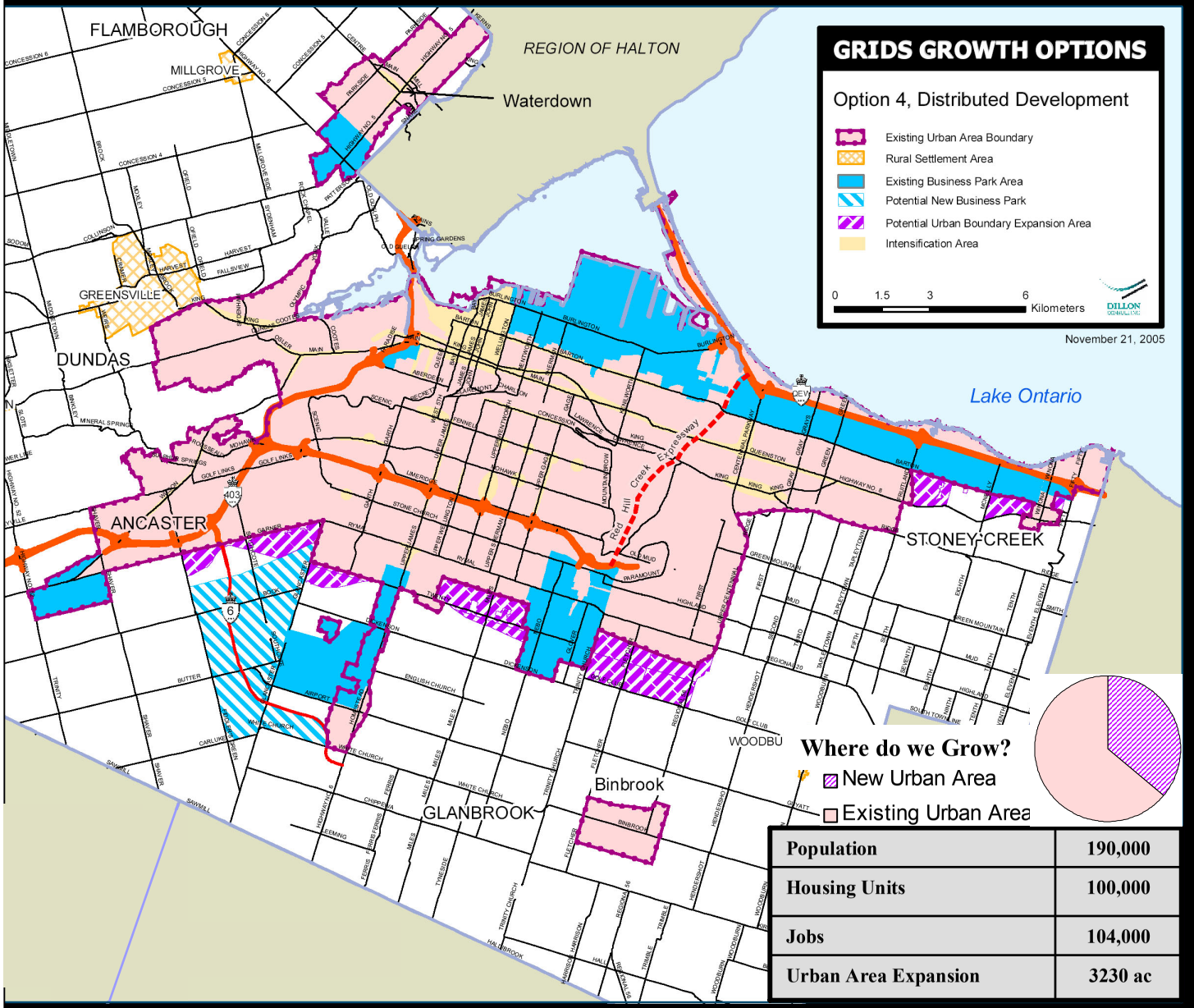
Options 2, 3 and 4 will all require expanded Transit Service Area on the Mountain. These options also result in a potential need for additional transportation capacity north-south across the escarpment and an expanded local collector road system in south east.

Water &Wastewater

All options need water and wastewater mains across the escarpment to service employment growth. This option results in significant water and wastewater demand in the southwest. Servicing for the residential and employment areas could trigger west trunk infrastructure upgrades and be integrated with a west escarpment crossing.

Stormwater

Approximately 8% of the existing storm sewer network may need to be upgraded to replaced to service intensification for Options 2, 3 & 4. These options will require stormwater management for the new urban areas, however, new development areas are typically easier and less costly to service. All Options have potential for some impact on the quality or quantity of water in the creeks. The location of Options 3 and 4 widely distribute new growth resulting in potential to effect Twenty Mile Creek, Stoney Creek, Borer's Creek, Spencer Creek, Sulphur Creek, and Red Hill Creek.



Population	**190,000**
Housing Units	**100,000**
Jobs	**104,000**
Urban Area Expansion	**3230 ac**

Table 19: Option 4, Distributed Development

	Key Advantages	Key Disadvantages	Key Challenges
Community Well Being	• New communities can be designed for walking, cycling and transit. • New growth is dispersed to minimize impacts to agricultural land	• Potential for moderate disruption to neighourhoods from construction of infrastructure and housing. • Options 3 and 4 are quite dispersed providing less opportunity to create a new urban area with distinctive character.	• Intensification levels are considered reasonable with appropriate policy intervention.
Ecological Well Being	• Least expensive option for storm sewer retrofit and upgrades in existing urban areas.	• Lower potential to decrease trip lengths. • Moderate potential for some impact on water quality and quantity in downstream watersheds as a result of development. • Removes 1240 acres of prime agricultural area.	• Location of specific infrastructure services to minimize impacts on environment and specific ecological features.
Economic Well Being	• Reduces congestion on inner area roads. • Lower unit cost for servicing as greenfield unit costs are less than intensification unit costs. • Opportunity for integrating water and wastewater servicing needs for employment and residential. • Options 2, 3 and 4 accommodate maximum growth forecast.	• Potential for increased road costs. • Highest cost for drainage & stormwater works in Urban Boundary Expansion Areas. • Additional capacity for water and wastewater trunk infrastructure required. These upgrades would be within existing developed areas.	• Feasibility relating to development in rural watersheds needs to be addressed.

3.7.3 Option 5: Nodes and Corridors

The nodes and corridors option is based on growth being directed to a series of activity nodes throughout the City of Hamilton based on where people live, work and play. This option envisioned a higher degree of residential intensification (43,000 units). An urban boundary expansion is required, and the new growth area is similar to Option 2, but the amount of land required has been reduced to 2,800 acres of new growth that has been assigned to a single node adjacent to the south-east boundary of the existing urban boundary with the objective of creating dense, mixed use, transit supportive neighbourhoods. The area of the node is smaller than for Option 2 because of the greater intensification for Option 5. The land area is reduced southward to avoid a watershed divide and westward to avoid impacts on prime agricultural land. This option envisions the development of mixed use corridors linking the various nodes and improving connectivity and transit service. This option also includes 190 net hectares of development on SCUBE lands.

This option is based on the growth forecast of 100,000 additional units. This growth is allocated as follows:

- Residential units in greenfield growth areas: 27,000;
- Residential units of intensification inside the urban boundary: 43,000; and
- Units allocated to vacant designated land: 30,000.

Figure 9 and associated table depicts Option 5 and a summary of advantages and disadvantages.

Figure 9: Option 5

Community

Nodes and corridors support opportunity to build distinctive, vibrant, high quality, mixed neighbourhoods. Intensification along corridors increases potential for new transit based linear neighbourhoods that are attractive to pedestrians. Intensification levels are above supply/demand but considered realistic with appropriate policy intervention. Removes 2080 acres of agricultural area.

Transportation

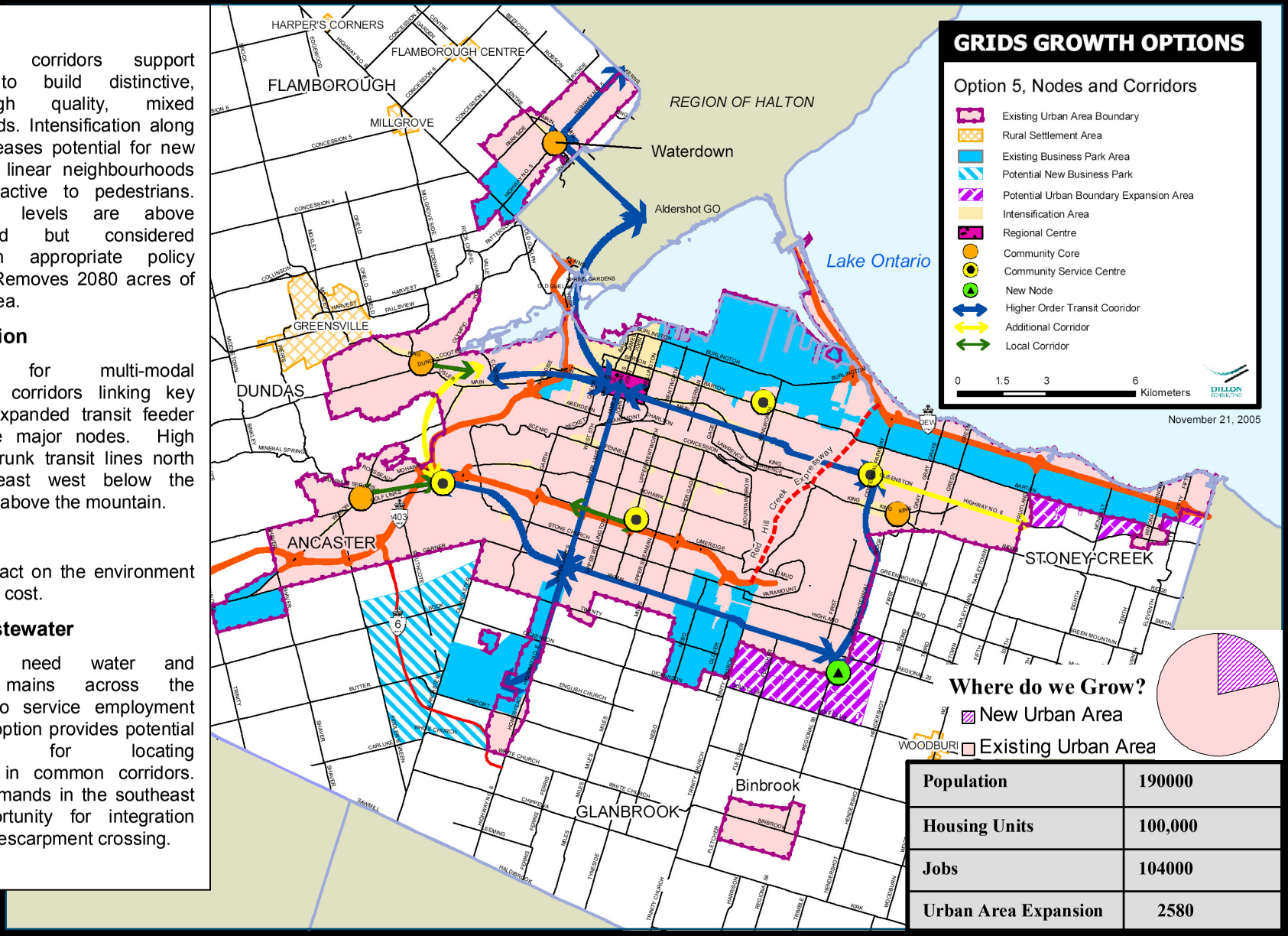
Opportunity for multi-modal transportation corridors linking key nodes with expanded transit feeder routes to the major nodes. High capacity for trunk transit lines north south and east west below the mountain and above the mountain.

Stormwater

Moderate impact on the environment with moderate cost.

Water &Wastewater

All options need water and wastewater mains across the escarpment to service employment growth. This option provides potential opportunities for locating infrastructure in common corridors. Significant demands in the southeast provide opportunity for integration with east end escarpment crossing.



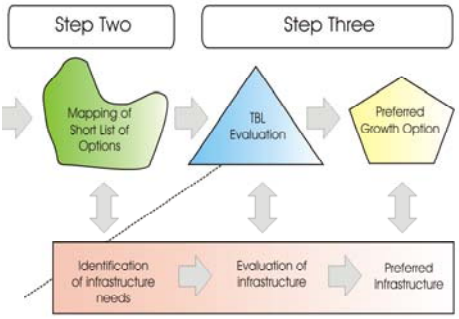
Population	**190000**
Housing Units	**100,000**
Jobs	**104000**
Urban Area Expansion	**2580**

Table 20: Option 5 , Nodes and Corridors

DRAFT	Key Advantages	Key Disadvantages	Key Challenges
Community Well Being	• Communities are linked by multi-modal corridors. • Nodes and corridors support opportunity to build distinctive, vibrant, high quality, mixed neighbourhoods. • Intensification along corridors increases potential for new transit based linear neighbourhoods that are attractive to pedestrians.	• Potential for moderate disruption to neighourhoods from construction of infrastructure and housing.	• Intensification levels are above supply/demand but considered realistic with appropriate policy intervention.
Ecological Well Being	• Highest transit potential. • Infrastructure construction could be coordinated with corridor improvements to minimize disruption. • Minor impacts to watersheds (other than Twenty Mile Creek).	• Development has largest potential for impact on downstream flood hazards, wetlands and geologic features in Twenty Mile Creek watershed. Some impacts on other watersheds also possible. • Removes 2080 acres of agricultural area.	• Location of specific infrastructure services to minimize impacts on environment and specific ecological features.
Economic Being	• Infrastructure construction could be coordinated with corridor improvements optimizing infrastructure investment. • Lower unit cost for servicing as greenfield unit costs are less than intensification unit costs. • Opportunity for integrating water and wastewater servicing needs for employment and residential. • Accommodates the maximum growth forecast.	•Requires significant investment in transit	•Infrastructure construction could be coordinated with corridor improvements further reducing unit costs.

4.0 Evaluation & Selection of Preferred Growth Option

Step three of the GRIDS process involved the evaluation of the five growth options and the selection of a preferred growth option.



4.1 Public Consultation & Response to Growth Options

The City of Hamilton hosted a series of consultation events in November and December 2005 to obtain input on the five growth options. The five growth options were presented to the public at three public information sessions on November 28th, 30th and December 5th and discussed with key stakeholders at a workshop on December 1st. Staff also received a number of written submissions from members of the public and agencies. At the workshop and Public Information Sessions, the City presented information on intensification, the five growth options, employment, and the infrastructure master plans that are taking place as part of GRIDS.

The following is a brief summary of the key results of the consultation events and stakeholder workshop:

- Development in the Pleasantview area proved to be a controversial topic, with a number of people both strongly supporting and opposing development in this area;
- There was general support for the development and enhancement of new and existing employment areas, although some were concerned that this development would be disconnected from the rest of City;
- Stakeholders thought that intensification in the City should include specific urban design policies to ensure that it occurs in an appropriate manner;
- Some residents also expressed concern regarding the impact that an aggressive intensification policy might have on public facilities (schools, recreation centres, health services etc.) and greenspace;
- General support was received for Option 1 and Option 5; and,
- Stakeholders expressed that infrastructure for transit and other services should be in place before development is approved.

A detailed summary of comments from this phase of consultation can be found in **Appendix E**.

4.2 Technical Assessment: TBL Evaluation of Short-List Growth Options

The second set of TBL sessions in the GRIDS process occurred in January and February of 2006. The purpose of these sessions was to evaluate each of the growth options in an effort to select a preferred growth option using more detailed technical data provided through a set of indicators and mapping the growth options for a geographical reference. Evaluators from a wide range of City departments were once again provided with a detailed data package and asked to evaluate each growth option based on its ability to satisfy a collection of desired results.

The detailed evaluation data package was formulated to reflect critical information on each of the *Nine Directions*, the Desired Results and to address Provincial Policy requirements for each growth option. Data was collected for each option by staff and consulting teams including the infrastructure Master Plan teams. The technical teams were also asked to rank the options based on the technical data for each measure.

The following sub-section explains the TBL framework that was used. **Appendix F** contains the detailed evaluation information.

4.2.1 TBL Framework

Hamilton's *Vision 2020* sets the vision for the City's future, a guide to the desired social, economic and environmental characteristics of the community. As noted in Section 2.2.1, TBL is a means of implementing the goals put forth in *Vision 2020*. The "Desired Results" are derived from *Vision 2020*, and the subsequent document *Nine Directions to Guide Development*. The *Nine Directions to Guide Development* was created in a community process to implement *Vision 2020* through GRIDS. At its narrowest, TBL is about measuring and reporting corporate performance against economic, social and environmental parameters. At its broadest, TBL is about values, issues and processes that agencies

must address to create economic, social and environmental value. The challenge for local governments is to find planning and decision-making tools that enable decision makers to take triple bottom line considerations into account in a holistic manner. The GRIDS TBL Evaluation tool provided this ability for assessing growth options.

The TBL evaluators used a web-based tool to rank the options against the desired results. Their input was collated and a workshop was conducted to express the collective opinions of the evaluators on the ability of each option to best meet the desired results for each of the Triple Bottom Lines.

4.2.2 Relationship with Draft Places to Grow Plan & *Provincial Policy Statement*

Not only was the TBL framework linked to the City's local strategic policy initiatives, but it was also linked to the Province's strategic policy documents, draft *Places to Grow Plan* and the *2005 Provincial Policy Statement.* This sub-section briefly outlines how the GRIDS process and the TBL framework related to the key provincial policies. **Table 21** shows how the GRIDS process addressed key strategic policies of the draft *Places to Grow Plan*, *Provincial Policy Statement*, *Greenbelt Plan* and *Niagara Escarpment Plan.*

Table 21: How GRIDS Meets The Province's Key Strategic Planning Policies

Provincial Policy Document	Strategic Policy Directive	Specific Policy	Triple Bottom Line for GRIDS	How GRIDS Addressed Provincial Policy:
Greenbelt Plan (2005)	NA	NA	Ecological Well Being	• All growth options consider the Greenbelt areas to be unsuitable for future development.
Niagara Escarpment Plan	NA	NA	Ecological Well Being	• All growth options consider the natural and rural areas within the Niagara Escarpment Plan to be unsuitable for future development.
2005 Provincial Policy Statement	*Building strong communities*	Land use within settlement areas shall be based on densities and mix of uses and a range of uses and opportunities for intensification and redevelopment (Section 1.0)	Community Well Being	• In an effort to consider how well each option accommodates the Province's unit and population forecasts, the TBL evaluation measures: o the deviation from Provincial target mix for 2031 housing projections; o opportunities to accommodate a range of dwelling types. • In an effort to consider how well each option achieves a mix of building types and land uses, the TBL evaluation considers: o Description of land use mix; o number of traffic zones that have a population decline; o amount of decline in population by traffic zone; o ease of retaining and providing new soft infrastructure services.
		Planning authorities shall support energy efficiency and improved air quality through land use and development pattern (Section 1.8)	Community and Ecological Well Being	• In keeping with Section 1.8, all options feature intensification around existing nodes and along major corridors, promoting "compact form and a structure of nodes and corridors". All options also promote transit, although some option better serve transit than others.
	Protection and wise use and management of resources	Natural features shall be protected for the long-term (Section 2.1)	Ecological Well Being	• Protecting all ANSIs, ESAs, PSWs, significant woodlands and locally significant wetlands for all growth options. • In an effort to consider how well each option protects the functions of ecological systems, the TBL evaluation

Table 21: How GRIDS Meets The Province's Key Strategic Planning Policies

Provincial Policy Document	Strategic Policy Directive	Specific Policy	Triple Bottom Line for GRIDS	How GRIDS Addressed Provincial Policy:
				measures: o Number of hectares in growth areas that area in the Natural Heritage System; o Linear distance of impacted Natural Heritage System in new growth areas (km); o Potential impacts to terrestrial and aquatic habitat; o Ecological impacts of transportation infrastructure.
		Water quality and quantity shall be improved or restored (Section 2.2)	Ecological Well Being	• In an effort to consider how well each option results in cleaner air and water the TBL evaluation measures: o potential water quality and erosion. o potential impacts to groundwater and geology.
		Prime agricultural areas shall be protected for the long-term (Section 2.3)	Ecological Well Being	• City staff undertook a detailed analysis of agricultural lands in Hamilton using LEAR approach to define prime agricultural areas. • In an effort to consider how well each option preserves Hamilton's agricultural/rural land areas, the TBL evaluation measures: o acreage of prime agricultural area in new growth areas; o number and area of active farm parcels in new growth areas; o number of primary farm parcels in new growth areas.
		Mineral aggregate resources shall be protected for long-term use (Section 2.5)	Ecological Well Being	• All option protect aggregate resource areas.
		Significant built heritage resources and significant cultural heritage landscapes shall be	Community Well Being	• In an effort to consider how well each option protects cultural heritage, the TBL evaluation measures: o area of archaeological potential for each growth option; o area of cultural heritage landscape affected by new

Table 21: How GRIDS Meets The Province's Key Strategic Planning Policies

Provincial Policy Document	Strategic Policy Directive	Specific Policy	Triple Bottom Line for GRIDS	How GRIDS Addressed Provincial Policy:
		conserved (Section 2.6)		growth areas.
	Protecting Human Health	Development shall be directed away from areas of natural or human-made hazards where there is an unacceptable risk (Sections 3.1 and 3.2)	Ecological Well Being	• TBL measure potential impact to flooding
Draft Places to Grow Plan	*Built compact, vibrant and complete communities*	Intensification (Section 2.2.3), Urban Growth Centres (2.2.4) and Employment Lands (2.2.6)	Economic Well Being	• City staff undertook a detailed intensification study that included a lot by lot analysis of key corridors and nodes to determine a range of potential intensification (by unit type). • Intensification estimates approaches the 40 percent intensification level expressed in the Province's draft Places to Grow Plan. • Preliminary analysis shows that Downtown Hamilton, identified as an urban growth centre in PTG, meets the minimum gross density targets of 200 residents and jobs per hectare for all options. • Intensification areas identified for all options focused on major transit and transportation corridors. • All options protect existing employment lands and also include the creation of additional employment lands near the Airport to satisfy the projected need. • City retained PEIL to prepare a neighbourhood design background report to determine appropriate mixes of land uses for new greenfield development that is consistent with compact, mixed-use communities. • The TBL evaluation considers potential disruption to communities resulting from stormwater, water and wastewater and transportation infrastructure works.

Table 21: How GRIDS Meets The Province's Key Strategic Planning Policies

Provincial Policy Document	Strategic Policy Directive	Specific Policy	Triple Bottom Line for GRIDS	How GRIDS Addressed Provincial Policy:
	Plan and manage growth to support a strong and competitive economy	Manage Growth (Section 2.2.2)	Economic Well Being	• GRIDS process incorporated the key directions from the 2005 Economic Development Strategy and Employment Lands Needs Study, including the development of a new employment base around the airport. • In an effort to consider how the various options support existing commercial nodes, the TBL measures the population within 1 km of existing core areas of 5 acres or more. • In an effort to consider how many jobs are provided, the TBL measures the number of population related jobs created (since major office and employment lands jobs are similar for all options). • In an effort to consider how the various options attract and retain a skilled, innovative diverse workforce, the TBL measures population growth in the downtown and core areas.
			Community Well Being	• In an effort to consider how the various options support closer live/work connections the TBL measures: o the number of residents within 5km of CBD, other downtowns and industrial business park areas; o commercial service levels – degree to which the option reduces the disparity across the city City to overall average City commercial service level; o the degree to which it fosters mixed use community opportunities.
	Protect, conserve, enhance and wisely use the valuable natural resources of land, air and	Settlement area boundary expansion (Section 2.2.8) and policies for protecting what is valuable (Section 4.2)	Ecological Well Being	• See *2005 Provincial Policy Statement* under "Protection and wise use and management of resources".

Table 21: How GRIDS Meets The Province's Key Strategic Planning Policies

Provincial Policy Document	Strategic Policy Directive	Specific Policy	Triple Bottom Line for GRIDS	How GRIDS Addressed Provincial Policy:
	water for current and future generations			
	Optimize use of existing and new infrastructure to support growth in a compact, efficient form	Infrastructure planning (Section 3.2)	Economic Well Being	• GRIDS incorporated transportation, water and wastewater and stormwater teams into the GRIDS process. Infrastructure teams provided detailed input at key stages of the process, including evaluation of growth options and development of infrastructure master plans. • In an effort to consider how the various options can be efficiently serviced, the TBL evaluation measures: o Ability to use existing water/waste water infrastructure; o Ability to address existing water/waste water infrastructure system deficiencies; o Ability to use existing transportation infrastructure; o Ability to use existing stormwater infrastructure. • In an effort to consider how each option will position Hamilton as a leading centre of economic growth, the TBL evaluation measures: o Impact on accessibility for goods movement; o Infrastructure requirements, technical ease of construction, level of service, flexibility in scheduling, proven effectiveness and relative approximate costs for new/upgrades to existing transportation, water and wastewater and stormwater infrastructure.

4.4 Results of the TBL Evaluation

In February of 2006, the group of evaluators met to discuss the results of the TBL evaluation. Of the short list growth options The group reviewed their rankings for each option against the desired results.

The majority of the group of evaluators ranked Option 5 as the best option to deliver the desired results for community, economic and ecological well-being[42]. From a community well-being standpoint, most evaluators felt that Option 5 offered the best opportunity to enhance delivery of social services through greater economies of scale, foster more vibrant neighbourhoods through the creation of mixed use, live-work environments and protect human health through transit improvements and more walkable built environments. From an economic well-being standpoint, the majority of evaluators felt that this option offered the best opportunity to attract and retain a skilled, innovative and diverse workforce through its support of existing commercial nodes, mix of housing types and range of amenities and improved transit services and to position Hamilton as a leading centre of economic growth through its more efficient infrastructure/service delivery. And lastly, from an ecological well-being standpoint, the majority of evaluators felt that Option 5 would best enhance economic development in an eco-efficient manner through its support for live-work communities and further protect ecosystem health due to the compact, concentrated nature of the development.

Option 5 also provides the best opportunity to meet a number of key provincial policy parameters. **Table 21** demonstrated how the overall GRIDS process complies with provincial policy initiatives, and further to this point, the following are a few key aspects of Option 5 which demonstrate how it best achieves some of these initiatives:

- Intensification approaches 40% percent of all growth after 2015;

42 17 out of 23 evaluators selected Option 5.

- Downtown Hamilton's status as an Urban Growth Centre is best supported under nodes and corridors option due to intensification and transit linkages;
- Transit infrastructure shapes growth both within the existing urban area and future urban areas;
- Intensification is targeted in key, strategic areas;
- Recommended urban structure supports transit;
- Goods movement corridors will be protected;
- Urban structure and new employment lands will protect and reinforce the importance of Hamilton International Airport;
- New greenfield areas can be designed as compact, complete communities;
- Recommended urban boundary expansion meets *Provincial Policy Statement* and *Places to Grow Plan* policy direction;
- Employment areas are capable of being linked with residential areas through transit and promotion of mixed uses;
- Future development is directed to areas with full servicing (future expansion areas will require full servicing);
- New development is targeted to areas adjacent to existing urban areas.

It should be noted that Option 5 does result in the loss of some prime agricultural land.

It was noted earlier that Option 3 considered future development in Pleasantview area as a base case for analysis. The results of the analysis show that future development in Pleasantview is not a rational option as it is conflicts with the City's *Nine Directions to Guide Development*, *Vision 2020*, the *Provincial Policy Statement*, draft *Places to Grow Plan* and the Parkway Belt West Secondary Plan. The conflict results from the fact that future development in Pleasantview is severely limited by existing transportation, water and wastewater and stormwater servicing capacities and also by sensitive environmental and topographical constraints.

The evaluators also discussed a number of ways in which Option 5 could be improved and blended with

some of the more advantageous aspects of other options. The following is a set of recommendations that the group put forth for the creation of a preferred growth option:

- Avoid single loading roads, rather, use hydro corridors and natural features as boundaries for urban growth boundaries particularly for Hwy 20 and Hwy 6 (where natural or other physical boundaries are absent, clear and definitive boundaries must be provided);
- Explore opportunities to reshape the employment area around the airport (Deferral 11 Area, Greenbelt and Highway 6 area) to provide more continuous development while providing appropriate residential/employment area separators;
- Explore opportunities to enhance the employment growth near the airport and along the Highway 6 corridor;
- Identify and protect corridors for goods movement;
- Identify and protect local greenspace within the existing urban area;
- Refine intensification levels to ensure they can be realistically implemented with appropriate policy and incentive interventions that are within the control of the City;
- Phasing and implementation strategies should include a focus on quickly improving the City's adverse jobs-housing balance;
- Implementation strategies should emphasize that employment lands should be developed before residential areas (hierarchy and orderly planned and phased development);
- Implementation strategy should acknowledge that the nodes and corridors will require special design policies/guideline and considerations addressed through a secondary plan process;
- Implementation strategies need to articulate how social services planning will be addressed (especially in areas that will be subject to intensification);
- Implementation strategies should contain some principles/policy statements on phasing and

staging such as no urban expansion until a secondary plan and infrastructure delivery strategy are completed;
- Further analysis should also look at whether or not the City can afford this type of built environment, from a development charges/tax base standpoint;
- The communication strategy for GRIDS needs to emphasize that the preferred option reflects complete support for the necessary linkages among intensification, transit and urban expansion (as opposed to just urban expansion).

Appendix G contains the detailed results of the TBL evaluation. The following section describes refinements to the preferred option.

5.0 Refinement of Preferred Option

Following the TBL evaluation, City staff met to review the outcomes and recommendations to refine the preferred option. Refinements to Option 5 deal with the growth forecasts, intensification, nodes and corridor structure and employment lands. The following is a brief summary of recommendations leading to the refinement of the preferred option.

5.1 Provincial Growth Forecasts

The original nodes and corridors growth option targeted the City of Hamilton with 100,000 units by 2031 (see Option 5 summary in Section 3.7). This forecast was based on the More Compact Scenario presented in Hemson Consulting's *Growth Outlook for the Greater Golden Horseshoe*. The first version of *the Places to Grow Plan* allowed for some flexibility in the application of growth figures at a local level (hence the application of both the Compact and More Compact Scenarios for the growth options). In November 2005 the Province released it's draft version of *Places to Grow* which states that when planning for growth municipalities must use the forecasts in *Places to Grow.* Hamilton's long term forecast contained in Places to Grow is 80,000 units. Based on the direction provided by the Province, the preferred growth option will plan for 80,000 units by 2031.

5.2 Intensification

As noted earlier, Option 5 Nodes & Corridors envisioned an intensification level of 42,000 units by 2031. 42,000 units represented an estimated supply of intensification units that could hypothetically be accommodated through the development and redevelopment of existing node and corridor areas (including a portion of stable residential areas on the periphery of these nodes) within the urban area but would require the redevelopment at much higher densities than typical. As part of the residential intensification background work, the City retained Clayton Research to examine market conditions for intensification in Hamilton. Clayton Research generated intensification unit estimates based on local housing formation, demographic, economic and past intensification trends in Hamilton. Clayton Research estimated the demand for intensification in Hamilton to be approximately 26,500

units. The estimate approaches the 40 percent intensification level expressed in the Province's draft *Places to Grow Plan*. Upon adoption of the final *Places to Grow Plan* the City will test intensification projections against the provincial targets.

Due to amenity/lifestyle/economic reasons, it was not considered likely that the City will experience levels of intensification beyond the demand range generated by Clayton. Employment growth and the demand for intensification-type housing by specific demographic sectors (particularly empty-nesters) are key drivers of intensification. Given the uncertain nature of both these drivers, City Staff considered it prudent to take a conservative approach to anticipating intensification performance over the planning period.

The 26,500 unit level of intensification was derived by considering the potential supply of intensification across the City, maintaining all the full potential supply identified in the node and corridor areas and factoring the remainder of the potential outside the node and corridor areas down to reach the 26,500 level. These estimates represent a potential intensification supply for planning purposes. Identification of specific intensification opportunities would occur through secondary planning exercises of potential intensification areas in the future. The following level of intensification will, therefore, be used for the preferred growth scenario:

Table 22: Revised Level of Intensification (by unit type)

Year	Singles/ Semis	Row	Apartments	Total
2011	650	800	280	1,730
2021	1,140	3,890	2,240	7,270
2031	2,220	5,860	9,420	17,500
Total	4,010	10,550	11,940	26,500

The overall intensification projection for City of Hamilton by 2031 is estimated to be 26,500 units. As **Table 22** indicates, the level of intensification begins to increase after 2011, increasing from 1,730 units between 2006-2011 to 7,270 units between 2011 and 2021. The majority of the 26,500 intensification units will be targeted

around key nodes and corridors. Some nodes and corridors are targeted for higher levels of intensification than others due to the anticipated function or physical characteristics of the various nodes.

5.3 Nodes and Corridor Structure

A node is a central focus or core that centres a community. Nodes often contain a mix of commercial, residential and civic buildings, open spaces or commons. The size of a node is dependent on the number of people living and working within the area and can range considerably. Access to and within a node is crucial in defining the space as a node. One of the fundamental characteristics of a node is it's role as a major hub within the transit network, meaning that the space is linked to other nodes within a larger urban region. Access to a variety of spaces within the node should facilitate a range of transportation modes, including walking, bicycling, transit and automobiles.

Preliminary results from the *Commercial Strategy Study* (currently being undertaken by the City) characterize Hamilton as being organized around a series of nodes and corridors and that future policy for the City should support and reinforce these nodes and corridors. Also, the *Places to Grow Plan* emphasizes that intensification should be used as a tool to create complete communities that can offer a wide variety of uses and functions. Accordingly, intensification potential for Hamilton focuses on areas with a long-term opportunity to evolve into complete communities. Areas such as downtown Hamilton, the historic downtowns, key commercial service centres and major road corridors that link all of these areas together exhibit both the physical potential for additional residential units and the potential for developing a critical mass to support transit and a range of activities that are envisioned to take place in these areas (i.e. retail, recreation, health and education services, major office, worship etc.). The majority of the 26,500 intensification units will be targeted around key nodes and corridors.

The recommended structure of the nodes and corridors system is as follows:

- Regional Node (Downtown Hamilton);
- Commercial Service Node (Limeridge Mall, Eastgate and Centre Mall)
- Community Node (historic downtowns of Stoney Creek, Waterdown, Ancaster, Dundas and a new node at Upper Centennial and Highway 20);
- Corridors (Barton Street, Centennial Parkway, Concession Street, James Street/Upper James Street, King Street, Main Street, Main Street West, Rymal Road and Queenston Road/Highway 8).

Within each of these nodes and corridors, mixed use will be permitted and encouraged. Downtown Hamilton is considered to be the pre-eminent node containing the broadest mix of uses. It is a destination with a regional focus and is one of the regional economic hubs of the area. Unique one of a kind facilities, such as the Art Gallery, should be located in the Downtown to support its status as the primary node in the City. Other uses envisioned for this area include major government and private administrative offices, residential uses, cultural and entertainment facilities and retail/commercial activities. The anticipated level of intensification in and around the downtown Hamilton is estimated to be 10,000 units. The projected growth for downtown Hamilton is also consistent with the province's density requirement of 200 people and jobs per hectare in downtown Hamilton as stated in *Places to Grow*.

Commercial Service Nodes provide a broad range of retail, service, entertainment, recreational, medical office and service office uses to a large portion of the municipality. A broad range of retail servicing uses such as large regional and sub-regional serving stores including malls, department stores, superstores, warehouse membership clubs, retail warehouses and home improvement centres. Mixing of uses on retail sites or on surrounding properties would be permitted, along with higher residential densities within a short radius of the centre will also be encouraged.

Community Nodes are the historic downtowns of the former municipalities that now comprise the City of Hamilton. They have all the characteristics of Regional

Nodes except on a much smaller scale. These centres have pedestrian oriented mainstreets and provide local retail functions and specialty retail. These areas are already well-served by transit and are surrounded by stable residential areas. These areas are expected to absorb a level of intensification that will enhance services and further promote live-work opportunities, while at the same time maintaining the look and feel of a historic downtown.

In addition to above, the City also has a number of smaller areas that can better be characterized as activity centres and have less potential to evolve into complete communities for a variety of site specific reasons. Examples of such areas are Meadowlands and McMaster University. Although these areas are not formally recognized as nodes, they do figure into plans for future transit service and also include a limited amount of intensification.

Corridors identified for intensification are envisioned to contain a broad mix of uses, including higher-density residential, retail, institutional and recreation uses. These corridors will also contain some form of higher order bus transit services that links the nodes together, allowing people to move easily from place to place. A hierarchy of corridors will need to be identified. A conceptual corridor hierarchy is illustrated on **Figure 10**, showing higher order transit, additional and local corridors. At a later date, a more formalized approach will be required to develop a corridor hierarchy beyond the conceptual level presented here. A more detailed look at corridor should also include consideration for goods movement corridors, which are to be addressed in the City's transportation infrastructure master plan.

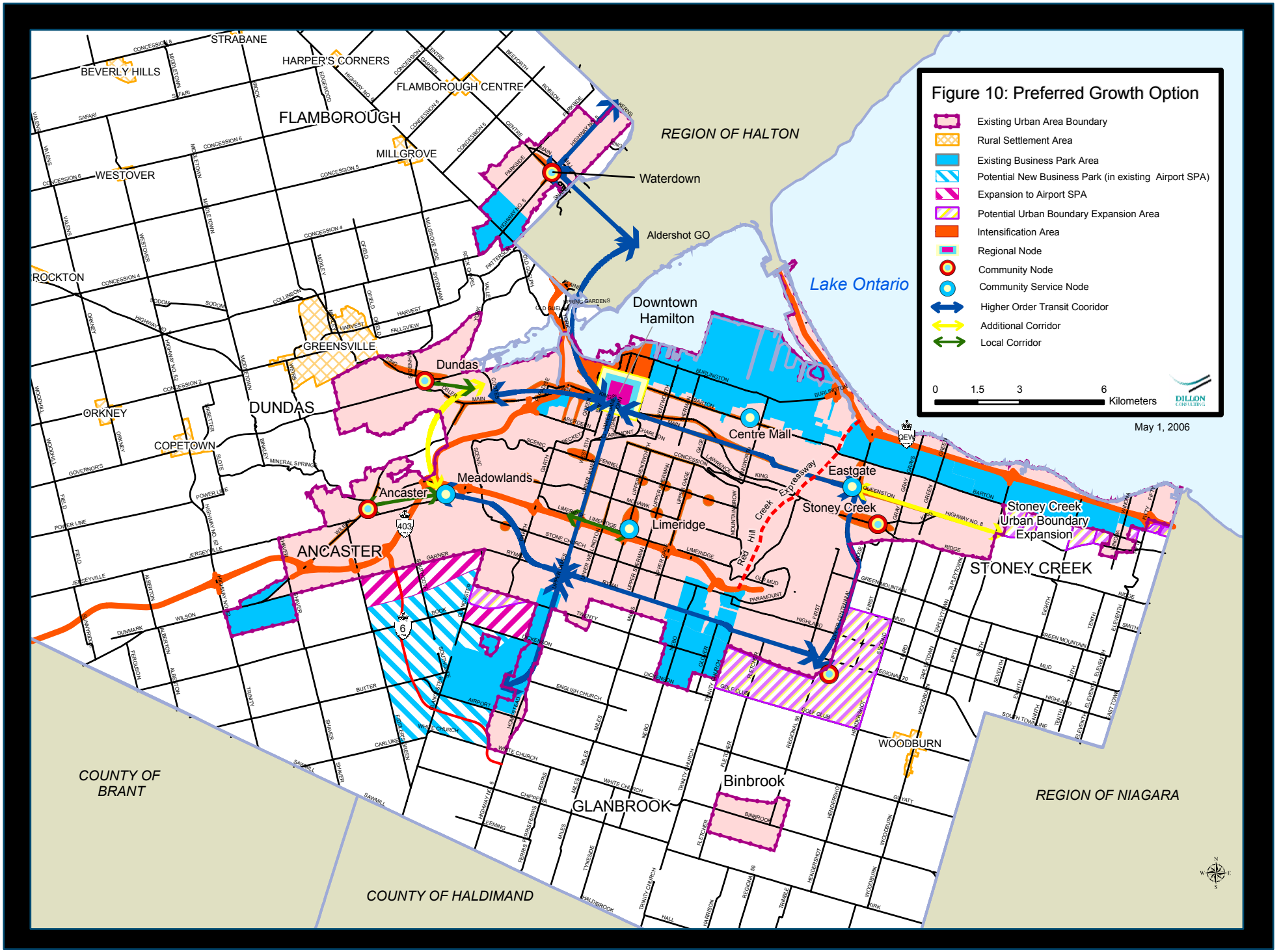


Figure 10: Preferred Growth Option
Existing Urban Area Boundary
Rural Settlement Area
Existing Business Park Area
Potential New Business Park (in existing Airport SPA)
Expansion to Airport SPA
Potential Urban Boundary Expansion Area
Intensification Area
Regional Node
Community Node
Community Service Node
Higher Order Transit Cooridor
Additional Corridor
Local Corridor
0 1.5 3 6 Kilometers
DILLON CONSULTING
May 1, 2006
REGION OF HALTON
Lake Ontario
Waterdown
Aldershot GO
Downtown Hamilton
Centre Mall
Eastgate
Stoney Creek
Stoney Creek Urban Boundary Expansion
Limeridge
Meadowlands
Ancaster
Dundas
Red Hill Creek Expressway
STRABANE
BEVERLY HILLS
HARPER'S CORNERS
FLAMBOROUGH CENTRE
FLAMBOROUGH
MILLGROVE
WESTOVER
ROCKTON
GREENSVILLE
DUNDAS
ORKNEY
COPETOWN
ANCASTER
STONEY CREEK
WOODBURN
GLANBROOK
Binbrook
COUNTY OF BRANT
COUNTY OF HALDIMAND
REGION OF NIAGARA

5.4 Employment Lands

Hemson Consulting's employment lands study for the City of Hamilton stated that the City has a shortage of employment lands. The shortage of employment lands is currently being addressed through the creation of a Special Policy Area (airport lands) in the south-central part of the City. Preliminary plans for this area are consistent with the 2005 Economic Development Strategy, that envisions the creation of a multi-functional employment park to support existing airport and airport related activities.

Throughout the GRIDS consultation process concern was raised about the potential for isolation and dislocation of these lands from the rest of City. Some stakeholders were concerned that the location of the new lands would further promote automobile transportation and discourage transit opportunities. Others also felt that the portion of unconstrained lands between the airport employment lands and the existing urban boundary would generate pressures for new residential development. It is recommended that the airport SPA boundary be extended to include the unconstrained areas to north of the current SPA to reduce opportunities for future land use conflict and land fragmentation. A comprehensive secondary plan will be completed for the SPA defining land use (including the future employment land area), phasing and infrastructure.
The recommendation for the preferred growth strategy is as follows:

- Airport Special Policy Area to be amended to include the lands south of Garner Road, east of Fiddler's Green and west of Glancaster Road.

The addition of these lands to airport employment area should also bring the job market closer to residential the area, with the potential for opportunities to integrate these areas into the transit system. Furthermore, this development should eliminate the potential for pressure for residential development in this area. Note that real opportunities for residential development near the SPA are limited because of the presence of Hamilton International Airport and noise levels associated with its

operation, however, this area could provide a buffer or transition zone between existing residential neighbourhoods and future employment land uses.

At the time of adoption of the Official Plan, Amendments relating to the airport Special Policy Area dealt with future employment land uses in and around the Hamilton International Airport, and laid out the planning process. Specifically, the first step in the planning process was the creation of a Community Liaison Committee (CLC) composed of homeowners, the agricultural community, the Ward Councillors, and other appropriate representatives. This group will be the steering committee for the secondary planning process, and the CLC will be guided by the following principles in developing the secondary plan:

- maintenance of existing property rights;
- the protection of environmentally significant features;
- the provision of appropriate buffering to maintain the quality of life within existing non-farm residential areas;
- the protection of heritage features;
- and any other principles deemed appropriate by the steering committee.

As part of the overall growth management strategy, this process should be retained.

Figure 10 displays the preferred growth strategy for the City of Hamilton.

The City preferred growth option features the following highlights:

- A nodes and corridors structure accommodating 80,000 units by 2031;
- 58,400 units within the existing urban boundary (26,500 units of intensification, 31,900 on vacant lands);
- An additional 21,600 new units through urban boundary expansion in;
    - SCUBE (230 net hectares) to recognize previously approved Council decision for an urban boundary expansion in Stoney Creek;

  - A new community node in south Flamborough at the corner of Upper Centennial and Highway 20 (1130 net hectares);
  - Small expansion to round out existing neighbourhoods between the airport employment area and existing residential area (95 net hectares) south of Highway 20 and east of Glancaster Road in the Deferral 11 area of the Regional Official Plan;
- An additional 1050 gross hectares of employment land in and around Hamilton International Airport within the proposed Airport Special Policy Area (see **Figure 10**).

5.5 Phasing and Staging

The issues of "where" and "how" the City of Hamilton will grow over the next 25 years have already been discussed. Equally important is "when" will growth occur. The following section will address the phasing and staging of development.

As noted in Section 1.0 of this report, the majority of the projected household growth can be accommodated within the existing urban area of the City of Hamilton (i.e. through residential intensification and on existing vacant, but not developed, lands). An urban boundary expansion is not warranted in the short term because of the available unit supply within the existing urban area (31,911 in vacant land inventory, 26,500 of intensification potential). In this respect the City meets the *Provincial Policy Statement's* requirement to maintain at least a ten year supply of designated land and a three year supply of serviced land for new residential development. In addition, through the resolution of localized servicing constraints as part of the "shovel-ready" industrial land program, opportunities to accommodate industrial land demands in the Stoney Creek, Ancaster and Glanbrook Industrial business parks are being created.

The staging of new growth areas is directly related to the realization of the type of community envisioned in *Vision 2020*. A more vibrant, compact, transit-efficient forms of development, the achievement of the 40 percent intensification objective of the draft *Places to Grow Plan*,

and the co-ordination of infrastructure investments are directly linked to the phasing and staging of development.

The *2005 Provincial Policy Statement* directs municipalities to maintain a range and choice of suitable sites for employment uses and to maintain at all times the ability to accommodate residential growth for a minimum through intensification and designated vacant lands.

In addition to the above, a wide range of issues will affect the phasing of development over the next twenty five years, such as:

- Evolution of job-housing mix;
- Neighbourhood demographic changes;
- Market demand for housing types;
- Development market supply constraints;
- Availability of infrastructure (water and wastewater, transportation and stormwater services).

Although the above issues will affect phasing of development, the City does posses several key implementation tools. Implementation tools will ensure that development occurs in a manner that is consistent with both local policy and provincial policy. The following is a list of potential implementation tools to define and manage phasing of growth over time:

- Ongoing public consultation and education;
- New Official Plan;
- New Zoning By-law;
- Infrastructure master plans (water and waste-water, transportation, stormwater);
- Parks and recreation master plan;
- Social services master plan;
- Secondary plans;
- Area site plans;
- Urban design guidelines and architectural review board; and
- Neighbourhood design guidelines.

In addition to implementation tools, the City also has to ensure that development continues to occur in a manner

that is consistent with local and provincial policy and therefore will also need to consider monitoring tools. The following is a list of potential monitoring tools:

- Five year review of Official Plan;
- Vision 2020 indicators monitoring; and
- Annual capital budgets.

5.6 Next Steps

The next steps in the GRIDS process are outlined below:

- Final refinement of the preferred option with respect to location/character of nodes and corridors, urban structure, land supply values and environmental constraints;
- Refinement of commercial area locations, character and employment numbers;
- Upon adoption of final *Places to Grow Plan*, testing of targets for intensification and mix of people /jobs;
- Completion of Infrastructure Master Plans for the preferred growth option;
- Completion of social services and environment plans, as appropriate;
- New development charges by-law;
- Completion of OP and policy implementation strategy;
- Completion of secondary plans and design guidelines.

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Photos are courtesy of Dillon Consulting Limited, City of Hamilton and Dennis R. McGreal.

7.0 Glossary

Affordable Housing
In the case of ownership of housing, the least expensive of:

i) Housing for which the purchase price results in annual accommodation cost which do not exceed 30% of the gross annual household income for low and moderate income households; or
ii) Housing for which the purchase price is at least 10% below the average purchase price of a resale unit in the regional market area.

In the case of renting, the least expensive of:

i) A unit for which the rental cost does not exceed 30% of gross annual household income for low and moderate income households; or
ii) A unit for which the rent is at or below the average market rent of a unit in the regional market area.
Source: From the *Provincial Policy Statement.*

Agricultural Land
Defined 'Prime agricultural area' in PPS: means areas where prime agricultural land predominates. Prime agricultural areas may also be identified through an alternative agricultural land evaluation system approved by the Province.
Source: Provincial Policy Statement

Alternative Energy Systems
Generation sources that produce electrical power from renewable resources such as solar or wind energy.
Source: Provincial Policy Statement

Brownfield
Lands that may include vacant, underused or abandoned industrial buildings, gas stations, or old mining and forestry sites in rural settings. These lands are ideal for intensification for industrial, commercial or residential uses.
Source: Places to Grow Discussion Paper

Built Boundary

The edge of the developed urban area.
Source: Places to Grow Plan

Compact Development
Compact development is a land-use pattern of medium- and high-density urban development that encourages efficient use of land, walkable neighbourhoods, mixed land uses (residential, retail, workplace and institutional all within one neighbourhood), proximity to transit and reduced need for infrastructure. "Compact" is a relative term and will mean different effective densities in small towns as compared to big cities. Compact development does not necessarily mean high-rise development.
Source: Places To Grow Discussion Paper

Connections/Connectivity
The degree to which key natural heritage or key hydrologic features are connected to one another by links such as plant and animal movement corridors, hydrologic and nutrient cycling, genetic transfer, and energy flow through food webs.
Source: Draft Greenbelt Plan

Eco-efficient
Eco-efficiency is a management strategy that links financial and environmental performance to create more value with less ecological impact. Eco-efficiency can be achieved through:
Optimized processes - moving from costly end-of-pipe solutions to approaches that prevent pollution in the first place.
Waste recycling - using the by-products and wastes of one industry as raw materials and resources for another, thus creating zero waste
Eco-innovation - manufacturing "smarter" by using new knowledge to make old products more resource-efficient to produce and use.
New services - for instance, leasing products rather than selling them, which changes companies' perceptions, spurring a shift to product durability and recycling.
Networks and virtual organizations - shared resources increase the effective use of physical assets.
Source: World Business Council for Sustainable Development

Environmental amenities
Are environmental resources (e.g., agriculture, natural areas, waterfront) that contribute to a high quality of life, making Hamilton a desirable place to live and do business.

Employment Lands
Lands zoned or designated within settlement areas for employment uses. These lands may be located outside of a designated employment area.
Source: Places to Grow Plan

Equity/Equitable
Does not mean that all residents should receive the same public services, but rather asserts that those residents with the greatest needs should benefit from a greater share of public services.

Full-Cost Pricing
Considers all of the operating and capital costs of an asset (usually hard infrastructure) over its useful life.
Source: Places to Grow Discussion Paper

Greenbelt Area
The geographic area defined by Ontario Regulation 59/05 as provided by the *Greenbelt Act*, 2005.

Greenfield Development
Term used to describe new urban development in areas that were formerly rural.

Greyfields
Former and underused retail developments. Greyfields are good candidates for intensification as they are often located along key transportation routes.
Source: Places to Grow Discussion Paper

Hazard Lands
All lands having inherent environmental hazards, such as flood susceptibility, erosion susceptibility, or any other physical condition which is severe enough to cause property damage and/or potential loss of life if those lands were to be developed.
Source: Hamilton-Wentworth Official Plan (2003 consolidated)

High Order Transit/Rapid Transit
Transit that operates in its own right-of-way, outside of mixed traffic, and therefore can achieve a frequency of service greater than mixed-traffic transit. High order transit can include heavy rail (subway), light rail (street car), and buses in separate rights-of-way.
Source: Shape the Future (Central Ontario Smart Growth Panel)

Infill
The term generally refers to small-scale development or redevelopment on vacant or underused land within built-up areas of existing communities, where infrastructure is already in place.
Source: Places To Grow Discussion Paper

Infrastructure
The basic systems and services that a region or organization requires in order to operate effectively. Infrastructure is typically described in two categories: hard and soft. Hard infrastructure is traditionally defined as physical structures, such as roads and highways, transit, airports, ports, water and sewage treatment facilities, schools, hospitals and telecommunications hardware. Soft infrastructure is traditionally defined as the programs and services provided in a community, such as skills training, health care and education.
Source: Places to Grow Discussion Paper

Intensification
The term generally refers to larger scale development or redevelopment within existing urbanized areas that has the effect of increasing the density within an area.
Source: Places To Grow Discussion Paper

Natural Heritage Features
Natural Heritage features located within the natural heritage system include the following and are subjected to [section 3.2.4 of the Greenbelt Draft Plan]:
Significant Habitat if endangered threatened and provincially rare species;
Fish Habitat;
Wetlands;

Life Science Areas of Natural and Scientific Interest (ANSIs);
Significant valleylands;
Significant woodlands;
Significant wildlife habitat;
Sand barrens, savannahs and tall grass prairies, and Alvars.
Source: Draft Greenbelt Plan

Life-Cycle Pricing
Considers the full spectrum of costs, benefits, and impacts on the community over the long term, including maintenance, environmental and social impacts, and financing methods.
Source: Places to Grow Discussion Paper

Multi-Modal Transportation System
A transportation system which may include several forms of transportation such as automobiles, walking, truck, cycling, bus, rapid transit, and rail, air, marine and pipelines
Source: Provincial Policy Statement

Natural Areas
Natural heritage features and areas: means features and areas, such as significant wetlands, fish habitat, significant woodlands south and east of the Canadian Shield, significant valleylands south and east of the Canadian Shield, significant habitat of endangered and threatened species, significant wildlife habitat, and significant areas of natural and scientific interest, which are important for their environmental and social values as a legacy of the natural landscapes of an area
Source: Provincial Policy Statement

Natural Heritage System
A system of natural core areas and key natural corridors or linkages, such as rivers and valleys, with significant ecological value. They collectively perform important ecological functions, such as providing habitat and improving air and water quality.
Source: Places To Grow Discussion Paper

Precautionary Principle

Where there are threats of serious or irreversible damage, scientific uncertainty shall not be used to postpone cost-effective measures to prevent environmental degradation.
Source: Rio Declaration of 1992

Prime Agricultural Area
Areas where prime agricultural areas predominate, as defined by the City of Hamilton's LEAR Study.

Public services
Programs and services provided or subsidized by a government or other public body. Examples include social assistance, recreation, police and fire protection, health and education programs, and cultural services.
Source: Provincial Policy Statement

Redevelopment
The creation of new residential or non-residential units on previously developed land in existing communities, including brownfields and greyfields.
Source: Provincial Policy Statement

Regional Nodes
Regional nodes are discrete areas within urban centers that have compact, mixed-use (residential, commercial, and institutional) development and service the surrounding areas. They are located within urban centers, are accessible by high order transit, and a good road network, and exhibit high quality urban design.
Source: Shape the Future (Central Ontario Smart Growth Panel)

Rural Land/Area
Means lands in the rural area which are located outside settlement areas and which are outside prime agricultural areas.
Source: Provincial Policy Statement

Settlement Areas
Lands designated through the municipal planning process for building or development—urban, suburban, or rural. This includes all development, ranging from dense urban to hamlets and other small residential development.
Source: Places to Grow Discussion Paper

Source Water Protection
Source water protection is the first barrier in a multi-barrier approach to protecting the water in Ontario's lakes, rivers and underground aquifers. Source water protection complements water treatment by reducing the risk that water gets contaminated in the first place. Watershed-based planning takes the natural boundaries of surface and groundwater into consideration, rather than man-made lines drawn on a map.
Source: Places to Grow Discussion Paper

Vegetation Protection Zone
A vegetated buffer surrounding a key natural feature within which only those land uses within the feature itself are permitted. The width of the vegetative protection zone in to be determined when new development or site alteration occurs within 120 meters of a key natural feature and is to be of sufficient size to protect the feature and its functions from the impacts of the proposed change and associated activities that will occur before, during and after construction, and where possible, restore or enhance the feature and/or its function.
Source: Draft Greenbelt Plan

Appendix A: Description of Growth Concepts

City of Hamilton
GRIDS - Growth Options

Final Working Paper
February 15, 2005

04-3646

Submitted by

Dillon Consulting Limited

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February 15, 2005

The City of Hamilton
Office of the City Manager
71 Main Street West
Hamilton, Ontario L8P 4Y5

Attention: Mr. Stephen Robichaud, Manager

Regarding GRIDS Growth Options

Dear Mr. Robichaud:

We are pleased to provide you with three (3) copies of our Final Report for the GRIDS Growth Options study. We have enjoyed working with you on this challenging project and look forward to working with you in the future on other GRIDS initiatives.

We trust that you will find our report in order. Should you have any questions regarding the enclosed, please feel free to contact the undersigned.

Yours sincerely,

DILLON CONSULTING LIMITED

Karla Kolli, BES
Associate & Project Manager

Encl.

TABLE OF CONTENTS

Page

List of Tables in Working Paper

List of Tables Appended to Working Paper

1.0 INTRODUCTION

The City of Hamilton retained Dillon Consulting Limited to create development/density options and associated land requirements as part of GRIDS for consideration in the ongoing New Official Plan, and infrastructure Master Plan work. This work is the first step in building geographically based scenarios. It provides building blocks for where growth should occur in the City of Hamilton.

The work has been based on the population projections developed by the Province of Ontario related to the provincial "Places to Grow" initiative. Three population scenarios were developed by Hemson Consulting reflecting the current trend, compact growth and more compact growth. Based on the more compact scenario, the City of Hamilton is expected to grow by approximately 190,000 people or 100,000 households by 2031 from a total population of 510,000 (2001) to a population of 700,000 (2031).

Based on a June 2004 report to Committee, Council confirmed the need for new employment land areas totaling 285 ha (704 acres) of general employment and 400-800 ha (988-1977 acres) of additional employment lands in the vicinity of the airport. This information was also used in this working paper. The Province of Ontario population projections identified that for the more compact scenario, the City of Hamilton will add approximately 104,000 jobs.

The purpose of this working paper is to describe the steps that were taken to create the development/density options and identify their characteristics for further discussion and evaluation. The paper is divided into the following sections:

- Growth options (residential and employment);
- Methodology; and,
- Conclusions.

2.0 GROWTH OPTIONS

2.1 RESIDENTIAL GROWTH OPTIONS

The following options were created to represent different residential growth patterns for the future city. Six basic options were devised, some of which have different density scenarios. They are described as follows:

Option 1: Status Quo – This option represents current development patterns. It allows the continuation of new development at the low densities Hamilton is currently experiencing with some allocation for infill (approx. 17%). As has been the case to date, this approach results in requests to the City for expansion of the urban boundary based on housing market demand. A similar scenario with slightly higher densities was also tested.

Option 2: No Expansion – Fits all the projected residential growth into the existing urban boundary. It will include significantly higher densities than currently experienced or proposed by the province in the vacant areas within the urban boundary (approx. 138% over the current gross average density). This Option will also include 40% infill in the existing built-up area.

Option 3: Distributed Development – This option accommodates the 40% intensification target set by the Province with a slightly higher intensification (60%) in the new areas. It allows for some urban expansion. The urban expansion is distributed relatively evenly among the former municipalities.

Option 4: Downtown Focus – This option directs additional population to the downtown area of Hamilton.[1] For the purposes of comparison, two downtown focus density scenarios have been created. Generally, the downtown focus option involves allocating an additional 5,000 units to the downtown.[2] In addition, the high density scenario involves building out the planned area at a higher density (approx. 75% higher than current) while the medium density scenario involves building out the planned area at a more modest density (approx. 60% higher than current). Both density scenarios result in some need for additional urban land.

Option 5: Nodal/Corridor Focus – This option involves directing growth to certain locations to create community nodes or along transit/transportation corridors. The option assumes approximately 48,000 units (48%) of infill in the downtown node and other nodes in the built-up area of Hamilton. The location of these corridors or nodes have not been determined, however, nodes identified in the former Region of Hamilton-Wentworth Transportation Master Plan were used to assist in defining the assumptions used to analyze this option.

[1] In considering the downtown focus options, it was anticipated that the "downtown" comprises existing built-up core areas in the new City of Hamilton but the wholesale redevelopment of existing stable residential neighbourhoods would be avoided.
[2] It should be noted that this totals approximately 45,000 units (or 45%) developed through in-fill and intensification in the downtown.

Option 6: Build to Limit and Stop – The premise of this option is that the City of Hamilton allows growth to occur, but no further growth is allowed once the current urban boundary is met. Two density scenarios have been created. The first scenario builds out the planned area with a full range of low, medium and high density housing units. The second scenario, builds out the planned area with only medium and high density housing units. Both options accommodate the provincial 40% intensification target through infill and increased density in newly developed areas.

While each growth scenario (status quo, no expansion, etc.) was tested against each population projection (current trends, compact, more compact), the summary of our analysis uses the population projection scenario which is most reflective of the philosophy of a growth option (e.g. for the "Status Quo" option the "Current Trend" population projection is most appropriate). ***Table 1*** summarizes the population/growth forecast and intensification assumptions used for each scenario.

Table 1: Summary of Growth Option Assumptions

Growth Option		**Assumptions**		
		Provincial Growth Forecast	**Intensification in Built Area (infill)**	**Intensification in New Growth Area (density increase over Status Quo)**
1	Status Quo	Current Trend Forecast (80,000 households; housing mix focused on singles and semis)	14,000 infill (17.5%)	Status quo densities for new development
	Status Quo (higher density)	Compact Forecast (80,000 population; housing mix focus shifts to more row and apartments)	14,000 infill (17.5%)	25% higher
2	No Expansion	Current Trend Forecast (80,000 households)	32,000 infill (40%)	Tied to market demand
3	Distributed Development	More Compact Forecast (100,000 households)	40,000 infill (40%)	60% higher
4	Downtown Focus (high density scenario)	More Compact Forecast (100,000 households)	45,000 infill (45%)	75% higher
	Downtown Focus (low density scenario)	More Compact Forecast (100,000 households)	45,000 infill (45%)	60% higher
5	Nodal Focus	More Compact Forecast (100,000 households)	47,750 (48%)	40% higher
6	Build to Limit and Stop	Compact Forecast (80,000 households)	32,000 infill (40%)	40% higher
	Build to Limit and Stop (no more low density)	Compact Forecast (80,000 households)	32,000 infill (40%)	40% higher

2.2 EMPLOYMENT GROWTH OPTIONS

The employment growth options were developed around the economic clusters identified in the City of Hamilton Economic Development Strategy:

Traditional Industry Clusters

- Advanced Manufacturing
- Agriculture/Food and Beverage Processing
- Port Related Industry/Business

Emerging Clusters

- Aerotropolis (Development surrounding the airport)
- Biotechnology and Biomedical
- Film and Cultural Industries

Non-Traditional Clusters

- Tourism
- Downtown

As noted previously in this report, Council confirmed the need for new employment land areas totaling 285 ha of general employment and 400-800 ha of additional employment lands in the vicinity of the airport. This land demand has been considered in all of the scenarios.

3.0 METHODOLOGY

Generally, our analysis is focused on better understanding the characteristics of the growth options and their land needs. In addition, consideration was given to what extent the growth options reflect the nine GRIDS Directions that have been established.

Through discussion with the City of Hamilton, staff advised that the following principles be applied to all growth options. Some of these principles are relevant to this stage of the analysis while others will be relevant at the point when options are geographically identified.

- Natural areas protected under the Provincial Policy Statement will remain as protected areas;
- Industrial lands remain for industry;
- No redesignation of older industrial areas;
- Stable residential lands will be protected to the extent possible;
- No redesignation of Niagara Escarpment lands; and,
- Urban development is fully serviced.

3.1 RESIDENTIAL

For this analysis, the residential growth options were characterized and the following questions were posed:

1) What does each option mean in terms of land needs, density and development form?

2) How well does each option meet the GRIDS Directions?

3) What key policies, programs, etc., are needed for implementation?

The following documents the work undertaken to respond to each of the above questions. The results are summarized in ***Table A – Residential Growth Options*** at the end of the working paper.

Land Needs, Density and Development Form

To determine the development form (i.e. low, medium and high density housing requirements and commercial/retail needs), development density and any additional urban land needs, the following steps were undertaken:

- **Identify Housing Demand** – The Provincial population projections (The Growth Outlook for the Greater Golden Horseshoe, January 2005) established three population scenarios for the City of Hamilton to 2031. Each scenario included different allocations to low, medium and high density housing types as shown in the ***Table 2***.

For each of the growth options identified, the population that best matched the philosophy of the growth option was used as discussed in ***Section 2.1*** and ***Table 1***. It is noted that we have reduced the number of new households required by roughly 7,000 units to account for housing starts (i.e. new units which have been constructed) in the three year period between the initial population forecast date (2001) and today.

Table 2: Provincial Population Projections for 2031

Population Scenario	2031 Total Population	Change in # of Households (2001-2031)	Housing units			
			Singles	Semis	Row	Apartments
Current Trend	660,000	80,000	40,000	6,000	16,000	18,000
Compact	660,000	80,000	34,000	7,000	17,000	22,000
More Compact	700,000	100,000	31,000	10,000	23,000	36,000

- **Identify Housing Supply** – Housing supply is made up of three components: (i) "approved" development; (ii) lands within the urban area that have been identified for future development but which do not yet have any specific plans; and, (iii) infill / intensification.

  1) The number of "approved" low, medium and high density units provided through draft approved and pending plans of subdivision was identified by the City of Hamilton. This information is consistent for all options and comprises approximately 12,251 "approved" residential units[3].

  2) The Official Plans and Secondary Plans for the City of Hamilton designate approximately 1873 acres (758 hectares) of land for future residential development[4]. For the analysis, it was assumed that the acreage of lands designated for low, medium and high density residential development remained constant. As a result, different units-per-acre assumptions were made for low, medium and high density development to determine the number of residential units that this land could accommodate for future growth. It should be noted that the "status quo" density is based on the City's estimated number of units and acres of lands designated for future growth but not currently subject to a development application. Other options include densities of 40% or greater to meet targets proposed in "Places to Grow" and reflect direction intended with each of the growth options. The following ***Table 3*** summarizes the various densities used in the analysis. The expected housing form resulting from these densities is indicated in ***Table A*** at the end of this report.

[3] (Source: City of Hamilton Year End 2004 Vacant Residential Urban Land Area and Unit Potential, January 7, 2005)
[4] (Source: City of Hamilton Year End 2004 Vacant Residential Urban Land Area and Unit Potential, January 7, 2005)

Table 3: Gross Density Assumptions in Units Per Acre						
Residential Housing Type	**Option 1: Status Quo** (Scenario A / B)	**Option 2: No Expansion**	**Option 3: Distributed Develop-ment**	**Option 4: Downtown Focus** (Scenario A / B)	**Option 5: Nodal/ Corridor Focus**	**Option 6: Build to Limit and Stop** (Scenario A / B)
Low (singles/semis)	7.64/9.55	21.20[5]	12.22	13.37/12.22	10.70	10.70 / 0.0
Medium (row)	15.44/19.30	21.62	24.71	27.03/24.71	21.62	21.62/21.62
High (apartments)	29.30 / 36.62	35.36	46.88	51.27/46.88	41.02	41.02/41.02

3) To meet City objectives for Downtown revitalization and provincial policies, all options include aggressive infill. As directed by the City of Hamilton, the potential for infill was established at a minimum of 14,000 units for all options. This infill however, does not meet the Province of Ontario 40% intensification target established through *Places to Grow* so for a number of the scenarios a higher number of units were allocated to infill (see Table 1). For simplicity, this infill potential was assumed to be evenly distributed between medium density units within existing suburban areas, medium density units within the Downtown/Core areas, high density units within the Downtown/Core Areas, and high density units within the West Harbour area.

- **Identify Unmet Housing Need** – Housing supply was subtracted from demand to identify the unmet housing needs. Using the density targets established in ***Table 3***, the amount of additional land required to accommodate the unmet housing needs was identified.

- **Identify Other Land Needs** –To determine the non-residential land requirements for each option, certain non-residential uses were identified, per-unit ratios were determined for each component, and the ratios were applied to determine the acreage of land needed to satisfy non-residential land requirements. The non-residential uses considered and the ratios applied are summarized in the table below. Unless noted elsewhere in this methodology, ratios were provided by the City of Hamilton.

  In applying the ratios, the calculation of non-residential land areas was based on the residual unmet demand/growth rather than the total demand/growth. This follows the theory that if a certain volume of population or housing units are accommodated through intensification, then it was more likely that new facilities would also be provided for in an intensified manner rather than in the suburban area. For example, if a new 1,000 unit apartment building was constructed as in-fill in downtown Hamilton, then it would be unlikely that a new swimming pool would be built in Ancaster to serve this development.

Table 4: Summary of Non-Residential Land Requirement Ratios

[5] This density is more appropriately aligned with row/townhouse development

Component	Raw Ratio
Parks and public open space	2.95 hectares per 1000 residents
Public and private schools	Ratio considers multiple factors
Community facilities	1 acre per 1000 units
Emergency services	1 acre per 1000 units
Roads and infrastructure	Ratio considers multiple factors
Local / neighbourhood commercial	1 acre per 1000 units
Population-related employment land	1 employee for every 5 persons of population growth; 15 employees per acre

It should be noted that direct acre-per-unit ratios were not available in three instances:

(1) Public and private schools: A more complex formula than acres-per-unit is applied by the school board, and this was used to determine the number of schools and lands for schools for this analysis.

(2) Roads and infrastructure: Areas for roadways were calculated by Dillon, using assumptions based on road right-of-way width and the density of development having frontage along roads.

(3) Population-related employment land: Based on the Hemson report (2003), population-related employment land includes such non-residential uses as grocery stores, small offices, hospitals, etc. which increase in step with population and housing increases. Population-related employment land is separate from employment lands identified in the City's economic development strategy. Ratios from the Hemson report (2003) for employees-per-population and employees-per-acre were applied to the anticipated population growth to determine the overall number of acres. To ensure that there was no double-counting, this acreage was then reduced to account for land included in the previous ratio calculation (e.g. schools, emergency services, etc.).

The type of development form, density assumptions and amount of additional urban land required for residential needs is shown for each of the options in ***Table A***. Detailed calculations are included in ***Table C***.

Preliminary Evaluation of Options for Growth

During the evaluation phase of the growth management process, the growth options will be more fully assessed based on criteria that may include consideration of the GRIDS Directions, the Provincial Policy Statements, other provincial requirements as well as Council priorities.

At this time, information was only collected on whether or not each of the development/density options met the intent of the GRIDS Directions as a starting point for building and comparing options. Each growth option was identified as either meeting the direction (✓), or not meeting the direction (x). Instances where it was difficult to determine whether the GRIDS Direction would be met or not were also noted (O).

The Consultation Report for Phase 1 of the City of Hamilton's Building a Strong Foundation Process provides the details behind the nine directions established for GRIDS, and the New Official Plan process.

The ability to meet the GRIDS Directions and supporting descriptions on how each option aligns with respect to the GRIDS Directions is documented in ***Table A***. This information will be used in the evaluation of growth options.

Implementation Requirements

For some of the options, there are key policy, economic, and/or infrastructure changes that would be required to facilitate implementation. These are also noted in ***Table A.***

3.2 EMPLOYMENT

The City has undertaken a study that projects employment levels and the overall demand for employment lands. The Hemson report "Providing Employment Land in Hamilton – Financial Options" (2003) identifies three types of employment in Hamilton:

Major Office Employment - This is defined as employment located in a free-standing office building of 20,000 sq. ft or more. This comprises approximately 7 percent of Hamilton's employment. The report concludes that major office developments are highly competitive, and Hamilton may find it difficult to attract this type of employment. This employment category was not specifically included in this work for GRIDS, however, some office is likely to be associated with all the economic clusters.

Population-Related Employment - This is employment that exists in response to residential population. It includes retail and other commercial services, community and health care services, schools, hospital, home occupations and local government. This comprises approximately 50 percent of Hamilton's employment. Future growth in this sector will likely grow by an average 1 job per every 5 new residents. This growth in population related

employment has been factored into the land supply requirements for the residential growth options.

Employment Land Employment - This is considered employment in designated employment lands. Currently, 17 percent of the total employment land employment is located outside of the designated business parks. This comprises approximately 43 percent of Hamilton's employment. The Hemson report anticipates that Hamilton will accommodate 65 percent of its future employment growth on employment lands.

The Province of Ontario population projections identified that for the more compact scenario, the City of Hamilton will add approximately 66,000 new jobs that will be housed in major office and employment lands and 37,000 population related jobs.

It is assumed that Hamilton will concentrate employment land growth into the clusters identified in the Economic Development Strategy. As noted above, Council has approved the designation of 285 ha of employment lands plus an additional 400-800 ha associated with the airport[6]. This already identifies the aerotropolis cluster as key to the economic future of the City of Hamilton.

For the employment options, each of the clusters was characterized by answering the following questions:

1) What does each option mean in terms of type of development form and land/location siting requirements?

   Information on the nature of the development for each of the clusters was gathered from the City's Economic Development Strategy and other information sources. Siting requirements were identified based on our understanding of the needs and expectations of different employment options.

2) How well does each option meet the GRIDS Directions?

   As was done for the residential options, each of the clusters was identified as either meeting the GRIDS Directions (✓), not meeting the Directions (x). Instances where it was difficult to determine whether the GRIDS Direction would be met were also noted (O).

3) What key policies, programs, etc., are needed for implementation?

   Any key policy, economic or infrastructure changes that would be required to facilitate implementation of the economic cluster options are noted.

The results are summarized in ***Table B – Employment Growth Options*** at the end of the working paper.

[6] The employment land needs are included in Table A to understand the total land needs for each of the growth options. For the purpose of this exercise, it was assumed that all new employment lands are outside the current urban boundary.

4.0 CONCLUSIONS

Table 5 summarizes the amount of land required for each residential growth option, combined with the employment needs. The additional land requirements shown in the table represent the amount of new land that needs to be added to the City of Hamilton's current urban area to accommodate growth for each option. All options include a minimum of 14,000 units of infill within the existing built area in addition to greenfield development. All options include a mix of employment land, residential land and other lands (i.e. parks and open space, schools, population related employment, etc.).

Table 5: Summary of Land Requirements for Each Growth Option

Growth Option		Population Projection Scenario	Additional Land Requirement (acres)	Average Gross Density (units per ac.)	Total Households Accommodated
1	Status Quo	Current	6451.9	9.18	80,000
	Status Quo (higher density scenario)	Compact	5036.5	11.48	80,000
2	No Expansion	Current	2681.0	21.99	80,000
3	Distributed Development	More compact	4260.8	14.70	100,000
4	Downtown Focus (high density scenario)	More compact	3763.8	16.07	100,000
	Downtown Focus (med. density scenario)	More compact	4020.4	14.07	100,000
5	Nodal Focus	More compact	4434.4	12.86	100,000
6	Build to Limit and Stop	Compact	2681.0	12.86	68,338
	Build to Limit and Stop (no low density housing)	Compact	2681.0	24.86	90,814

It should be noted that the land needs for employment lands are consistent for all options at 2,681 acres. This represents all the land that Hamilton City Council has identified for future employment area. It is noted that some of the employment clusters are likely to be focused within the existing urban boundary (e.g. industrial) and thus would result in a decrease in this acreage for additional urban area lands. Since we do not know how much of the employment lands will be within the urban boundary, all was assumed to be in the new development areas.

Additional urban land for residential growth is needed in all options, with the exception of the No Expansion Option (#2) and the Build to the Limit and Stop Option (#6). The different residential land needs for the growth scenarios varies from approximately 2,310 acres for the Status Quo (low density) to approximately 358 acres for the Downtown Focus (high density option). The variation in this number is based on assumptions related to intensification/density, number of households and housing mix. The Status Quo Option (#1), the No Expansion Option

(#2) and the Build to the Limit and Stop Option (#6) represent the extremes for residential land needs.

The "other land" requirements reflect a significant portion of overall land requirements for all the options ranging from approximately 1,461 acres for the Status Quo Option (#2) to approximately 725 acres for the Downtown Focus (#4 - high density option). The reason for this is that the community services, schools, infrastructure, population related employment, etc., that make up these "other lands" have large land requirements regardless of the residential density. There is no "other land" needs for the No Expansion Option (#2) or the Build to the Limit and Stop Option (#6).

A detailed evaluation of the "long list" of growth options shown in ***Table 5*** has not been undertaken. However, based on an understanding of the constraints to greenfield development in Hamilton (including the Greenbelt, natural environment features, airport restrictions, etc.) and the firm Provincial policy direction towards "smart growth", we believe that some of the initial growth options are not feasible options for further consideration as follows:

1. Even assuming the compact development scenario, the status quo (Option #1), requires a significant amount of land. This is particularly pronounced with the lower density assumptions. It is noted that the provincial direction towards smart growth as documented in "Places to Grow" will not allow for a continuation of the status quo. This option does not meet the intent of the GRIDS Directions.

2. Building out to the existing limits of the City of Hamilton urban area boundary and then permitting no further growth (Option #6) will result in limiting Hamilton's growth to between 68,338 (Option 6A) to 90,814 (Option 6B) additional households. Build to the Limit and Stop Option 6A which includes a mix of housing types does not accommodate the provincial 30 year population projection of 80,000 households for the compact growth scenario. Option 6B will accommodate the population but severely restricts housing choice to medium density (townhouses) or high density (apartments) housing only.

3. In 2001, the City of Hamilton had 190,000 households. Accommodating 80,000 new households within the existing urban boundary (Option #2) would result in a density for singles and semis that is really more appropriate for medium density housing types. Thus, this option also would severely restrict the housing choice available. This option should be retained and tested to determine its real potential for such impacts within the existing urban areas and as a benchmark against which to measure the impacts of the other growth options.

4. The more moderate options (3, 4 and 5) should form the starting point for defining a short list of growth option scenarios for further more detailed consideration. These options represent three different ways to grow the City of Hamilton. All three attempt to minimize the need for more urban land, while applying reasonable

densities to maintain and enhance the character of both the existing urban areas of Hamilton and the planned new urban areas.

It is important to note that the information and numbers in this working paper are based on assumptions that will likely change as more policies and discussions emerge from the provincial "Places to Grow" initiative and other initiatives, and as the City begins to map the growth options. Changes in any one of the variables (i.e. density, infill allocation, housing mix, population target, open space allocations, etc) will change the amount of land needed to accommodate growth. However, this work provides a snapshot of the different ways the City of Hamilton can grow.

Once the options are mapped, they will need to be assessed as to the form and character of development within the built area, within the remaining approved developable lands within the urban boundary and within any necessary expansions beyond the existing urban boundary. Ultimately, care must be taken to find the appropriate balance between: (a) the look and feel of development that is acceptable to the community; and, (b) an acceptable amount of land to bring into the urban fold for future development. Consultation on the options will need to facilitate the dialogue necessary to allow urban, suburban and rural stakeholders to better understand, and thus be better prepared to comment on, the advantages and disadvantages of different growth options.

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Table "A"
GRIDS Residential Growth Options & Summary Matrix

Options & Description		Option 1: Status Quo		Option 2: No Expansion	Option 3: Distributed Development	Option 4: Downtown Focus		Option 5: Nodal Focus	Option 6: Build to Limit and Stop	
Corresponding Map										
		Status Quo	Modest Density Increase	No Expansion	Distributed Development	Downtown high density	Downtown medium density	Nodal Focus	Range of housing units	No more low density
Applicable to all options: - natural areas will be protected - industrial lands remain for industry - stable residential lands will be protected - no redesignation of older industrial areas - no redesignation of Niagara Esc. lands - urban development is fully serviced		Build out at current approved low densities to boundary and expand boundary as required	Development of low and medium density units with slight increase in overall density	Build out at higher density to fit all development into existing urban area	Build out at more modest density to fit most development in existing urban area; allow for some development with an urban area expansion	Allocate growth to downtowns and plan for high density suburban development	Allocate growth to downtowns and plan for medium density suburban development	Allocate growth in downtowns, suburban nodes and corridors, with the remainder in greenfield development	Development to limits of urban area with low and medium density units, but no further growth permitted afterwards	Development to limits of urban area with medium to high density units, but no further growth permitted afterwards
Urban Area Expansion contemplated?		Yes	Yes	No	Yes	Yes	Yes	Yes	No	No
A. What does this mean in terms of:										
1. Type of development form		Existing mix, predominantly single detached	Status quo with smaller lots	Predominantly townhouses, walk-ups and high rises	Single detached on smaller lots	High rise, semis, townhouses and other infill in downtown; smaller lot suburban development	High rise, semis, townhouses and other infill in downtown; smaller lots and semis in suburban areas	High rise, semis, townhouses and other infill in downtown; small lot singles and semis with more intensive townhouse development at nodes and along corridors	Status quo	Townhouses, walk-ups and apartments; no single detached housing.
2. Density of development		Low-7.64 Medium - 15.44 High - 29.3	Low-9.55 Medium - 19.30 High - 36.62	Low - 21.20 Medium - 21.62 High - 35.36	Low-12.22 Medium - 24.71 High - 46.88	Low-13.37 Medium - 27.03 High - 51.27	Low-12.22 Medium - 24.71 High - 46.88	Low-10.70 Medium - 21.62 High - 41.02	Low-10.70 Medium - 21.62 High - 41.02	Low-0 Medium - 21.62 High - 41.02
3a. Amount of new urban area required *(in acres)*	*Residential*	2310.0	1138.8	0.0	546.0	357.7	517.7	802.9	0.0	0.0
	Other	1460.9	1216.8	0.0	1033.9	725.1	821.7	950.5	0.0	0.0
	Employment	2681.0	2681.0	2681.0	2681.0	2681.0	2681.0	2681.0	2681.0	2681.0
	Total	**6451.9**	**5036.5**	**2681.0**	**4260.8**	**3763.8**	**4020.4**	**4434.4**	**2681.0**	**2681.0**

Options & Description	Option 1: Status Quo		Option 2: No Expansion	Option 3: Distributed Development	Option 4: Downtown Focus		Option 5: Nodal Focus	Option 6: Build to Limit and Stop	
Corresponding Map									
	Status Quo	Modest Density Increase	No Expansion	Distributed Development	Downtown high density	Downtown medium density	Nodal Focus	Range of housing units	No more low density
B. How well does it meet the GRIDS Directions?									
Direction 1: Encourage a compatible mixed use	× This option continues with the current housing mix which emphasizes low density. Generally, lower density housing development is not as supportive of mixed use. Thus, this option is less likely to provide the benefits mixed use provides such as diversity, less reliance on auto travel, range of housing options.	○ This option continues with the current housing mix which emphasizes low density housing. However, the overal density ratio is increased to reflect "smart growth" making these options slightly more supportive of mixed use than the status quo.	✓ This option results in development above the current density. Thus it is considered to be more supportive of mixed use diversity, less reliance on auto travel, range of housing options.	✓ This option results in development above the current density. Thus it is considered to be more supportive of mixed use encouraging diversity, less reliance on auto travel, range of housing options.	✓ This option results in development above the current density. Thus it is considered to be more supportive of mixed use diversity, less reliance on auto travel, range of housing options.	✓ This option results in development above the current density. Thus it is considered to be more supportive of mixed use encouraging diversity, less reliance on auto travel, range of housing options.	○ This option continues with the current housing mix which emphasizes low density housing. However, the overal density ratio is increased to reflect "smart growth" making these options slightly more supportive of mixed use than the status quo.	× This option continues with the current housing mix which emphasizes low density. Generally, lower density development is not as supportive of mixed use. Thus, this option is less likely to provide the benefits mixed use provides such as diversity, less reliance on auto travel, range of housing options.	× This option continues with the current housing mix which emphasizes low density. Generally, lower density development is not as supportive of mixed use. Thus, this option is less likely to provide the benefits mixed use provides such as diversity, less reliance on auto travel, range of housing options.
Direction 2: Concentrate development within existing built-up areas; firm urban boundary	× encourages continued sprawl; development effort focused on new land rather than revitalizing existing urban areas	○ development effort focused on new land rather than revitalizing existing urban areas; overall density increase results in less urban area expansion than the status quo.	✓ growth at relatively high densities; more efficient use of existing infrastructure; may not allow for market demand for low density residential so people may go elsewhere	○ continued growth at densities higher than currently achieved; more efficient use of existing infrastructure; better than option 2A for fulfilling market demand as some low density residential so still included	✓ reinvests in existing built-up areas; more efficient use of existing infrastructure;	✓ reinvests in existing built-up areas; more efficient use of existing infrastructure; does not allow for market demand for low density residential so people may go elsewhere	✓ reinvests in existing built-up in a more distributed manner than downtown focus; more efficient use of existing infrastructure; allows for market demand for low density	× development effort focused on new land rather than revitalizing existing urban areas; however, maintains existing urban boundary	× development effort focused on new land rather than revitalizing existing urban areas; however, maintains existing urban boundary
Direction 3: Protect rural areas	× Expansion will displace rural areas	× Expansion will displace rural areas	✓ No expansion anticipated so protects rural areas.	× Expansion will displace rural areas	× The downtown alternatives have the potential to result in some expansion of the urban area. It is noted however that the focus of this alterantive is downtown revitalization .	× The downtown alternatives have the potential to result in some expansion of the urban area. It is noted however that the focus of this alterantive is downtown revitalization .	× Expansion will displace rural areas	✓ No expansion anticipated so protects rural areas.	✓ No expansion anticipated so protects rural areas.
Direction 4: Design neighbourhoods to improve access to community life	× Continued expansion of the urban area will result in people having to travel further for community, recreation and other services or the construction of new facilities to support the expanded area. It is noted that the design of communities has a great influence on access to community life. New communities can be designed to improve community life however, it is often difficult and costly to include the extent of transit and social service in new communities that already exist in the more established areas of the city.	○ This option focuses growth in new communities. It is noted that the design of communities has a great influence on access to community life. New communities can be designed to improve community life however, it is often difficult and costly to include the extent of transit and social service in new communities that already exist in the more established areas of the city.	○ This option focuses growth in new communities. It is noted that the design of communities has a great influence on access to community life. New communities can be designed to improve community life however, it is often difficult and costly to include the extent of transit and social service in new communities that already exist in the more established areas of the city.	○ This option focuses growth in new communities. It is noted that the design of communities has a great influence on access to community life. New communities can be designed to improve community life however, it is often difficult and costly to include the extent of transit and social service in new communities that already exist in the more established areas of the city.	✓ The existing urban area is where the current concentration of services exists. Continued revitalization of this area will increase people's access to the green space, cultural and recreation facilities and transportation the city has already invested in.	✓ The existing urban area is where the current concentration of services exists. Continued revitalization of this area will increase people's access to the green space, cultural and recreation facilities and transportation the city has already invested in.	✓ The existing urban area is where the current concentration of services exists. Continued revitalization of this area will increase people's access to the green space, cultural and recreation facilities and transportation the city has already invested in.	○ A vibrant community with access to recreation, transit etc, requires in influx of new population. The "build to the limit" alternatives limit the population increase the city can allow and thus will result in less ability to finance community services.	○ A vibrant community with access to recreation, transit etc, requires in influx of new population. The "build to the limit" alternatives limit the population increase the city can allow and thus will result in less ability to finance community services.

Options & Description	Option 1: Status Quo		Option 2: No Expansion	Option 3: Distributed Development	Option 4: Downtown Focus		Option 5: Nodal Focus	Option 6: Build to Limit and Stop	
Corresponding Map									
	Status Quo	Modest Density Increase	No Expansion	Distributed Development	Downtown high density	Downtown medium density	Nodal Focus	Range of housing units	No more low density
Direction 5: Retain and attract jobs	✗ The status quo may not support the growth of interesting and diverse mixed use communities or provide the housing type variety to attract and retain young new employees.	✓ This alternative will likely result in a good mix of all housing types and neighborhoods thus providing accomodation for all employee needs/types.	✓ This alternative is likely to provide the diversity of housing and the support for vibrant mixed use communities to be able to attract and retain young new employees. Its disadvantage is that it provides less emphasis on the single family home which could detract some portion of the working population.	✓ This alternative will likely result in a good mix of all housing types and neighborhoods thus providing accomodation for all employee needs/types.	✓ This alternative will likely result in mixed use and vibrant downtown neighborhoods. However, it may not provide sufficient supply of single familiy housing to fullfill the variety of employee types/needs.	✓ This alternative will likely result in mixed use and vibrant downtown neighborhoods. However, it may not provide sufficient supply of single familiy housing to fullfill the variety of employee types/needs.	✓ This alternative will likely result in a good mix of all housing types and neighborhoods thus providing accomodation for all employee needs/types.	✗ This option will limit Hamilton's ability to reach its full share of the GTA employment market.	✗ This option will limit Hamilton's ability to reach its full share of the GTA employment market.
Direction 6: Expand transportation options and enhance connections	✗ Status quo may not support better transit service and other mode options. While new urban areas can be designed to be more transit and pedestrian/bike friendly the density of development will not likley be there to fully support transit.	✗ Status quo may not support better transit service and other mode options. While new urban areas can be desined to be more transit and pedestrian/bike friendly the density of development will not likley be there to fully support transit.	✓ High density will support an improved transit system however, for best results the development should be directed to support specfic transit nodes.	◯ This alternative may not support an improved transit system because of the lower density and the fact that it is distributed.	✓ Focusing development downtown could result in the ability to have a vibrant multi-modal transportation system in this area. The downtown options also best support inter-connections by providing a single destination.	✓ Focusing development downtown could result in the ability to have a vibrant multi-modal transportation system in this area. The downtown options also best support inter-connections by providing a single destination.	✓ Increased growth in specific targetted nodes and along transit corridors will support an improved transit service. The nodal option also best support inter-connections by providing specific destinations.	✗ This option may not provide the density to support better transit service and other mode options. The lower population will also influence the availability of funds for transportation improvements.	✗ This option will likely result in the density to support transit.
Direction 7: Maximize existing buildings, infrastructure, vacant land	✗ This option is about new suburban growth and thus it does not support this direction.	✗ This option is dependant on what the market wants. While there may be a market trend towards infil and intensification, this alterantive does not allow the City to encourage that trend.	✗ This alternative involves some reinvestment in existing urban areas but is more about building new areas at a higher density from the start.	✗ This alternative involves some reinvestment in existing urban areas but is more about building new areas at a higher density from the start.	✓ This alterantive has a greater focus on infill and use of existing buildings and vacant land.	✓ This alterantive has a greater focus on infill and use of existing buildings and vacant land.	✓ This alterantive has a greater focus on infill and use of existing buildings and vacant land.	✗ This option is about new suburban growth and thus it does not support this direction.	✗ This option is about new suburban growth and thus it does not support this direction.
Direction 8: Protect ecological system (air, land, water)	✗ Any urban boundary expansion will include the protection of imporant natural areas. However, this option has the potential to displace less significant greenspaces that exist on the outskirts of Hamilton.	✗ Any urban boundary expansion will include the protection of imporant natural areas. However, this option has the potential to displace less significant greenspaces that exist on the outskirts of Hamilton.	◯ With no urban expansion, this alternative will not result in displacement or disruption to areas outside the city but because of the very high density could result in a greater use of those environmental areas within the city boundaries.	◯ This option requires minimal expansion and thus minimal disruption effects on new green areas but could result in greater use of green areas in city by the medium density population.	◯ With limited urban expansion, this alternative will not result in displacement or disruption to areas outside the city but could result in a greater use of those environmental areas within the city boundaries.	◯ With limited urban expansion, this alternative will not result in displacement or disruption to areas outside the city but could result in a greater use of those environmental areas within the city boundaries.	✗ Any urban boundary expansion will include the protection of imporant natural areas. However, this option has the potential to displace less significant greenspaces that exist on the outskirts of Hamilton.	✓ This option will not result in disruption to new green areas. The density and population increase may also not result in a negative influence on the green areas within existing city boundary.	✓ This option will not result in disruption to new green areas. The density and population increase may result in some negative influence on the green areas within existing city boundary.
Direction 9: Maintain and create attractive public spaces and respect character of existing buildings, neighbourhoods, and settlements	✓ All options have the potential to create attractive neighborhhods through careful design.	✓ All options have the potential to create attractive neighborhhods thorough careful design.	✓ All options have the potential to create attractive neighborhhods thorough careful design.	✓ All options have the potential to create attractive neighborhhods thorough careful design.	✓ All options have the potential to create attractive neighborhhods thorough careful design.	✓ All options have the potential to create attractive neighborhhods thorough careful design.	✓ All options have the potential to create attractive neighborhhods thorough careful design.	✓ All options have the potential to create attractive neighborhhods thorough careful design.	✓ All options have the potential to create attractive neighborhhods thorough careful design.

Options & Description	Option 1: Status Quo		Option 2: No Expansion	Option 3: Distributed Development	Option 4: Downtown Focus		Option 5: Nodal Focus	Option 6: Build to Limit and Stop	
Corresponding Map									
	Status Quo	Modest Density Increase	No Expansion	Distributed Development	Downtown high density	Downtown medium density	Nodal Focus	Range of housing units	No more low density
C. How do we implement?									
Policy requirements		comittment to push for increased density ratios	strong design policies and standards re: compatibility commitment to no urban expansion; public education re: density and mixed use; effort to integrate social housing into all areas of community;	strong design policies and standards re: compatibility; public education re: density and mixed use; effort to integrate social housing into all areas of community;	strong design policies and standards re: compatibility; public education re: density and mixed use; effort to integrate social housing into all areas of community;	strong design policies and standards re: compatibility; public education re: density and mixed use effort to integrate social housing into all areas of community;	strong design policies and standards re: compatibility; clear direction on nodes and corridors to be developed; effort to integrate social housing into all areas of community;	strong political commitement to no boundary expansion	strong political commitement to no boundary expansion; comittment to push for increased density ratios
Infrastructure requirements	New roads and services to continually serve expansion areas	New roads and services to serve expansion areas		New roads and services to serve expansion areas	New roads and services to serve expansion areas	New roads and services to serve expansion areas	New roads and services to serve expansion areas		
Economic requirements			market has to move to wanting more compact housing types	market has to move to wanting more compact housing types	market has to move to wanting more compact housing types	market has to move to wanting more compact housing types	market has to move to wanting more compact housing types		

Table "B"
GRIDS Employment Growth Options & Summary Matrix

	Traditional Industry Clusters			Emerging Clusters			Non-Traditional Clusters	
Options & Description	Advanced Manufacturing	Agriculture/Food & Beverage Processing	Port Related Industry/Business	Aerotropolis	Biotechnology & Biomedical	Film & Cultural Industries	Tourism	Downtown
Description	Companies that manufacture a product or provide ancillary services to the manufacturing sector	Agricultural companies as well as value-added agriculture-related business, such as wineries, agritourism, etc.	Port of Hamilton has been central to City economy. Economic activity of the Port is closely linked to the Steel Industry however, other industries are also important	Master planned community that includes airport industrial development, commercial/ office spin-off development, and residential areas with schools and retail/food services.	Research companies that support the health sector by producing drugs and vaccines, and new tools for health	Firms that temporarily or permanently assist in the production of films or television series.	Tourism involves visits from persons living further than 40 km from Hamilton	Five point plan for revitalizing the core of the City including: Land use and transportation, infrastructure and capital investment, communication, incentive programs, environment
Major industries in this sector	Steel, heavy manufacturing, general manufacturing, storage, aggregates, chemicals	Floral and Nursery, poultry, vegetables, dairy, fruit, other.	Steel industry, shipping, recreation	Time-sensitive sector companies for distribution. These include logistics, aviation, manufacturing, information and communication technologies, and biomedical.	Small research and manufacturing companies that spin-off from the research centres at McMaster University, pharmaceutical companies, and laboratories.	Film, television, advertising	Canada Marine Discovery Centre, Royal Botanical Gardens, Wild Waterworks, Adventure Village, Dundurn Castle, Bruce Trail, etc.	Numerous stores and shops including the City Centre and Jackson Square
Comments	Significant contributor to Hamilton's existing economy. Industry is experiencing a shift to more value-added manufacturing in mid-sized firms.	There are 1026 farms in Hamilton, occupying 138,879 acres	Approximately 4% of Ontario GDP (1999) id directly or indirectly tied to the Port of Hamilton.	This is a proposed expansion of the existing Airport Business Park upon completion of the Hwy 6 extension.	Majority of firms are small or medium sized. 72% have 50 employees or less. The number of firms and the size of the workforce is small.	Already emerging in the City of Hamilton	Hamilton has tremendous potential to capitalize on tourism.	Enhancing the identify of the City will help foster a more vibrant downtown

Options & Description	Advanced Manufacturing	Agriculture/Food & Beverage Processing	Port Related Industry/Business	Aerotropolis	Biotechnology & Biomedical	Film & Cultural Industries	Tourism	Downtown
A. What does this mean in terms of:								
1. Type of development form	Single use - medium - large scale development	Greenhouses and large farms, as well as smaller farms - agri-tourism	Mix of industry and recreation.	Airport Industrial-Business Park comprise 700 acres and are designated as Airport-Related Prestige Industrial, Airport Related Commercial, Airport-Related Business, and Airport-Related General Industrial. The first three categories have frontage along Hwy 6 while general industrial lands are in internal parcels.	Could located in office buildings, research facilities in a business park or old industrial area, or as infill within a community	Film studios and on-site locations - small office component	Promotion of existing attractions, Hotels, transportation infrastructure,	Mix of urban residential, commercial and institutional activities
2. Amount of land required	City must designate large parcels of land for industrial development. On Brownfield land, typically 10+ acres	Average size of farm is 135 acres	Will vary depending on the industry/business	Typical industrial size lots between 4-6 acres. There should be planning flexibility for larger parcels	Varying land parcel sizes required	Large parcel required for film studio, but there will likely only be a market for 1 or 2.	Land needs and location will vary depending on the attraction	Relates to all of City Core
3. Location/Land Characteristics Required	Good access to transportation corridors, including ports. Availability of skilled labour. Clustered with similar industries (encourage spin-off industry). Effectiveness of ERASE program and other initiatives for Brownfields will influence location choices	Rural areas with large land parcels and access to transportation corridors. Close proximity to built up areas (markets)	Ongoing investment needed in facilities and infrastructure. Alliances needed with other ports, trucking and shipping companies, etc.	Good access to an airport (within 15 minutes) and other transportation corridors. Timing of Hwy 6 extension and servicing will significantly influence this option.	Requires existence of and location near leading biomedical companies, strong universities that house medical schools, and affiliated hospitals and research facilities. Hamilton's existing assets in this sector include St. Joseph's Hospital, McMaster University, and research centres	Diverse filming environments. Filming studio's often located in industrial areas (brownfield development) or industrial parks	Land needs and location will vary depending on the attraction. Likely location for hotels, etc. is near existing facilities or transportation corridors	Location is within core of City. Improvements to infrastructure is being considered through the Transportation Master Plan
B. How well does it meet the GRIDS Directions?*	✓ *Meets GRIDS Direction*			✗ *Does not meet GRIDS Direction*				
Direction 1: Encourage a compatible mixed use	✗ Potential land use conflicts between residential and industrial uses. Typically not well integrated.	◯ Single use area outside the urban boundary. Might mix with some rural residential	✗ Potential land use conflicts between residential and industrial uses. Typically not well integrated.	✗ Can be a planned community with mixed employment, services, and residential. However, airport has significant zoning restrictions that make mixed use difficult	✓ Location could be focused on built-up mixed use areas	◯ Location is typically temporary, and could be shot anywhere, depending on film/TV services. Studios' could rejuvenate old industrial areas (warehouses)	✓ Location could be focused on built-up mixed use areas	✓ This cluster is based on the creation of mixed use
Direction 2: Concentrate development within existing built-up areas; firm urban boundary	✓ Needs access to services. Could be located within an existing built-up area - Brownfield development with ERASE program. Industrial sector most common in seeking Brownfield development.	◯ N/A	✓ Needs access to services. Is located within an existing built-up area.	✗ Must resolve urban boundary issues to get the land serviced. Servicing areas outside the urban boundary reduces viability of existing infrastructure and services	✓ Location likely targeted near McMaster University, Mohawk College and St. Joseph's Hospital.	✓ Location of a studio or office associated with the film industry would be likely be in the urban area (downtown or industrial area)	✓ Location likely targeted within existing urban boundary	✓ This cluster is within the existing built-up area
Direction 3: Protect rural areas	✓ Most located in urban areas or along existing transportation corridors in the port area.	✓ Keeps rural lands in active production	✓ Located in urban area. No impact on rural lands	✗ Concentrated in one area, however, does occur on some greenfield sites. The area designated for industrial park expansion will also be adjacent to the Hwy 6 extension	✓ Location within urban boundary	◯ Location of a studio or office associated with the film industry would be likely be in the urban area (downtown or industrial area)	✓ Location likely within urban boundary	✓ This cluster is within the existing built-up area
Direction 4: Design neighbourhoods to improve access to community life	◯ Likely to be separated from community.	◯ Supports maintenance of rural community life.	◯ Likely to be separated from community. However, the addition of recreation to the Port Lands may provide a better link	✗ These are largely auto-oriented designed, even with mixed use components	✓ Quality of life factors are an important factor in attracting biotechnology industries	◯ Typically temporary	◯ These are largely designed for visitors to Hamilton and not likely to relate to local residents	✓ This cluster is based on the creation of mixed use neighborhoods with improved transportation and access to community life
Direction 5: Retain and attract jobs	✓ Will continue to create manufacturing jobs	✓ Will create jobs for the agricultural sector	✓ Will continue to create port related jobs	✓ Will create jobs near the airport and spin-off jobs at the airport	✓ Health sector in Hamilton is one of the City's largest employers.	✗ Brings in revenue to the City but unlikely to support many permanent jobs for Hamilton residents	✓ Will create jobs in the tourism sector	✓ Revitalizing downtown will help both those living and working there

Options & Description	Advanced Manufacturing	Agriculture/Food & Beverage Processing	Port Related Industry/Business	Aerotropolis	Biotechnology & Biomedical	Film & Cultural Industries	Tourism	Downtown
Direction 6: Expand transportation options and enhance connections	○ May justify expansion of transit service to specific employment nodes	× Area is not serviced by transit - serviced primarily by rural roads. This is not likely to change	○ May justify expansion of transit service to port lands	× There is currently no transit service to the airport lands. Transit resources are better suited in the urban area. Design will likely be auto-oriented, which will yield a poorer level of transit service. Proposed Hwy 6 extension and Mid-Pen corridor present excellent servicing opportunities to the airport lands	✓ Location in areas served by transit and major arterial roads. The cluster would become a transit destination and could increase level of transit service for the community.	○ May cause temporary congestion near film sites	✓ Investment in road infrastructure may be required to support tourism initiatives which would assist meeting this direction	✓ Part of the downtown focus is on transportation improvements
Direction 7: Maximize existing buildings, infrastructure, vacant land	✓ Brownfield redevelopment programs - ERASE	× Area is not serviced. There are only a few existing buildings.	✓ Port lands include Brownfield redevelopment programs - ERASE	× Area is not serviced, no existing buildings	✓ Could be built in brownfield sites / intensification near University, etc.	✓ Filming could temporarily utilize existing buildings - old warehouses are often good locations for studios	○ Whether or not new buildings are required will depend on the nature of the facility	✓ Much of this cluster is about improving what is already available in Downtown Hamilton.
Direction 8: Protect ecological system (air, land, water)	✓ Recent history has heavy industry working towards environmental protection.	✓ Emphasis on agriculture will protect rural and natural areas from other developments. Provides locally grown produce	✓ Port related land uses are not expected to negatively impact ecological systems.	× Will be built on greenfield lands - larger reliance on auto transportation until HSR is extended to airport	✓ No effect on ecological systems	✓ No effect on ecological systems	✓ No effect on ecological systems	✓ No effect on ecological systems
Direction 9: Maintain and create attractive public spaces and respect character of existing buildings, neighbourhoods, and settlements	○ Good urban design will be important in all options	✓ Maintains attractive rural landscapes	○ Integration of recreation into the port lands may help create attractive public spaces	○ Good urban design will be important in all options	✓ Could be used as a method to rejuvenate certain neighbourhoods. Good urban design will be important in all options.	× Filming may cause temporary disruption to public spaces. Urban design only relevant to permanent locations.	✓ Could be used as a method to rejuvenate certain neighbourhoods. Good urban design will be important in all options.	✓ Will result in rejuvenation of downtown. Good urban design will be important in all options.

C. What is Required for Implementation?

Land use Planning	Promote ERASE program and other incentives for brownfield development	Protect rural areas	Promote ERASE program and other incentives for brownfield development	Land use planning and site design should be transit supportive	Identify areas near Hospital and University for infill development	Identify locations for potential film studios. Could be located on brownfield site.	Accommodation needs to be promoted	Hamilton Downtown Land Use Plan sets out the vision and priorities for downtown
Infrastructure			Continual investment in port facilities and infrastructure	Completion of Hwy 6 extension and servicing	Hamilton Incubator of Technology (a 40,000 sq. ft. regionally operated modern business incubator available to biotechnology companies).		Effort on tourism promotion required.	The Downtown Transportation Master Plan guides transportation growth downtown
Transit				Should bring transit services in early to promote use				A greater priority for public transit and pedestrians.

***Legend =** ✓ *Meets GRIDS Direction* × *Does not meet GRIDS Direction* ○ *Unclear whether GRIDS direction is met*

Table "C"
GRIDS Residential Growth Option Calculations

Option 1		Option 2	Option 3	Option 4		Option 5	Option 6	
Status Quo	Modest Density Increase	No Expansion	Distributed Development	Downtown Focus (high density)	Downtown Focus (medium density)	Nodal Focus	Build to Limit and Stop (range of housing units)	Build to Limit and Stop (no more low density)
Build out at current approved low densities to boundary and expand boundary as required	Low and medium density development	Build out at high density to fit all development into existing urban area	Build out at medium density to fit most development in existing urban area; allow for some development with an urban area expansion	Allocate growth to downtowns and plan for high density suburban development	Allocate growth to downtowns and plan for medium density suburban development	Allocate growth in downtowns, suburban nodes and corridors, with the remainder in greenfield development	Low and medium density development to limits of urban area, but no further growth permitted afterwards	Medium and high density development to limits of urban area, but no further growth permitted afterwards

SUMMARY OF ASSUMPTIONS

A - Inventory of Residential Lots	One single or semi-detached lot in a Plan of Subdivision or a rural lot is assumed to represent one housing unit.							
B - Gross Vacant Residential Land Supply	The land area already designated for future residential development is the same for all scenarios. However, the number of units is a function of the density targets established in each scenario.							
	The status quo density is based on the City's estimated number of units and acres of lands designated for future growth but not subject to a dev't application.	See comment under Option 3/4/5	Individual densities were set for low, medium and high to satisfy the demand in each category, assuming the area of land designated was unchanged.	For simplicity and ease of comparison, a factor was applied to each density category in each scenario. It was assumed that a growth management strategy would encourage the general increase of density and apply this increase across the density targets for low, medium and high density residential development. The minimum density increase facter is 1.40 (i.e. 40%) which correlates to the Province's recommended intensification of new development.					
C - Provision for Intensification and In-Filling	14,000 units has been confirmed as a base number of units developed through intensification and in-fill. This development is assumed to occur in existing built-up areas and would not generate a demand for new lands to be designated. The 14,000 units has been divided evenly between 7,000 medium density and 7,000 high density units.		Based on 32,000 units developed through in-fill and intensification, divided evenly between medium and high density units.	Based on 40,000 units developed through in-fill and intensification, divided evenly between medium and high density units.	Based on 40,000 units of in-fill and intensification, divided evenly between medium and high density units. Additionally, 5,000 more high density units have been allocated to the downtown as further in-fill / intensification for this scenario.		5,000 more high density units allocated to the downtown as in Option 4, plus a total of 2,500 additional medium density units allocated as nodal intensification.	Based on 32,000 units developed through in-fill and intensification, divided evenly between medium and high density units.
D - Existing Supply to Satisfy Demand								
E - Housing Demand	Based on "Current" pop'n forecast by Hemson Consulting, Jan. 2005	Based on "Compact" pop'n forecast by Hemson Consulting, Jan. 2005	Based on "Current" pop'n forecast by Hemson Consulting, Jan. 2005	Based on "More Compact" pop'n forecast by Hemson Consulting, Jan. 2005				Based on "Compact" pop'n forecast by Hemson Consulting, Jan. 2005
F - Remaining Unmet Demand	Where there is an oversupply of lands for low, medium or high density development, it has been assumed that the immediate demand will be satisfied and all residual lands would be developed beyond the 2031 horizon.							
G - Gross Residential Land Requirement to Satisfy Growth	It was assumed that a policy change which increased density would apply to both lands already designated for development as well as urban area expansion lands. As a result, the target densities determined in Calculation "B" are the same for Calculation "G".							
H - Non-residential land requirement to satisfy growth								

Notes for the following tables of calculations:

1. Source: City of Hamilton, Year End 2004 Vacant Residential Urban Land Area & Unit Potential (Jan 7, 2005)
2. Registered lots in Plans of Subdivision are used to discount the housing demand in Calculation "E"
3. Sources: Hemon Consulting, November 2004; CMHC/City of Hamilton, 2004
4. Households is used as a proxy for housing units
5. Source: Discussions with Hamilton District School Board Staff; adjusted for increased development density
6. Source: W. Scott Morgan, Retail Market Analyst
7. Transit node assumptions based on "Transit Oriented Development" from the TDM Encyclopedia, Victoria Transport Policy Institute, and transit nodes from former Hamilton-Wentworth Trans. Master Plan
8. Based on Parks, Culture and Recreation Master Plan, City of Hamilton, 2002; adjusted for increased development density
9. Acres per unit target for community facilities is generalized
10. Source: City of Hamilton / Hemson Consulting

				Option 1		Option 2	Option 3	Option 4		Option 5	Option 6	
				Status Quo	Modest Density Increase	No Expansion	Distributed Development	Downtown Focus (high density)	Downtown Focus (medium density)	Nodal Focus	Build to Limit and Stop (range of housing units)	Build to Limit and Stop (no more low density)
				Build out at current approved low densities to boundary and expand boundary as required	Low and medium density development	Build out at high density to fit all development into existing urban area	Build out at medium density to fit most development in existing urban area; allow for some development with an urban area expansion	Allocate growth to downtowns and plan for high density suburban development	Allocate growth to downtowns and plan for medium density suburban development	Allocate growth in downtowns, suburban nodes and corridors, with the remainder in greenfield development	Low and medium density development to limits of urban area, but no further growth permitted afterwards	Medium and high density development to limits of urban area, but no further growth permitted afterwards
Footnotes	Evaluation	Calculation Groups	How measured									
1,2		**CALCULATION A CURRENT INVENTORY OF RESIDENTIAL LOTS/UNITS**										
		Plans of Subdivision - Singles & Semis										
	A1	Draft Approved	Lots	3987	3987	3987	3987	3987	3987	3987	3987	3987
	A2	Pending	Lots	3697	3697	3697	3697	3697	3697	3697	3697	3697
	A3=A1+A2	***Subtotal PoS Supply***	***Lots***	***7684***	***7684***	***7684***	***7684***	***7684***	***7684***	***7684***	***7684***	***7684***
		Medium Density Blocks										
	A4	Draft Approved	Units	2745	2745	2745	2745	2745	2745	2745	2745	2745
	A5	Pending	Units	1590	1590	1590	1590	1590	1590	1590	1590	1590
	A6=A4+A5	***Subtotal***	***Units***	***4335***	***4335***	***4335***	***4335***	***4335***	***4335***	***4335***	***4335***	***4335***
		High Density Blocks										
	A7	Draft Approved	Units	232	232	232	232	232	232	232	232	232
	A8	Pending	Units	0	0	0	0	0	0	0	0	0
	A9=A7+A8	***Subtotal***	***Units***	***232***	***232***	***232***	***232***	***232***	***232***	***232***	***232***	***232***
	A10	***Unit potential not included in Plans of Subdivision (e.g. rural lots)***	***Lots***	0	0	0	0	0	0	0	0	0
	A11=A3+A6+A9+A10	**CALCULATION A TOTAL**		**12251**	**12251**	**12251**	**12251**	**12251**	**12251**	**12251**	**12251**	**12251**
1,2		**CALCULATION B GROSS VACANT RESIDENTIAL LAND SUPPLY**										
		Gross Capacity for New Units on Designated Land										
	B1	Low	Units	11923	14904	33089	19077	20865	19077	16692	16692	0
	B2	Medium	Units	4321	5401	6049	6914	7562	6914	6049	6049	33741
	B3	High	Units	961	1201	1160	1538	1682	1538	1345	1345	12822
	B4=B1+++B3	**Subtotal New Units**	**Units**	**17205**	**21506**	**40298**	**27528**	**30109**	**27528**	**24087**	**24087**	**46563**
		Acreage of Designated Land										
	B5	Low Density	Acres	1560.6	1560.6	1560.6	1560.6	1560.6	1560.6	1560.6	1560.6	0.0
	B6	Medium Density	Acres	279.8	279.8	279.8	279.8	279.8	279.8	279.8	279.8	1560.6
	B7	High Density	Acres	32.8	32.8	32.8	32.8	32.8	32.8	32.8	32.8	312.6
	B8=B5+++B7	**Subtotal Acreage**	**Acres**	**1873.2**	**1873.2**	**1873.2**	**1873.2**	**1873.2**	**1873.2**	**1873.2**	**1873.2**	**1873.2**
		Gross Density for Existing Planned Development			1.250	Factor tied to demand	1.600	1.750	1.600	1.400	1.400	1.400
	B9=B1/B5	Low	Units per acre	7.64	9.55	21.20	12.22	13.37	12.22	10.70	10.70	0.00
	B10=B2/B6	Medium	Units per acre	15.44	19.30	21.62	24.71	27.03	24.71	21.62	21.62	21.62
	B11=B3/B7	High	Units per acre	29.30	36.62	35.36	46.88	51.27	46.88	41.02	41.02	41.02
	B12=B9+++B11	**Subtotal Average Gross Density**	**Units per acre**	**9.18**	**11.48**	**21.51**	**14.70**	**16.07**	**14.70**	**12.86**	**12.86**	**24.86**

					Option 1		Option 2	Option 3	Option 4		Option 5	Option 6	
					Status Quo	Modest Density Increase	No Expansion	Distributed Development	Downtown Focus (high density)	Downtown Focus (medium density)	Nodal Focus	Build to Limit and Stop (range of housing units)	Build to Limit and Stop (no more low density)
					Build out at current approved low densities to boundary and expand boundary as required	Low and medium density development	Build out at high density to fit all development into existing urban area	Build out at medium density to fit most development in existing urban area; allow for some development with an urban area expansion	Allocate growth to downtowns and plan for high density suburban development	Allocate growth to downtowns and plan for medium density suburban development	Allocate growth in downtowns, suburban nodes and corridors, with the remainder in greenfield development	Low and medium density development to limits of urban area, but no further growth permitted afterwards	Medium and high density development to limits of urban area, but no further growth permitted afterwards
		CALCULATION C											
		PROVISION FOR INTENSIFICATION AND IN-FILLING											
	C1	Suburban Areas - Medium Density		Units	3500	3500	8000	10000	10000	10000	10000	8000	8000
	C2	Downtowns / Core Areas - Medium Density		Units	3500	3500	8000	10000	10000	10000	10000	8000	8000
	C3	Downtowns / Core Areas - High Density		Units	3500	3500	8000	10000	10000	10000	10000	8000	8000
	C4	West Harbour - High Density		Units	3500	3500	8000	10000	10000	10000	10000	8000	8000
7	C5	Add'l intensification allocation - Medium		Units in greenfield nodes	0	0	0	0	0	0	2750	0	0
	C6	Add'l intensification allocation - High		Units in downtown	0	0	0	0	5000	5000	5000	0	0
	C7=C1+C2+C5	**CALCULATION C - Medium Density Total**		**Units**	**7000**	**7000**	**16000**	**20000**	**20000**	**20000**	**22750**	**16000**	**16000**
	C8=C3+C4+C6	**CALCULATION C - High Density Total**		**Units**	**7000**	**7000**	**16000**	**20000**	**25000**	**25000**	**25000**	**16000**	**16000**
		CALCULATION D											
		EXISTING SUPPLY TO SATISFY DEMAND											
	D1=A3+A10+B1	Low		Units	19607	22588	40773	26761	28549	26761	24376	24376	7684
	D2=A6+B2+C7	Medium		Units	15656	16736	26384	31249	31897	31249	33134	26384	54076
	D3=A9+B3+C8	High		Units	8193	8433	17392	21770	26914	26770	26577	17577	29054
	D4=D1++D3	**CALCULATION D TOTAL**		**Units**	**43456**	**47757**	**84549**	**79779**	**87359.75**	**84779**	**84088**	**68338**	**90814**
3,4		**CALCULATION E**											
		HOUSING DEMAND (ADJUSTED TO 2004)											
	E1	Low density		Units	40773	35773	40773	35773	35773	35773	35773	24376	7684
	E2	Medium density		Units	13985	14985	13985	20985	20985	20985	20985	26384	54076
	E3	High density		Units	17392	21392	17392	35392	35392	35392	35392	17577	29054
	E4=E1++E3	**CALCULATION E TOTAL**		**Units**	**72150**	**72150**	**72150**	**92150**	**92150**	**92150**	**92150**	**68338**	**90814**
		CALCULATION F											
		REMAINING UNMET DEMAND											
		Unadjusted Remaining Unmet Demand											
	F1=E1-D1	Low		Units	21166	13185	0	9012	7224	9012	11397	0	0
	F2=E2-D2	Medium		Units	-1671	-1751	-12399	-10264	-10912	-10264	-12149	0	0
	F3=E3-D3	High		Units	9199	12959	0	13622	8478	8622	8815	0	0
	F4=F1++F3	**Subtotal**		**Units**	**28694**	**24393**	**-12399**	**12371**	**4790**	**7371**	**8062**	**0**	**0**
		Adjusted Remaining Unmet Demand											
	F5	Low		Units	21166	13185	0	9012	7224	9012	11397	0	0
	F6	Medium		Units	0	0	0	0	0	0	0	0	0
	F7	High		Units	9199	12959	0	13622	8478	8622	8815	0	0
	F8=F5++F7	**CALCULATION F TOTAL**		**Units**	**30365**	**26144**	**0**	**22635**	**15702**	**17635**	**20211**	**0**	**0**

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		CALCULATION G **GROSS RESIDENTIAL LAND REQUIREMENT TO SATISFY GROWTH**										
		Gross Density Targets										
	G1=B9	Low	Units per acre	7.64	9.55	0.00	12.22	13.37	12.22	10.70	0.00	0.00
	G2=B10	Medium	Units per acre	15.44	19.30	0.00	24.71	27.03	24.71	21.62	0.00	0.00
	G3=B11	High	Units per acre	29.30	36.62	0.00	46.88	51.27	46.88	41.02	0.00	0.00
		Gross Residential Land Requirement										
	G4=F5*G1	Low	Acres	2770.4	1380.7	0.0	737.3	540.3	737.3	1065.5	0.0	0.0
	G5=F6*G2	Medium	Acres	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	G6=F6*G3	High	Acres	314.0	353.8	0.0	290.6	165.4	183.9	214.9	0.0	0.0
	G7=G4++G6	**CALCULATION G TOTAL**	**Acres**	**3084.4**	**1734.5**	**0.0**	**1027.8**	**705.7**	**921.2**	**1280.4**	**0.0**	**0.0**
		CALCULATION H **NON-RESIDENTIAL LAND REQUIREMENT TO SATISFY GROWTH**										
		Non-residential land requirement ratios										
8	H1	Parks and public open space	Acres per unit	0.0085	0.0085	0.0085	0.0085	0.0085	0.0085	0.0085	0.0085	0.0085
	H2	Public and private schools	Acres per unit	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
9	H3	Community facilities	Acres per unit	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010
	H4	Emergency services	Acres per unit	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010
	H5	Roads and infrastructure	Acres per unit	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
6	H6	Local / neighbourhood commercial	Acres per unit	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010
		Net non-residential land requirements										
	H7=F8*H1	Parks and public open space	Acres	257.9	222.0	0.0	192.2	133.3	149.8	171.6	0.0	0.0
5	H8	Public and private schools	Acres	165.8	112.7	0.0	83.3	63.6	76.7	94.3	0.0	0.0
	H9	Community facilities	Acres	30.4	26.1	0.0	22.6	15.7	17.6	20.2	0.0	0.0
	H10=F8*H4	Emergency services	Acres	30.4	26.1	0.0	22.6	15.7	17.6	20.2	0.0	0.0
	H11	Roads and infrastructure	Acres	259.7	182.5	0.0	138.5	104.0	124.1	150.9	0.0	0.0
	H12=F8*H6	Local / neighbourhood commercial	Acres	30.4	26.1	0.0	22.6	15.7	17.6	20.2	0.0	0.0
	H13=H7++H12	**CALCULATION H TOTAL**	**Acres**	**774.4**	**595.7**	**0.0**	**481.9**	**348.0**	**403.5**	**477.5**	**0.0**	**0.0**
		CALCULATION I **SUMMARY OF ADDITIONAL RESIDENTIAL LAND REQUIREMENT TO SATISFY GROWTH** **(i.e. ACRES OF RESIDENTIAL URBAN AREA EXPANSION)**										
	I1=G7-H13	Net residential land	Acres	2310.0	1138.8	0.0	546.0	357.7	517.7	802.9	0.0	0.0
	I2=H13	Net other non-residential land	Acres	774.4	595.7	0.0	481.9	348.0	403.5	477.5	0.0	0.0
	I4=G7	**CALCULATION I TOTAL**	**Acres**	**3084.4**	**1734.5**	**0.0**	**1027.8**	**705.7**	**921.2**	**1280.4**	**0.0**	**0.0**
		CALCULATION J **SUMMARY OF ADDITIONAL POPULATION-RELATED EMPLOYMENT LAND REQUIREMENT TO SATISFY GROWTH** **(i.e. ACRES OF POPULATION-RELATED EMPLOYMENT URBAN AREA EXPANSION)**										
	J1=F8	Households in growth area	Households	30365	26144	0	22635	15702	17635	20211	0	0
	J2=J1*2.33	Residents in growth area	Persons given 2.33 per household	70750	60916	0	52739	36586	41089	47093	0	0
10	J3=J2/5	Projected employees in growth area	Ratio of 1 employee per 5 persons	14150	12183	0	10548	7317	8218	9419	0	0
10	J4	Employee density	Employees per acre	15	15	15	15	15	15	15	15	15
	J5=H8+H9+H10+H12	Reduction for acreages accounted for in H	Acres	256.8	191.2	0.0	151.2	110.7	129.6	154.9	0.0	0.0
	J6=J3/J4-J5	**Pop'n-related commercial land**	**Acres**	**686.5**	**621.1**	**0.0**	**552.0**	**377.1**	**418.2**	**473.0**	**0.0**	**0.0**

Appendix B: May 30th Event Report

Growth Related Integrated Development Strategy
City of Hamilton

MAY 30th PUBLIC EVENT REPORT

Submitted by
Dillon Consulting
July 21, 2005

Hamilton

BUILDING A STRONG FOUNDATION HAMILTON

DILLON CONSULTING

On Monday June 30, the City kicked off a summer of GRIDS related public events at the Hamilton Convention Centre. The May 30th event was aimed at gathering public input on the overall GRIDS process, six growth concepts, and the Triple Bottom Line evaluation. The event consisted of an afternoon workshop session that included a group of stakeholders representing various community, environmental and business-related associations. The workshop was followed by a town-hall style public meeting in the evening that offered Hamiltonians a first look at six concepts for how the City might consider growth. These concepts are the starting point for the next phase of GRIDS which will map out specific growth options for the City and ultimately select a preferred way to accommodate residential and employment growth.

The workshop and evening events featured presentations, display boards, question and answer sessions, informal conversation and meaningful debate with staff and stakeholders. Representatives from over 160 interested groups related to the environment, economy and community were invited to participate in the workshop from 12 noon to 4 pm on May 30th. Twenty eight (28) people attended the afternoon workshop. The evening Public Information Centre was advertised in the local media and notice was mailed to approximately 3000 contacts in the City. Approximately fifty seven (57) people attended the evening event. Participants at the May 30th events were also asked to provide any written comments by June 17, 2005. Twenty three (23) comment forms, letters and emails were received.

The following is a brief overview of the key ideas and concerns raised. The summary of what was heard has been organized into five broad categories:

- What Participants said about the GRIDS Process;
- Response to the Six Growth Concepts;
- Ideas for Mapping the Short List;
- Input on the Triple Bottom Line Evaluation;
- Additional Comments Received.

Detailed information is provided in appendices to document as follows:
Appendix A - Notes of the workshop and Public Information Centre events including the responses provided to questions raised at the public event.
Appendix B - Workbooks completed at the workshop session.
Appendix C - List of stakeholder groups invited to participate in the workshop session.
Appendix D - Advertisements for the public event and the invitation letter to the workshop.
Appendix E – Comments raised in written submissions

Public input and comments received to date have been reviewed by the GRIDS team members and will be taken into consideration as the GRIDS process evolves.

What Participants Said About the GRIDS Process

Comments received regarding the GRIDS process are listed below:

- A few individuals felt that the GRIDS process should put more emphasis transportation planning. Moreover, transportation route planning should coincide with growth options. Transportation infrastructure should be implemented in tandem with land development.

- At the evening session, concern was raised that the "stakeholders" invited to participate in the afternoon workshop session may not be representative.
- Participation from communities and neighbourhoods in the GRIDS process is important. All consultation efforts for GRIDS should involve the Hamilton communities.
- A question regarding the opportunity for appealing the GRIDS process was raised in the evening session. There is no appeal process for GRIDS. The output of GRIDS will feed into updates to the Official Plan and Zoning by-law. Under the Planning Act, individuals have the right to appeal decisions reflected in amendments to the Official Plan, and Zoning By law.
- Concern was raised that the GRIDS process will not include rural settlement areas. Some attendees felt that some rural settlements have the infrastructure capacity to absorb new growth and therefore growth should and be included in all of the mapped concepts.
- It was suggested that the City needs to develop a better way to resolve differences that would include everyone's wisdom rather than the majority rules.
- A number of the written submissions expressed concern that the airport expansion was included in all the options and that this expansion seems have bypassed the holistic evaluation process of GRIDS.
- The Hamilton Chamber of Commerce suggests that the City take a longer range vision and proactively plan for the staged development of all the land outside the Greenbelt to ensure a firm future urban boundary and avoid regular ad-hoc boundary expansions.
- One participant suggested that a better approach to creating a successful future Hamilton would be to look at each community in Hamilton, assess the live, work and play balance and provide strategies to add jobs, housing or recreation on a community by community basis to address any imbalance.

Response to the Six Growth Concepts

The majority of comments regarding the six concepts were heard during the workshop session. Participants were provided with a list of the advantages and disadvantages for each of the growth concepts. Participants were asked whether we had missed any advantages or disadvantages had been missed, and whether there were any elements of the concepts that they really would like to see carried forward. The main ideas and concerns raised with respect to the growth concepts are listed below.

Concept One: Status Quo

- Disadvantages - Built form can result in high costs for local taxpayers because of the excessive consumption of land and infrastructure that is required to accommodate it;
- Advantages - Building form can allow for a greater housing affordability, as many believe that the production style of development can produce significant cost savings;
- Most of workshop and public information centre attendees supported the recommendation that Concept One not be carried forward. No one supported this option.

Concept Two: No Expansion

- Disadvantage - May cause a sharp increase in land values, reducing opportunities for affordable housing;
- Disadvantage - Development community may not cooperate with concept;

- Advantage - May allow for more efficient delivery of services;
- Aspect to be carried forward – Protect prime agricultural land and other natural heritage areas surrounding the city;
- Few of the workshop and public information centre attendees objected to this concept being carried forward to the short list.

Concept Three: Appropriately Distributed Development

- Disadvantage – It would be very difficult and controversial to try to determine what would qualify as "appropriate" distributed development;
- One of the workshop groups rejected this concept, stating that it should not be carried forward to the short list;
- Another group supported the idea of distributing development, so long as it was clustered around key nodes.

Concept Four: Downtown Focus

- Disadvantage – A strict focus on downtowns may make it difficult to accommodate new employment growth within the downtowns, resulting in a disconnect between the downtowns and employment areas;
- The concept of rebuilding the downtowns into centres where people can live, work, play and worship received a lot of support at both the workshop and evening event;
- The quality of downtown living is often raised when attempting to attract businesses and employees to Hamilton.

Concept Five: Nodes and Corridors

- Advantage – This type of form can help to built communities;
- Disadvantage – Intensification in some smaller nodes could have consequences for neighbourhood identity. The uniqueness of these areas should be considered carefully when planning for intensification in the smaller nodal areas;
- Disadvantage – Increasing density in nodal areas without considering social aspects could potentially result in decreasing the quality of life in these areas;
- Concern over how nodes will affect the existing neighbourhoods that surround potential new nodes;
- Nodes should be places where people can live, work, play and worship;
- One attendee raised the issue that there may be a problem with the idea of creating mixed-use development in the context of the City's existing employment sectors;
- Two of the major employment sectors, the port and the airport have land use compatibility issues that severely limit the potential for mixing residential and employment uses, which could undermine the effort to create, widespread, vibrant, mix-use centres.

Concept Six: Build to the Limit and Stop

- The workshop and public information centre attendees objected to the rejection of this concept from future consideration.

Mapping the Short List

The next step in the GRIDS process is to create maps showing a short list of options for Hamilton. Participants in the afternoon workshop were asked to identify any issues they felt the team should be aware of when undertaking this mapping exercise. The evening comment form also asked participants what should be considered when identifying growth areas. The following key comments were received.

- Nodes and corridors should be located around specific features such as major recreational hubs, transportation hubs and arterials, existing built up areas, areas of decline (as an opportunity for revitalization), newer growth areas, existing dense areas and employment areas. Employment areas should be located along major transportation routes.
- While many participants expressed the benefits of mixing residential and employment uses, the importance of ensuring compatibility was also raised.
- Nodes and Corridors/Downtowns should include not only primary nodes such as downtown Hamilton, and secondary nodes such as Stoney Creek, Dundas and Ancaster, but also sub nodes based on employment, institutional and recreational opportunities.
- Appropriately distributed development could have a piece of development in each community (rural settlements too) in order to reduce stress on transportation systems.
- Economic clusters should be located in the following places:
    - Biotechnology (Westdale/east end);
    - Eco-Tourism (Bay Front, Dundas Valley, Bruce Trail);
    - Film & Culture (distributed throughout the city);
    - Agri-Business (rural and rural settlement areas);
    - One workshop group stated that they were unable to reach a consensus on some of the other more controversial clusters, such as the Aerotropolis, port related industry.
- Economic development should consider accessibility to international boarders and the benefit of Hamilton's airport in this regard.
- It was suggested that Hamilton focus more on internal connections for employment and residential development rather than external. Examples included focusing on internal food production and locating residential areas so that they have improved access to Hamilton rather than Toronto and the GTA.
- Opportunity for future development was identified in the following existing urban areas:
    - Waterdown;
    - Mount Hope;
    - Stoney Creek, Ancaster, Dundas;
    - Brownfield sites (mixed use, i.e. potentially residential and employment);
    - Niagara Escarpment Urban Areas (as long as development conforms to NEC standards);
    - Schools can act as neighbourhood hubs or smaller nodes.
- Areas to that should be avoided for future development included:
    - Niagara Escarpment (specifically Dundas and Red Hill Valley);
    - Prime agricultural land.
- Connections among nodes should be a key attribute of option selection (transportation and socio-economic).

- One group in the workshop session created a map of potential nodes. The map envisioned four types of nodes; primary residential, primary employment, secondary residential and secondary employment. Primary residential nodes were located in Ancaster, downtown Hamilton, downtown Stoney Creek, Limeridge Rd. and Upper Wellington and Highland Rd. and First Rd. Secondary residential nodes were located in Waterdown, downtown Dundas, McMaster University, Binbrook, and west of Stoney Creek/east of Winona. Primary employment areas would be located within the Port area (east and west end), downtown Hamilton and the airport. A secondary employment node would be located at McMaster University.

Input on the TBL Evaluation

Several participants at both the workshop and the PIC were of the opinion that the TBL evaluation tool was too subjective. A number of the written comments support the TBL tool commending the City for considering ecological and community issues in the decision making process however others had concerns that it was environmentally biased and did not adequately reflect the importance of economic development. Some written comments also suggested that had the TBL tool been applied, the airport expansion would not have been approved. The following were raised for consideration as other things that the TBL tool should measure:

- How development near the harbour could impact water quality (impacts of population growth on water);
- How the various development forms will impact the education system;
- Ecological footprint;
- How the development options support the priority of downtown renewal and revitalization.

Additional Comments Received

A number of issues were raised that did not fit into the specific agenda items for the workshop and PIC. Some of these are applicable to the identification and evaluation of specific growth options for Hamilton. Others are relevant to policy development regardless of the growth option Hamilton ultimately decides upon. The following is a list of concerns raised that the City will consider:

- Future development of mixed use areas should also provide for affordable housing and other necessary social services such as job training, disability related services, and child care facilities.
- The notion that the world's dwindling supply of oil will run out in the next ten years should be factored into GRIDS and other processes. Decisions regarding growth management and the location of new infrastructure, transportation systems, employment and residential areas should consider the consequences of oil scarcity.
- It was noted that support for public transit will be very difficult to achieve.
- Growth projections were questioned. Some individuals objected to the notion of planning for the maximum population and employment projections identified by the Province.
- One individual stated that development around the airport may be incompatible with the portion of the Greenbelt that is to east of the existing airport.
- There are a number of places in Hamilton where residential development has occurred in close proximity to heavy industry, resulting in conflict. In instances where this type of

incompatibility exists, the new Official Plan and Zoning By law must resolve these conflicts.

- Specific plans will need to be developed in each node or corridor to reflect the unique characteristic of each community.
- Need for wide spread support of home-based businesses to improve employment opportunities.
- One participant suggested that there is a need and opportunity to better coordinate transportation systems in Hamilton (e.g. DARTS, school buses, private companies) to provide better service to the aged and disabled.

Appendix A: Detailed Record of Q & A sessions

The following are the comments and questions raised at the workshop and evening sessions on May 30, 2005. Where responses where provided at the meetings they are also documented.

MAY 30TH, 2005 WORKSHOP: QUESTION & ANSWER SESSION

QUESTION: Where are the settlement areas on your constraints map?

RESPONSE: They are actually on the map, however, at this scale they are difficult to see. The maps on your table as well as the ones in the back include the settlement areas which are shaded light orange.

QUESTION: How much land in the urban area is vacant residential land?

RESPONSE: There are approximately 3,400 acres of vacant residential land. Of this 3,400 acres, 1,800 acres are vacant residential lands with no plans for development. The remaining 1,600 acres are either approved, draft approved or pending approval (for development).

QUESTION: Can we have a hybrid of concepts (i.e. different concepts for different areas)?

RESPONSE: The idea of different concepts for different areas of the city is something that could be looked at.

QUESTION: The province has named downtown Hamilton as one the key areas that it would like to target intensification. Can you give us an idea of the scale of intensification that is being called for in the downtown?

RESPONSE: Existing secondary plans for the Downtown and West Harbour Area envision about 10,000 new dwelling units in these two areas

QUESTION: The projections that call for 100,000 new households or 190,000 new residents and 2,700 acres of employment land may be inflated. Why have you selected to use these high numbers as a premise for your plan?

RESPONSE: Using these numbers will test the maximum. Council has provided direction to the effect that GRIDS should plan for, up to the maximum of 100,000 new households or 190,000 new residents and 2700 acres of employment land. Some of the older forecasts that were done used interim census numbers which resulted in lower population projections. These interim census numbers proved to underestimate the population trend in Hamilton and other areas.

QUESTION: Are concepts 1 & 6 still on the table, or has Council adopted your recommendations?

RESPONSE: Concept 1 & 6 are still on the table for the moment. You are free to explore these concepts and offer comment on these concepts.

QUESTION: How are the different criteria balanced in your TBL evaluation?

RESPONSE: TBL is a process to evaluate concepts, looking at both qualitative and quantitative criteria with the objective of finding a solution that will meet our objectives. The TBL process will highlight tradeoffs that Council will have to make.

QUESTION: Based on the projections of 100,000 new households and 190,000 new residents, your average household size seems quite small. The average is 1.9 persons per household. Could you please comment on this.

RESPONSE: The average size is small, but this reflects the reality of Hamilton's varying demographics. For example, some areas of Hamilton, like the newer sub-divisions have a growing population with larger households, while other areas have an aging, declining population with single occupant households. The average household size of 1.9 persons per household reflects this reality.

MAY 30TH, 2005 PUBLIC INFORMATION CENTRE: QUESTION & ANSWER SESSION

QUESTION: Why is growth a good thing?

RESPONSE: Growth should not be viewed as either good or bad. In the context of the Greater Golden Horseshoe, growth should be viewed as something that is inevitable. We are not trying to put a value judgment on it, rather our purpose is to see how we can best accommodate it.

QUESTION: Will the GRIDS process include measures to ensure that there is affordable housing?

RESPONSE: GRIDS will set the foundation for the infrastructure investment and the new Official Plan and Zoning by-law. Affordable housing plans will not directly come out of the GRIDS plan, however, when we evaluate the options, we will look at each option's ability to accommodate affordable housing as well as a range of other items. Subsequently, the new Official Plan and Social Plan will provide more detailed policy regarding affordable housing.

COMMENT: Roads and transport must be in place first. Growth needs to take place in harmony with environment, infrastructure, culture and community. Minimize travel and produce industry and that is compatible with residents. I like Options 3,5,6.

QUESTION: How can economic development be included into the process? e.g. Airport?

RESPONSE: The TBL evaluation will take into account economic considerations. We do have a shortage of employment lands and GRIDS will address this. There are a number of questions that come along with the decision to plan for new employment lands; How do service these areas? Which areas can be developed? How can we protect the environment and develop these areas in a sustainable manner?

QUESTION: (1) Are the inner town centres nodes? I don't want to lose the little places.
(2) How can we address pockets of heavy industry located next to residential areas (incompatible land uses)? Will you need zoning?

RESPONSE 1: At least one of the options would consider new/old downtowns with various levels of intensification.

RESPONSE 2: We will produce a new Official Plan in 2006 and Zoning by-law in 2007. When we create a new zoning by law we will address this issue in all parts of the City.

QUESTION: This idea of a Smart City sounds very attractive. But who's to say that this plan will be implemented? How is this planning process any different that our past attempts that have failed?

RESPONSE: A number of major changes have occurred in recent years. We can say with some certainty that times have changed. We have provincial support in the form of Places to Grow, the Greenbelt Plan and changes to the Planning Act that give municipalities greater control over their urban boundaries. Also, the amalgamation of Hamilton has changed the nature of our relationship internally. We are in less competition for growth since property tax revenues now flow into a common place. GRIDS is the plan to implement Vision 2020. Council supports GRIDS.

QUESTION: Where does the Economic Development Strategy fit into GRIDS? I think that the Aerotropolis development is incompatible with the most of the concepts presented here tonight.

RESPONSE: The Economic Development Strategy and its eight clusters will be incorporated into the Growth Plan. The airport is a Council direction that is fixed. The airport also exists and is already successful. Development around the airport in the form of the Aerotropolis will have to consider a wide range of issues to ensure the success of these new developments and future prosperity of the airport.

QUESTION: The airport seems to be a strong driver? It seems expensive. Can we afford it? Will noise be a problem? How can transit access this area? If Aerotropolis takes off we have a car dependent location. I think it's a high risk. It is dependent on the American economy. What about competing the Pickering airport?

RESPONSE: We are not putting all our eggs into one basket. Firstly, we have a number of other seven other clusters which we are also focusing our efforts on. The Aerotropolis is

just one of these clusters. In terms of cost, we have tripartite agreements with both the Province and Federal governments to subsidize development around the airport so it will not be solely the taxpayers of Hamilton that will be supporting this initiative. Also, it is important to remember that this is a functioning airport, unlike Pickering which is far from being built so we have a huge head start.

QUESTION: I live in Binbrook. How can people afford these huge houses? People are buying these massive homes on large lots and I wonder where is the employment that will ensure that people can keep these homes?

RESPONSE: It is our belief that the Economic Development Strategy will set forth a plan to ensure that Hamiltonians can find employment in Hamilton.

COMMENT: I think that our communities have become cold. I would like to see more mixing of uses and outdoor markets that are friendly and accessible to all.

COMMENT: It was said earlier by one of the attendees that Vision 2020 is a dated document. I disagree, I think it still a relevant document and stands on its own. I think intensification must occur first, before we expand our urban boundary to accommodate new growth.

COMMENT: I can't read your panels, the wording is too small.

QUESTION: I do not see the Social Strategy in your work. Where is it? People need affordable housing, jobs, services and quality of life. How will you deal with changing demographics?

RESPONSE: Any option we take forward will address the Social Vision. The diagram shown in the presentation showed that GRIDS will include the Social Vision. We need to consider ages and changes in demographics. Some parts of this city are aging and other parts are the opposite. Also, the Nine Directions operationalize this and other strategies.

COMMENT: Our roads are over capacity. But on the other hand we have too many roads. Hamilton actually has a surplus of roads. This does not seem sustainable.

RESPONSE: We have committed to multi-modes of transportation (for all users). We would like to have more transit and better service, more trails for cyclists and pedestrians. We are not there yet though, but we will continue to pursue these things.

QUESTION: One of your display boards states that the "Vibrancy" of rural settlements may be affected. What does this mean?

RESPONSE: There is a constituency that wants to see growth in the rural settlement areas. However, in most places it will still be very difficult to allocate new growth into the settlement areas and meet provincial policy.

QUESTION: We have underused infrastructure in some of these rural settlement areas. Doesn't it make sense to allocate growth into some of these areas like Freelton for example? What type of consideration have you given to making them more attractive?

RESPONSE: We are currently working on a rural settlement strategy. The rural settlement strategy will be comprehensive in its effort to address growth in these areas. At the same time, we will attempt to incorporate some of this work into the Growth Plan and address growth in the rural settlement areas.

QUESTION: Why do you have that piece of Greenbelt in the airport area? It is viable land?

RESPONSE: The Province of Ontario created the Greenbelt. Ministry of Municipal Affairs and Housing is the provincial ministry to which questions on the Greenbelt should be directed. The Greenbelt is final, so we will have to live with it and do our best to work with what we have.

QUESTION: You mentioned earlier that a number of "stakeholders" were invited to a workshop session earlier today. Who was invited to this meeting? I would be interested in knowing who you consider a "stakeholder"?

RESPONSE: We invited a number of people from various community, environmental and business associations based on stakeholder consultation lists used by the Planning, Public Works and Community Services Departments. Invitees included the Hamilton Chamber of Commerce, Hamilton Health Services, Friends of the Red Hill Valley, Immigrant Art and Culture Association, Grand River Conservation Authority, Downtown Hamilton BIA, Hamilton Agricultural and Rural Affairs, Community Information Services, Bay Area Restoration Council, Social Planning and Research Council, ICCLI, Iroquoia Bruce Trail Club, Durand Neighbourhood Association, SHCI, HR Matters, Hamilton Harbour Remedial Action Plan (Environment Canada), McMaster Institute of Environment and Health, Hamilton Wentworth Building Association, Ancaster Community Committee, Niagara Peninsula Conservation Authority, Hamilton International Airport, Flamborough Chamber of Commerce and The Sustainable Scale Management.

COMMENT: Under the disadvantages listed for Concepts 2 and 4 it was noted that "if not planned properly these concepts could have negative impacts". This seems odd to be stating that we might not plan things properly. "Density may cause problems for neighbourhoods" but I think density is a good thing. I like the TBL and think it has value.

QUESTION: For concept 5 it says that corridors will lead to infilling. This could be bad. We need to make sure that existing communities and neighbourhoods are taken into consideration when planning for infill and intensification. How can you address this? Is there consideration for existing neighbourhoods?

RESPONSE: In terms of infilling and intensification, each neighbourhood will be dealt with differently, we will address this in detailed work on the opportunities for intensification when the growth options are mapped in the next step.

QUESTION: Who makes the final recommendation of the Growth Plan? Who authors the final document?

RESPONSE: The GRIDS reports are authored by GRIDS Project Manager Steve Robichaud from the City Manager's Office and then they are signed off by General Manager. The documents are also reviewed by the City Mayor and staff. Council will make the final decision on the preferred growth option.

QUESTION: Is there an appeal process for GRIDS?

RESPONSE: Reports will be considered by Council, but ultimately, your appeal process will be through the Master Plans, Official Plan and Zoning By-Law.

QUESTION: When the GRIDS process is completed, will there be a review process similar to what happens for the Official Plan and Zoning By law?

RESPONSE: The Growth Management Plan will be updated through the five year OP review, along with the Master Plans.

QUESTION: I am a single mother, with a disability. I am trying hard to find work but have not been successful. How can GRIDS help us?

RESPONSE: On a holistic aspect GRIDS will touch on this by developing better more sustainable communities. It will take some time before we see the benefits of this type of plan.

QUESTION: Is there someone on the mayor's committee that represents the disabled?

RESPONSE: The individual who sits on the mayor's advisory committee who represents this point of view is Tom Cooper.

Furthermore, disabilities, like a number of broader social issues were considered when we designed the TBL, as we pushed for evaluation of all kinds of ideas (e.g. affordable housing). There are copies at the back with detailed information on the TBL. If you have any questions about the TBL, please contact Linda Harvey at the City of Hamilton.

QUESTION: The composition of the Mayor's Advisory Committee is not a representative group. They have produced no minutes and have been holding closed-door sessions.

RESPONSE: The Committee is very representative and Council would challenge that statement very strongly. Secondly, the meetings held to date have been information sessions

only. The purpose of these meetings has been to update the Committee on the work being done by Steve Robichaud and the GRIDS team. The members of the Committee are as follows:

- Laura Babcock of Powergroup Communications;
- Rebecca Wissenz of the Hamilton Chamber of Commerce and law firm Sullivan Festeryga Lawlor and Arrell;
- Tom Cooper of McQuesten Legal Services;
- Mark Shurvin, Hamilton Conservation Authority Board member;
- Ben Vanderbrug, former General Manager of the Hamilton Conservation Authority.

COMMENT: There are a number of people in this City with fixed incomes. Does you plan address people on fixed incomes? We're taxing these pensioners out of their homes. I suggest that an economically viable solution for fixed income be considered, such as a fixed tax rate for pensioners.

QUESTION: I question your reasoning for using the high projections as the basis for this growth plan. Several years ago, a study predicted significantly lower projections for Hamilton's future growth. Why have you chosen to use these high population and employment projections?

RESPONSE: Council has directed us to look at maximum upper limits as a ceiling for projected growth to test the implications of growing from 500,000 to 600,000 and/or 650,000 to 700,000. Also, the earlier population projections that you have referred to were based on interim Census numbers which were revised once the 2001 numbers were released.

QUESTION: Have you considered climate change? What about the rising cost of gas?

RESPONSE: The City has produced a background document on climate change. GRIDS can consider the implications of such "what if" scenarios.

QUESTION: What will it cost to implement your plan? Does the City have the capacity to afford it?

RESPONSE: We will test costs. The evaluation of options will identify costs and tradeoffs between costs and benefits.

COMMENT: It is good of you to look ahead and try and plan for the future. However, we do have a problem of with a significant number of people working out of town (possibly 30%). I suggest that the vacant industrial lands be taxed to the point that it forces owners to redevelop these "brownfield" lands. This may help to address our employment problems and give people the chance to live and work in places that are in close proximity.

QUESTION: I do not want a bedroom community. We need to find a way to redevelop the brownfield sites in Hamilton. Why can't we change the tax rates for these vacant lands and force land owners to do something with these lands?

RESPONSE: Unfortunately the Municipal Act doesn't allow us to change the tax rates on vacant land.

Appendix B: Workbooks

During the workshop session participants were divided into three groups, blue, red and green. Each group was asked to complete the workbook and report back to the group at the end of the day. The following are the three workbooks that were completed by the three groups.

Green

Growth-Related Integrated Development Strategy

(GRIDS)

Stakeholder Workshop
May 30, 2005

Workbook

BUILDING A STRONG
FOUNDATION
HAMILTON

Hamilton

BUILDING A STRONG FOUNDATION
HAMILTON

Stakeholder Workshop
May 30, 2005
The Hamilton Convention Centre
1 Summers Lane, Hamilton
Albion Room
12 noon to 4 pm

Draft Workshop Agenda

12:00-1:00	Registration and Opportunity to view Displays
1:00-1:10	Introductions
1:10-1:30	Presentation on GRIDS and Growth Concepts
1:30-2:00	Question & Answer
2:00-3:30	Small Group Discussion • Long list of growth concepts • Short list of growth concepts • Issues to consider when mapping growth options • TBL evaluation tool
3:30-4:00	Plenary

Hamilton

Thank you for taking the time to help shape the future growth of Hamilton.

Please answer the questions in this workbook and leave it with us tonight or send to:

Steve Robichaud
GRIDS Project Manager
Office of the City Manager,
71 Main Street W., City of Hamilton, L8P 4Y5
Fax: 905-546-2573

OR

Christine Lee-Morrison
Integrated Master Plan Coordinator
Public Works Department
320-77 James Street, City of Hamilton, L8R 2K3
Fax: 905-546-4435

Or call our BASF phone line at (905-546-2424 ext. 7828)

We want to know what you think.

Background

- The City of Hamilton must make some decisions on how the city should grow over the next 25 years. We are at the beginning of this decision making process, and want your thoughts on conceptual options for growth.

- This is the first of a series of meetings that will give the public the opportunity to participate in the development of the *Growth-Related Integrated Development Strategy* (GRIDS).

- GRIDS is the second phase of *Building a Strong Foundation* (BASF), the community based initiative that allows us to move from our vision for a sustainable future *(Vision 2020)* to the development of our Official Plan.

Nine Directions

In the first phase of BASF the consultation process identified directions that should guide development decisions. These directions were adopted by City Council in September 2003. They include:

1. Encourage a compatible mix of uses in neighbourhoods that provide opportunities to live, work and play.
2. Concentrate new development within existing built-up areas and within a firm urban boundary.
3. Protect rural areas for a viable rural economy, agricultural resources, environmentally sensitive recreation and enjoyment of the rural landscape.
4. Design neighbourhoods to improve access to community life.
5. Retain and attract jobs in Hamilton's strength areas and in targeted new sectors.
6. Expand transportation options that encourage travel by foot, bike and transit and enhance efficient inter-regional transportation connections.
7. Maximize the use of existing buildings, infrastructure and vacant or abandoned land.
8. Protect ecological systems and improve air, land and water quality.
9. Maintain and create attractive public and private spaces and respect the unique character of exiting buildings, neighbourhoods and settlements.

Making Growth Decisions

A 3-Step process to determine the best way to accommodate future population and employment growth:

- Evaluate a long list of growth concepts to identify those concepts appropriate for further consideration
- Mapping of the short list
- Evaluate short list of growth options and select a preferred growth option

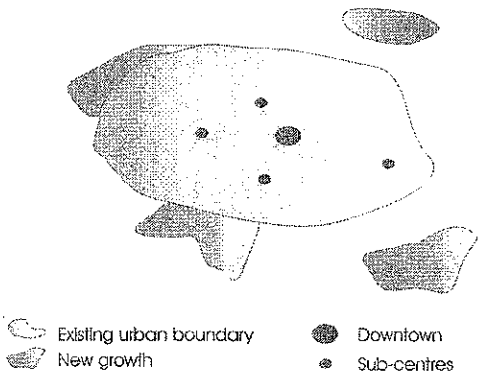
The following pages summarize each of the long list of growth concepts and provide an overview of some of the advantages and disadvantages of each.

Question 1: Did we miss any advantages or disadvantages?
Question 2: Are there characteristics of any of the concepts that you want to keep as we move forward.

Space has been provided to answer these questions on the following pages. Feel free to add any additional comments here.

Concept 1: Status Quo

Let market forces rule which will likely result in continued pressure to expand urban boundary for low density residential growth.



Advantages	Disadvantages
meets current market demand for single family houses on larger lots	continued low density reinforces continued reliance on private car use
- greater affordability and	continued boundary expansion disrupts rural communities and agriculture
	stress on natural areas
	land use pattern associated with increased greenhouse gas emissions
	makes poor use of existing infrastructure
	land use pattern can have negative health consequences

It is proposed that this concept not be considered further

Did we miss any advantages or disadvantages?

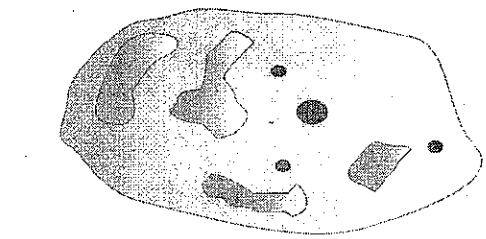
—

Are there characteristics of this concept you want to keep as we move forward?

- market forces need to be taken into consideration
- market forces balanced w community-wide interests
- minimum standards of the TBL need to be maintained
- proposed transportation corridor (eg. Mid-Peninsula Highway)

Concept 2: No Expansion

All new residential growth is contained within the existing urban area.



Advantages	Disadvantages
natural areas, greenspace and agricultural areas are protected	it may be perceived that density increase will negatively change and disrupt existing neighbourhoods
high density likely to support more effective delivery of public transit services	limits the market choice for housing
makes good use of (optimize) existing infrastructure	potential for traffic problems if not properly planned
opportunity to revitalize urban areas	vibrancy of rural settlements may be affected
will encourage urban design innovation	potential for problems with social services if not properly planned

[redacted]

Did we miss any advantages or disadvantages?

– Minimize ecological footprint

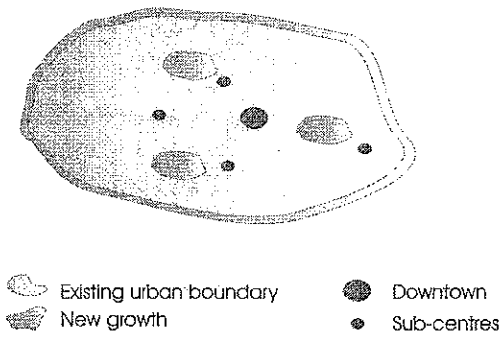
Are there characteristics of this concept you want to keep as we move forward?

–

[redacted]

Concept 3: Appropriately Distributed Development

Allocates growth across the City. Encourages growth inside the existing boundary and includes some urban boundary expansion distributed widely into unconstrained areas.



Advantages	Disadvantages
higher density allows for improved efficiency in public services (eg. transit)	does not fully support transit or other non-auto modes of travel because growth not targeted to nodes/corridors
some urban boundary expansion allows for a flexibility in housing type	

It is proposed that this concept be considered further

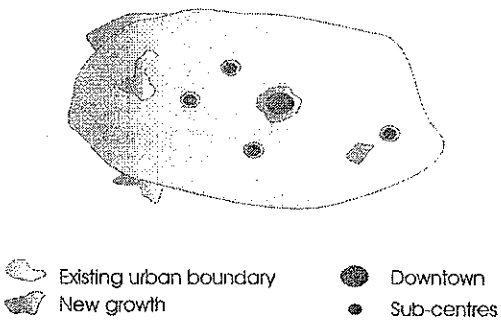
Did we miss any advantages or disadvantages?

Are there characteristics of this concept you want to keep as we move forward?

Question 7 asks for your input on mapping this concept

Concept 4: Downtown Focus

Growth within the urban boundary is allocated primarily to downtowns in Hamilton and urban boundary expansion areas are planned at a higher density than today.



Advantages	Disadvantages
enhances current focus of public services on downtown(s)	limits the market choice for housing
protects natural areas and agriculture	could be perceived as changing nature and character of downtowns and stress existing neighbourhood character
creates opportunity for mixed use area downtown	could lead to traffic congestion if not planned properly
makes good use of existing infrastructure	vibrancy of rural settlements may be affected
opportunity to revitalize urban areas	

[redacted]

Did we miss any advantages or disadvantages?

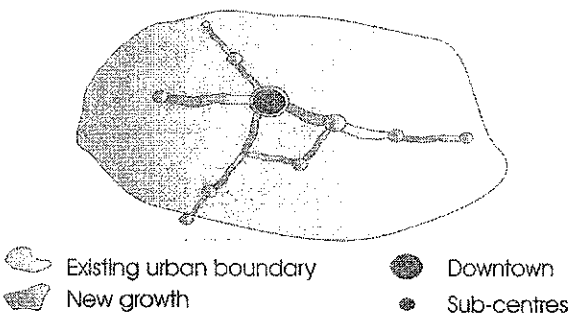
Are there characteristics of this concept you want to keep as we move forward?

[redacted]

Concept 5: Nodes and Corridors

Growth is allocated to the downtowns, suburban centres and the corridors that link these areas. Includes some urban boundary expansion which emulate the above development pattern.

Advantages	Disadvantages
supports efficient delivery of public services, such as transit	might limit the market choice for housing
mixed use can be focused around nodes/corridors	vibrancy of rural settlements may be affected
makes good use of existing infrastructure	



It is proposed that this concept be combined with Concept 4 and considered further

Did we miss any advantages or disadvantages?

- Subnodes around nodes (European Models) (neighbourhoods) – need to definite "unique" neighbourhoods

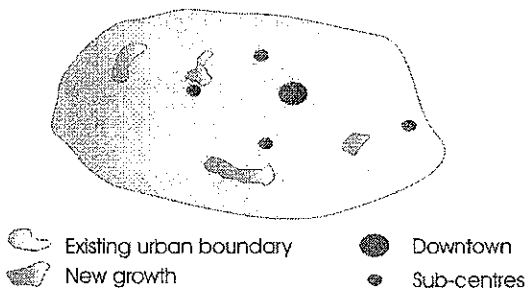
Are there characteristics of this concept you want to keep as we move forward?

- protect uniqueness of neighbourhoods (subnodes)
- protect uniqueness of rural communities

Question 7 asks for your input on mapping this concept

Concept 6: Build to the Limit and Stop

Grow within the existing urban boundary until there is no more room. Accepts that not all forecasted growth can be accommodated



Advantages	Disadvantages
natural areas, greenspace and agricultural areas are protected	may not meet population and employment projection forecast
if development density is higher than current, likely to support more effective delivery of public transit services	limits the market choice for housing in the long term
	vibrancy of rural settlements may be affected

It is proposed that this concept not be considered further

Did we miss any advantages or disadvantages?

Are there characteristics of this concept you want to keep as we move forward?

Question 3: Do you think there are any other growth scenarios that should be considered? If yes, please describe them.

The Short List of Growth Concepts

Based on a Triple Bottom Line (TBL) evaluation, City staff from a mix of departments have identified that:

- Concept 1: *Status Quo* and Concept 6: *Build to Limit and Stop* will not meet the desired end goals established through the TBL framework.
- Concept 4: *Downtown Focus* and Concept 5: *Nodes and Corridors* should be combined

This leaves a short list of 3 growth concepts for further consideration:

- *Downtown Focus, Nodes and Corridors*
- *Distributed Development*
- *No Expansion*

Question 4: Do you have any concerns moving forward with these growth concepts?

Mapping the Short List

The next step to be carried out over the next few months is to identify locations for each of the short list options taking into consideration the existing conditions and constraints in the City of Hamilton. We are calling this "Mapping the Short List". It will include identifying locations for future residential growth (i.e. homes, retail, commercial and institutional uses) and employment growth.

Question 5. What do you see as the key issues and opportunities that should be considered when mapping these growth options?
(feel free to draw on the map provided)

Where should the nodes and corridors go?

- define neighbourhoods (map out)
- monitoring growth & decline
- looking at infrastructure ⇒ how to support communities / neighbourhoods.
- assessing transportation needs between communities
- encourage living, working & playing

What would 'appropriately distributed development' look like to you?

within each community to reduce stress on transportation systems and energy requirements.
- Improved health within these communities
- Improved economic stimulation

Where is the best place for the economic clusters to be located (manufacturing, port related industry, agri-business, aerotropolis, biotechnology, film&culture, tourism, downtown)?

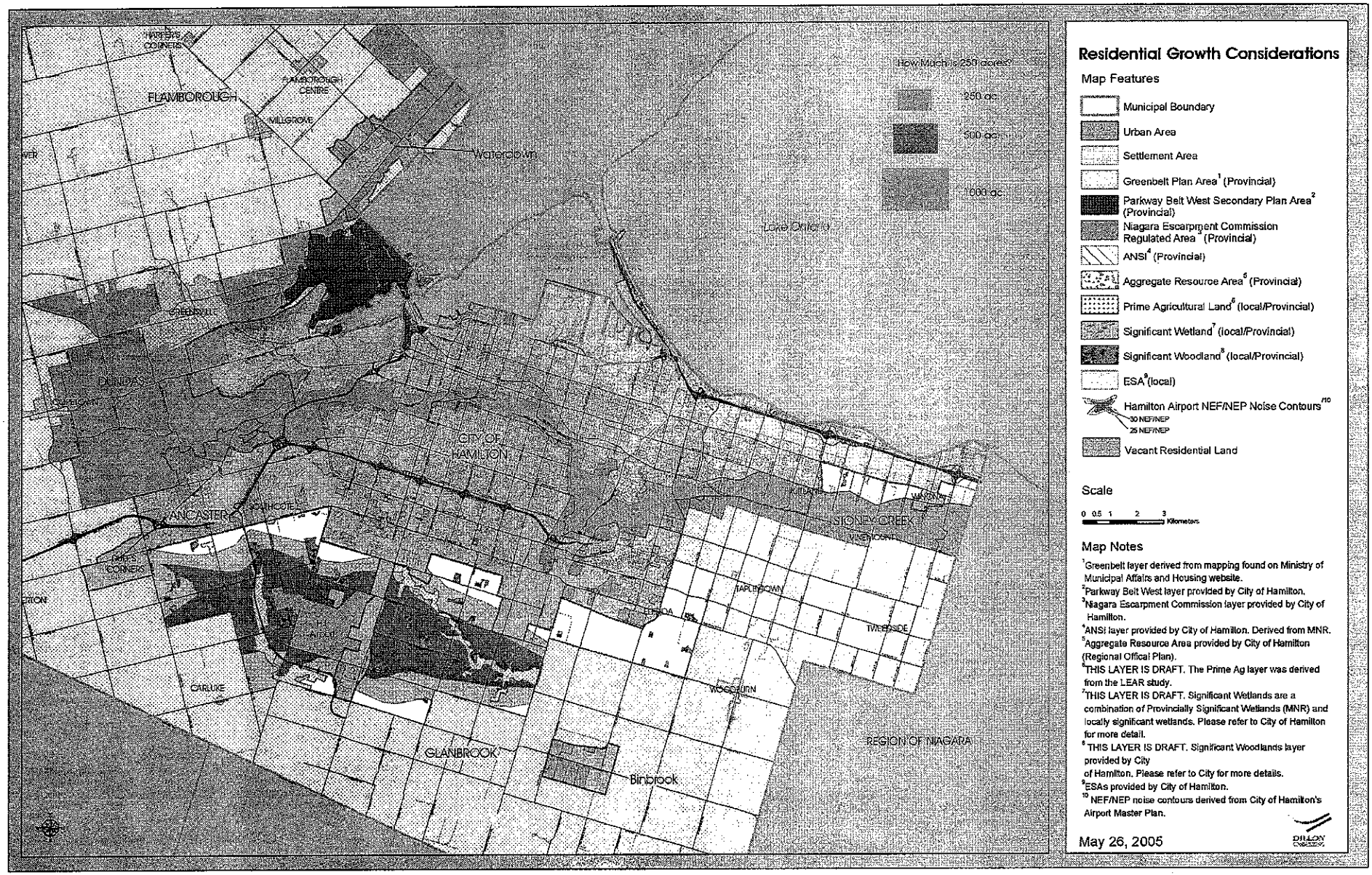
- Biotechnology - Westdale (Old Camco)/East End.
- Eco-tourism - Bay Front, RBG, Dundas Valley, Bruce Trail.

Are there any existing urban areas you feel are opportunities for increased development?

- Brownfields for economic stimulation
- Escarpment - conforms to NEC standards

Are there any areas you feel should be avoided?

- Niagara Escarpment - Dundas Valley, Red Hill Valley.
- Good Agricultural Land.



Residential Growth Considerations

Map Features

- Municipal Boundary
- Urban Area
- Settlement Area
- Greenbelt Plan Area[1] (Provincial)
- Parkway Belt West Secondary Plan Area[2] (Provincial)
- Niagara Escarpment Commission Regulated Area[3] (Provincial)
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  - 30 NEF/NEP
  - 25 NEF/NEP
- Vacant Residential Land

Scale

0 0.5 1 2 3 Kilometers

Map Notes

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May 26, 2005

DILLON CONSULTING

The TBL Evaluation Tool

The six growth concepts were evaluated using a Triple Bottom Line (TBL) Evaluation tool. This tool identifies "desired results" and "considerations" that are used to compare how well options meet the "desired results".

TBL Evaluation Toolkit

TBL Evaluation Framework

Triple Bottom Line		Desired Results	Considerations
Community Well-Being	1.1	This Growth Option will support the delivery of public services in an equitable manner	• Affordable & Accessible Housing • Public Transit • Recreation & Leisure Activities • Health Care • Rural Communities
	1.2	This Growth Option will enhance employment opportunities in Hamilton, and ensure they are accessible to all Hamiltonians.	• Transit-Accessible Employment Lands • Integration of Employment and Residential Lands
	1.3	Human health will be protected through this Growth Option.	• Protecting Air Quality • Secure Water Supply • Promotion of Physical Activity • Protecting Public Health & Safety
Economic Well-Being	2.1	This Growth Option will help to attract and retain a skilled, innovative and diverse workforce.	• Population to Employment Ratio • Cultural & Heritage Amenities • Higher Education • Housing & Community Choice • Commuter Transportation Network
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Question 6 - Do you have any additions or changes you would like to see to the "desired results" (Table 2 - column 2) that are being used to assess the growth options? Are there other "considerations" (Table 2 - column 3) that should have been included in determining a preferred conceptual growth option?

- Individual communities need to be healthy then city will be healthy.
- Greenfield development should be excluded if beneficial to live, work & play within community but only if all other options are exhausted.

Question 7 - Do you have any other thoughts you would like to offer on the use of the Triple Bottom Line Evaluation Framework?

Question 8: Are there any other thoughts you would like to share about the Growth Related Integrated Development Strategy? (A reminder that there will be further opportunity to discuss specifics about water, wastewater, stormwater and transportation in June)

Thank you!

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R e D

Growth-Related Integrated Development Strategy

(GRIDS)

Stakeholder Workshop
May 30, 2005

Workbook

BUILDING A STRONG
FOUNDATION
HAMILTON

Hamilton

BUILDING A STRONG FOUNDATION HAMILTON

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- Long list of growth concepts
- Short list of growth concepts
- Issues to consider when mapping growth options
- TBL evaluation tool

3:30-4:00 Plenary

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- This is the first of a series of meetings that will give the public the opportunity to participate in the development of the *Growth-Related Integrated Development Strategy* (GRIDS).

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In the first phase of BASF the consultation process identified directions that should guide development decisions. These directions were adopted by City Council in September 2003. They include:

1. Encourage a compatible mix of uses in neighbourhoods that provide opportunities to live, work and play.
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Making Growth Decisions

A 3-Step process to determine the best way to accommodate future population and employment growth:

- Evaluate a long list of growth concepts to identify those concepts appropriate for further consideration
- Mapping of the short list
- Evaluate short list of growth options and select a preferred growth option

The following pages summarize each of the long list of growth concepts and provide an overview of some of the advantages and disadvantages of each. * Need to attract employment growth -
* Immigrant - many women do not work.
* Clusters are meant to be competitive [illegible]

PART C

Question 1: Did we miss any advantages or disadvantages?

Question 2: Are there characteristics of any of the concepts that you want to keep as we move forward.

Space has been provided to answer these questions on the following pages. Feel free to add any additional comments here.

PART A Affordability - Residential Housing
- Infrastructure and Social Services
- Sustainable Community NEEDS sustainable employment.

* 33,000 going out to work - reversed over 25 years. (Population growth is outstripping employment growth → bedroom community which is not sustainable)

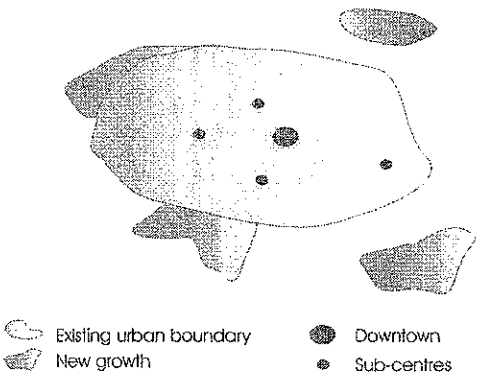
PART B * Intellectual Infrastructure - education institutes, immigration - 25% born outside of Canada - decision manufacturers, hi tech

v. immigrant/population growth must be considered hand in hand with employment growth & type

* balance - GRIDS process seems to emphasize residential growth vs. employment growth does not match [illegible] - addressing employment here - add 2700 acres - does GRIDS plan [illegible] that work for service - options will dictate growth? inter-dependant

Concept 1: Status Quo

Let market forces rule which will likely result in continued pressure to expand urban boundary for low density residential growth.



Advantages	Disadvantages
meets current market demand for single family houses on larger lots	continued low density reinforces continued reliance on private car use
	continued boundary expansion disrupts rural communities and agriculture
	stress on natural areas
	land use pattern associated with increased greenhouse gas emissions
	makes poor use of existing infrastructure
	land use pattern can have negative health consequences

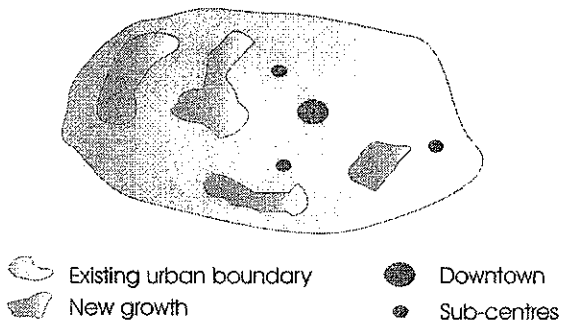
It is proposed that this concept not be considered further

Did we miss any advantages or disadvantages? AGREE

Are there characteristics of this concept you want to keep as we move forward?

Concept 2: No Expansion of URBAN BOUNDARY

All new residential growth is contained within the existing urban area.



Advantages	Disadvantages
natural areas, greenspace and agricultural areas are protected	it may be perceived that density increase will negatively change and disrupt existing neighbourhoods
high density likely to support more effective delivery of public transit services	limits the market choice for housing
makes good use of existing infrastructure	potential for traffic problems if not properly planned
opportunity to revitalize urban areas	vibrancy of rural settlements may be affected
will encourage urban design innovation	potential for problems with social services if not properly planned

[redacted]

Did we miss any advantages or disadvantages?

This starts to express some of the concerns w: affordability However Connectivity to employment is lacking explicitly.
Mix of employment, residential lands - remote from employment lands (i.e brown fields not always useful)

Are there characteristics of this concept you want to keep as we move forward?

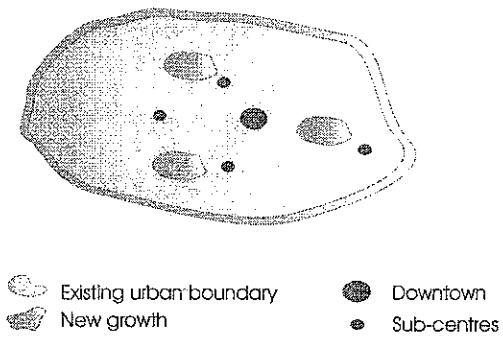
Keep this in the options as a baseline comparator to the other concepts

Keep residential growth contained - preserve agricultural land (keep good soils) - Consider LEAR study

[redacted]

Concept 3: Appropriately Distributed Development

Allocates growth across the City. Encourages growth inside the existing boundary and includes some urban boundary expansion distributed widely into unconstrained areas.



Advantages	Disadvantages
higher density allows for improved efficiency in public services (eg. transit)	does not fully support transit or other non-auto modes of travel because growth not targeted to nodes/corridors
some urban boundary expansion allows for a flexibility in housing type	
NOT	AN OPTION

It is proposed that this concept be considered further

Did we miss any advantages or disadvantages?

This is more like STATUS QUO (Concept I)

Are there characteristics of this concept you want to keep as we move forward?

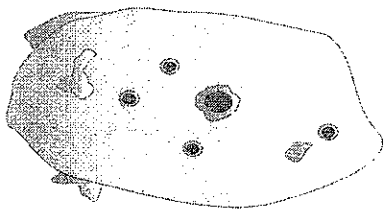
Look at amount of land – too large?

Question 7 asks for your input on mapping this concept

live, play, work, worship downtown.

Concept 4: Downtown Focus

Growth within the urban boundary is allocated primarily to downtowns in Hamilton and urban boundary expansion areas are planned at a higher density than today.



Existing urban boundary
New growth
Downtown
Sub-centres

Advantages	Disadvantages
enhances current focus of public services on downtown(s)	limits the market choice for housing
protects natural areas and agriculture	could be perceived as changing nature and character of downtowns and stress existing neiahbourhood character
creates opportunity for mixed use area downtown	could lead to traffic congestion if not planned properly
makes good use of existing infrastructure	vibrancy of rural settlements may be affected
opportunity to revitalize urban areas	LINKS ← 5

[redacted]

Did we miss any advantages or disadvantages?

Problem is that this is not made relevant to the Employment lands pilot in our discussions. Downtown is not going to be a logical place for business - people to live downtown ok, but not big employers other than office space which is very transient.

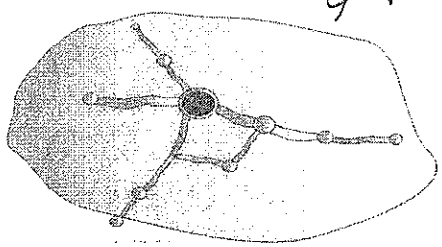
Are there characteristics of this concept you want to keep as we move forward?

building up downtown to live work play and worship

[redacted]

Concept 5: Nodes and Corridors

Growth is allocated to the downtowns, suburban centres and the corridors that link these areas. Includes some urban boundary expansion which emulate the above development pattern.



Existing urban boundary
New growth
Downtown
Sub-centres

Communities = live, work, play and worship

Advantages	Disadvantages
supports efficient delivery of public services, such as transit	might limit the market choice for housing
mixed use can be focused around nodes/corridors	vibrancy of rural settlements may be affected
makes good use of existing infrastructure	LINKS C 4

employment

It is proposed that this concept be combined with Concept 4 and considered further.

Did we miss any advantages or disadvantages?

This builds Community - there are also sub-communities Downtown plus others ie Waterdown - communities
This also concerns employment.
Quality of life issues

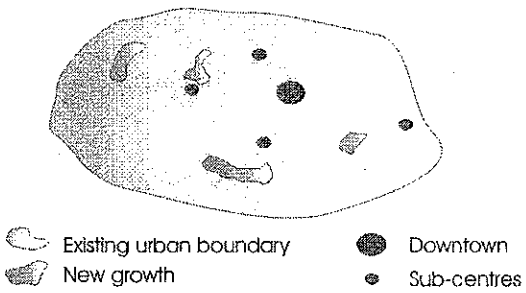
Are there characteristics of this concept you want to keep as we move forward?

Need critical mass in
4 is incorporated in 5

Questions? Ask for your input on mapping this concept

Concept 6: Build to the Limit and Stop

Grow within the existing urban boundary until there is no more room. Accepts that not all forecasted growth can be accommodated



Advantages	Disadvantages
natural areas, greenspace and agricultural areas are protected	may not meet population and employment projection forecast
if development density is higher than current, likely to support more effective delivery of public transit services	limits the market choice for housing in the long term
	vibrancy of rural settlements may be affected

It is proposed that this concept not be considered further

Did we miss any advantages or disadvantages?

Are there characteristics of this concept you want to keep as we move forward?

Question 3: Do you think there are any other growth scenarios that should be considered? If yes, please describe them.

Use highway 6 N to Guelph as a transportation corridor (4 lanes + turn around lane) NO CONSENSUS ON THIS

The Short List of Growth Concepts

Based on a Triple Bottom Line (TBL) evaluation, City staff from a mix of departments have identified that:

- Concept 1: *Status Quo* and Concept 6: *Build to Limit and Stop* will not meet the desired end goals established through the TBL framework.
- Concept 4: *Downtown Focus* and Concept 5: *Nodes and Corridors* should be combined

This leaves a short list of 3 growth concepts for further consideration:

- *Downtown Focus, Nodes and Corridors*
- *Distributed Development*
- *No Expansion*

Question 4: Do you have any concerns moving forward with these growth concepts?

Community - promote live, work, play - worship in mixed use

Employment - be clearer about employment strategy that will support population, match transportation to areas for employment

Residence - allow density to increase & cope & the constraints in land use, transportation, affordability.
- GET OVER FEAR OF DENSITY - see other city models.

Mapping the Short List

The next step to be carried out over the next few months is to identify locations for each of the short list options taking into consideration the existing conditions and constraints in the City of Hamilton. We are calling this "Mapping the Short List". It will include identifying locations for future residential growth (i.e. homes, retail, commercial and institutional uses) and employment growth.

Question 5. What do you see as the key issues and opportunities that should be considered when mapping these growth options?
(feel free to draw on the map provided)

Where should the nodes and corridors go?

See question 4

What would 'appropriately distributed development' look like to you?

Residential Development

Integrated - mixed SES development & Community, play grounds, small shops, child care spaces - to support densification

Need schools in communities - "hub", including recreation

Where is the best place for the economic clusters to be located (manufacturing, port related industry, agri-business, aerotropolis, biotechnology, film&culture, tourism, downtown)?

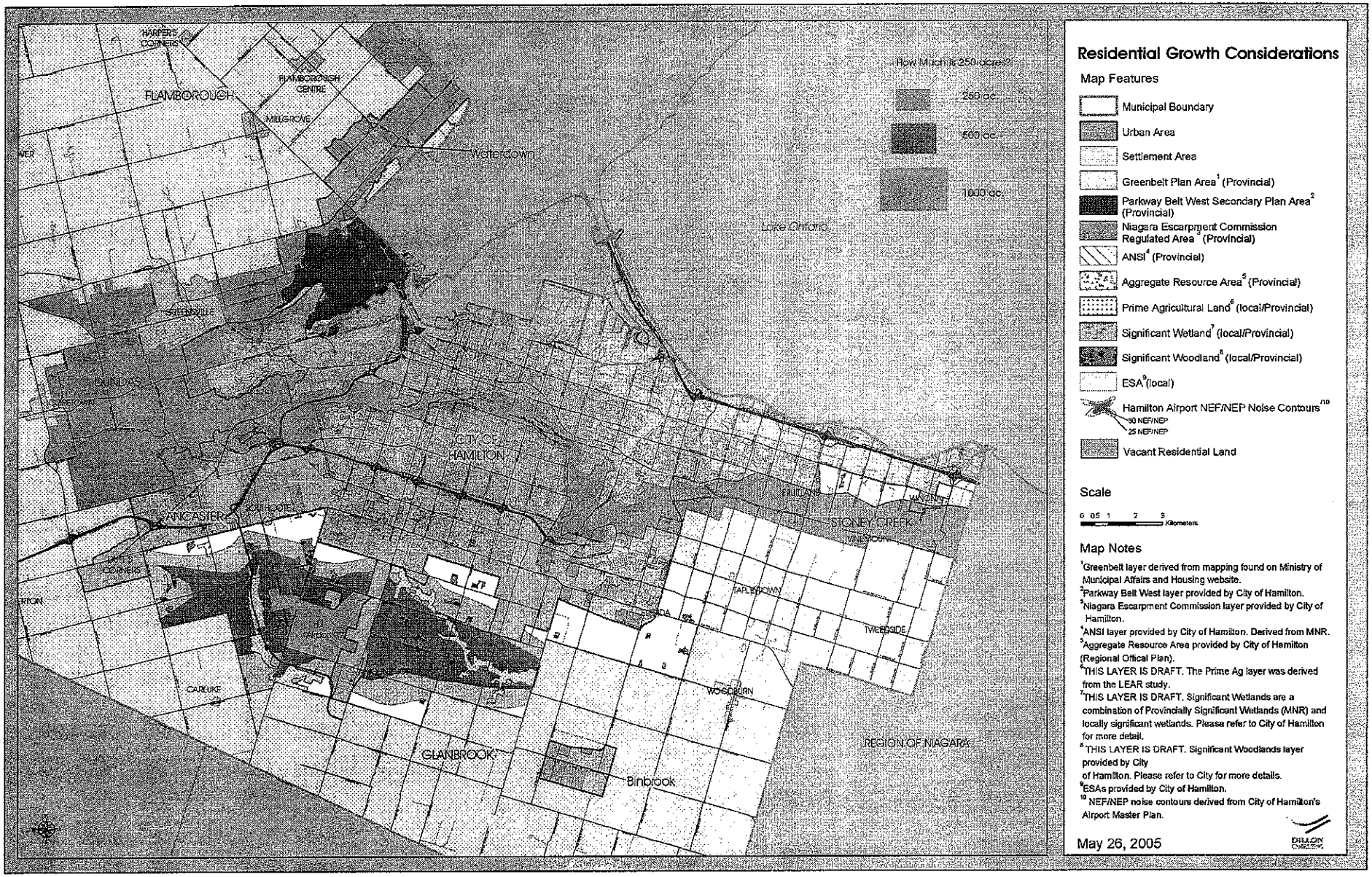
Air port
liability issues - Brownfields
Majority Consensus
No consensus

Near transportation

Are there any existing urban areas you feel are opportunities for increased development?

Waterdown
Mount Hope
Tapleytown (not good agricultural land)

Are there any areas you feel should be avoided?



Residential Growth Considerations

Map Features

- Municipal Boundary
- Urban Area
- Settlement Area
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DILLON CONSULTING

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See comments on front re: Affordability re. PARTS A, B, C
PART D Attracting & retaining business - need to make decisions that support employment as population grows.

Question 7 - Do you have any other thoughts you would like to offer on the use of the Triple Bottom Line Evaluation Framework?

Re environmental consideration ⇒ effluent dump into the harbour must stay in the safe range regardless of the growth in population
Re: education participation of education in GAIDS -
- supporting effective use of resources & high needs school
- implications for education system re: basic numeracy.

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GRIDS planning process → residential focus - does not look at criteria relevant to environmental / ecology impacts of employment growth eg Geography - fossil fuels - we are a transportation hub c̄ the PORT = centre of transportation - Hamilton is a natural place to come

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Blue Group.

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(GRIDS)

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agree to reject ✓

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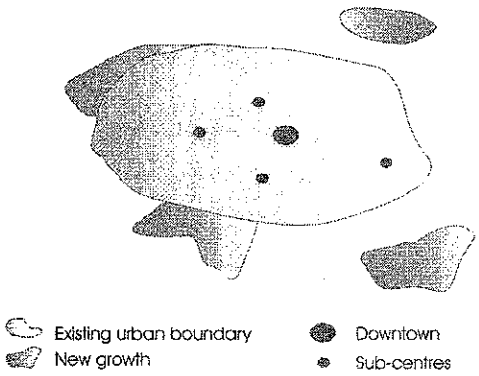

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	continued boundary expansion disrupts rural communities and agriculture
	stress on natural areas
	land use pattern associated with increased greenhouse gas emissions
	makes poor use of existing infrastructure
	land use pattern can have negative health consequences

It is proposed that this concept not be considered further

Did we miss any advantages or disadvantages?

- expanded infrastructure causing extra costs.
- costs to individual citizens.

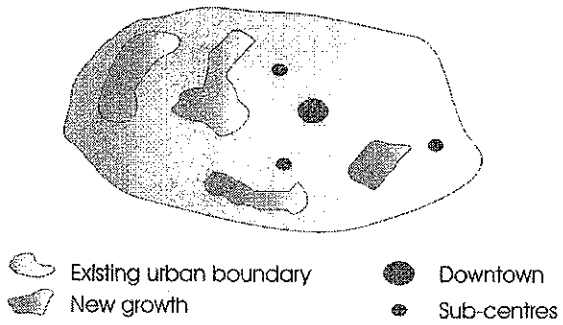
need to be conscious of the attraction of neighbouring jurisdictions to attract residents. (other side of greenbelt.) there will be a need to inform consumers of advantage of med + high density.

Are there characteristics of this concept you want to keep as we move forward? – will newcomers be more willing to adapt to higher density?

– depends too much on cars + roads + expansion of urban boundaries.

Concept 2: No Expansion

All new residential growth is contained within the existing urban area.



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high density likely to support more effective delivery of public transit services	limits the market choice for housing
makes good use of existing infrastructure	potential for traffic problems if not properly planned
opportunity to revitalize urban areas	vibrancy of rural settlements may be affected
will encourage urban design innovation	potential for problems with social services if not properly planned

It is proposed that this concept be considered further.

Did we miss any advantages or disadvantages?

- more efficient municipal service delivery
- easier for existing urban to adapt.
- developers may be difficult to convince & lack the experience
- medium density vertical is desirable.

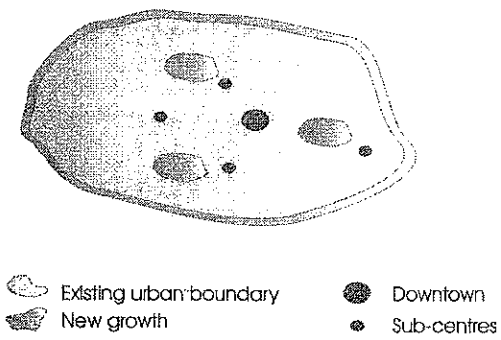
Are there characteristics of this concept you want to keep as we move forward?

- expansion would likely be more vertical than horizontal. - fairly drastic change is obliged.
- node development may be more difficult
- setting a boundary is critical.

Question 7 asks for your input on mapping this concept.

Concept 3: Appropriately Distributed Development

Allocates growth across the City. Encourages growth inside the existing boundary and includes some urban boundary expansion distributed widely into unconstrained areas.



Advantages	Disadvantages
higher density allows for improved efficiency in public services (eg. transit)	does not fully support transit or other non-auto modes of travel because growth not targeted to nodes/corridors
some urban boundary expansion allows for a flexibility in housing type	

It is proposed that this concept be considered further

Did we miss any advantages or disadvantages?

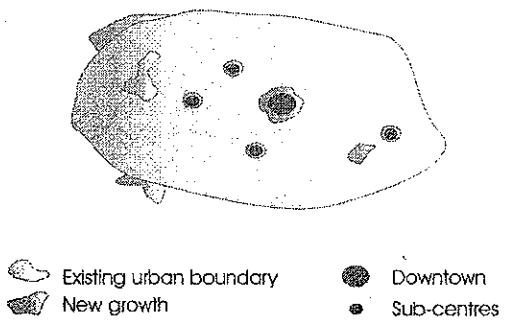
- hard to determine what is "appropriate"
- [illegible]

Are there characteristics of this concept you want to keep as we move forward?

Question 7 asks for your input on mapping this concept

Concept 4: Downtown Focus

Growth within the urban boundary is allocated primarily to downtowns in Hamilton and urban boundary expansion areas are planned at a higher density than today.



Advantages	Disadvantages
enhances current focus of public services on downtown(s)	limits the market choice for housing
protects natural areas and agriculture	could be perceived as changing nature and character of downtowns and stress existing neighbourhood character
creates opportunity for mixed use area downtown	could lead to traffic congestion if not planned properly
makes good use of existing infrastructure	vibrancy of rural settlements may be affected
opportunity to revitalize urban areas	

It is proposed that this concept be combined with Concept 5 and considered further.

Did we miss any advantages or disadvantages?

- downtown most logical focus.

Are there characteristics of this concept you want to keep as we move forward?

Question 7 asks for your input on mapping this concept.

- Zoning by-laws can be very useful

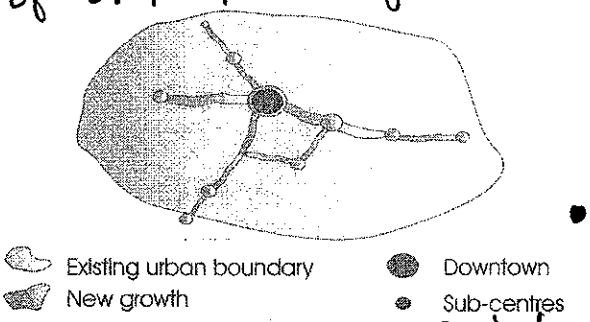
our choice w. elements of 2, 3 and 4

Concept 5: Nodes and Corridors

Growth is allocated to the downtowns, suburban centres and the corridors that link these areas. Includes some urban boundary expansion which emulate the above development pattern.

Advantages	Disadvantages
supports efficient delivery of public services, such as transit	might limit the market choice for housing
mixed use can be focused around nodes/corridors	vibrancy of rural settlements may be affected
makes good use of existing infrastructure	

- service sector is the area of employment growth.



- integrate business + residential through zoning.

It is proposed that this concept be combined with Concept 4 and considered further.

- employment + commercial must be a part of consideration of the nodes + corridors.
- self sustaining nodes wherever possible. (employment, commercial, residential)

Did we miss any advantages or disadvantages?

- ensure corridors don't become strip development
- corridors will focus on public transit.
- compatible use for corridors
- is corridor agnoymous w. "linkages"

Are there characteristics of this concept you want to keep as we move forward?

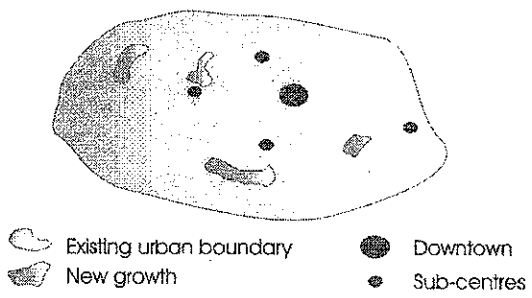
from 2 - adjust area the star
from 4 - downtown is a KEY node.
from 3 - nodes are more than core (downtowns) - distributed.

Question 7 asks for your input on mapping this concept.

reject

Concept 6: Build to the Limit and Stop

Grow within the existing urban boundary until there is no more room. Accepts that not all forecasted growth can be accommodated



Advantages	Disadvantages
natural areas, greenspace and agricultural areas are protected	may not meet population and employment projection forecast
if development density is higher than current, likely to support more effective delivery of public transit services	limits the market choice for housing in the long term
	vibrancy of rural settlements may be affected

It is proposed that this concept not be considered further.

Did we miss any advantages or disadvantages?

unsustainable.

Are there characteristics of this concept you want to keep as we move forward?

Question 3: Do you think there are any other growth scenarios that should be considered? If yes, please describe them.

- home-based business growth encouraged
- nodes - self sustaining whenever possible
- need for a middle ground between tension between industrial + park/residential.
- waterfront node w. strong link to downtown
- important to develop parks, schools etc.
- remediation costs for brown fields is prohibative - needs to be addressed by municipalities
- review where employment potential?

The Short List of Growth Concepts

Based on a Triple Bottom Line (TBL) evaluation, City staff from a mix of departments have identified that:

- Concept 1: *Status Quo* and Concept 6: *Build to Limit and Stop* will not meet the desired end goals established through the TBL framework.
- Concept 4: *Downtown Focus* and Concept 5: *Nodes and Corridors* should be combined

This leaves a short list of 3 growth concepts for further consideration:

- *Downtown Focus, Nodes and Corridors*
- *Distributed Development*
- *No Expansion*

Question 4: Do you have any concerns moving forward with these growth concepts?

- specific growth of AIRPORT + PORT is critical.
- AIRPORT - noise shadow affects residential development but should not be a factor for other kinds of development.
- challenge to get people to adopt public transit

Mapping the Short List

The next step to be carried out over the next few months is to identify locations for each of the short list options taking into consideration the existing conditions and constraints in the City of Hamilton. We are calling this "Mapping the Short List". It will include identifying locations for future residential growth (i.e. homes, retail, commercial and institutional uses) and employment growth.

Question 5. What do you see as the key issues and opportunities that should be considered when mapping these growth options?
(feel free to draw on the map provided)

Where should the nodes and corridors go?

- small # of nodes or large # of nodes? both industrial + residential
- primary ~~major~~ and secondary ~~minor~~ nodes? (mixed use/transportation focus?)
- employment nodes need to be on corridors
- highest + best use. (mixed use is critical)
- location of corridors is efficient when it serves many uses.
- nodes - concentration density + diversity

What would 'appropriately distributed development' look like to you?

Where is the best place for the economic clusters to be located (manufacturing, port related industry, agri-business, aerotropolis, biotechnology, film&culture, tourism, downtown)?

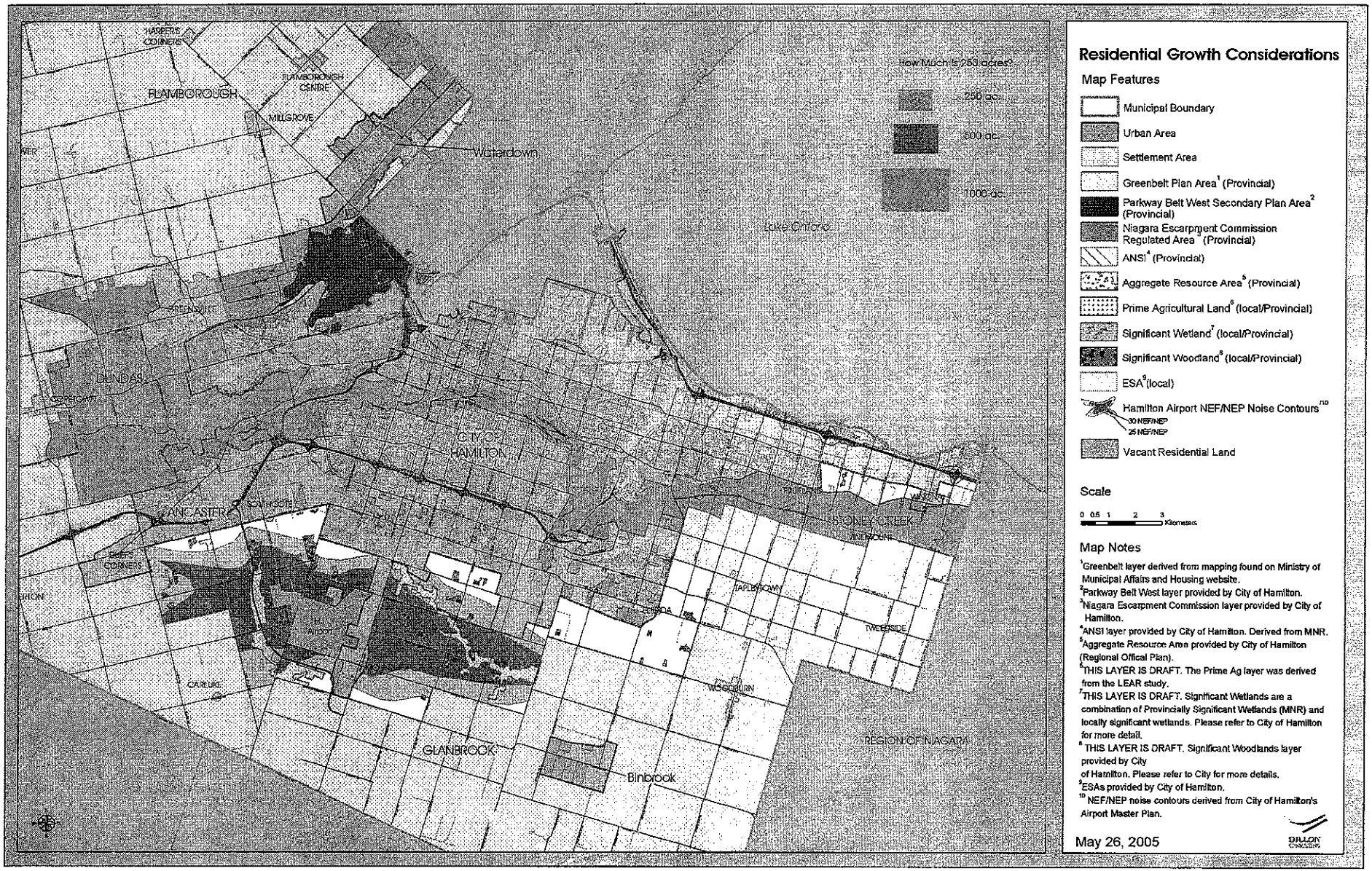
film - distributed
culture - distributed.
agri - rural.

Are there any existing urban areas you feel are opportunities for increased development?

- Stoney Creek.
-

Are there any areas you feel should be avoided?

- all communities must be impacted



Residential Growth Considerations

Map Features

- Municipal Boundary
- Urban Area
- Settlement Area
- Greenbelt Plan Area[1] (Provincial)
- Parkway Belt West Secondary Plan Area[2] (Provincial)
- Niagara Escarpment Commission Regulated Area[3] (Provincial)
- ANSI[4] (Provincial)
- Aggregate Resource Area[5] (Provincial)
- Prime Agricultural Land[6] (local/Provincial)
- Significant Wetland[7] (local/Provincial)
- Significant Woodland[8] (local/Provincial)
- ESA[9](local)
- Hamilton Airport NEF/NEP Noise Contours[10]
  - 30 NEF/NEP
  - 25 NEF/NEP
- Vacant Residential Land

Scale

0 0.5 1 2 3 Kilometers

Map Notes

[1]Greenbelt layer derived from mapping found on Ministry of Municipal Affairs and Housing website.
[2]Parkway Belt West layer provided by City of Hamilton.
[3]Niagara Escarpment Commission layer provided by City of Hamilton.
[4]ANSI layer provided by City of Hamilton. Derived from MNR.
[5]Aggregate Resource Area provided by City of Hamilton (Regional Offical Plan).
[6]THIS LAYER IS DRAFT. The Prime Ag layer was derived from the LEAR study.
[7]THIS LAYER IS DRAFT. Significant Wetlands are a combination of Provincially Significant Wetlands (MNR) and locally significant wetlands. Please refer to City of Hamilton for more detail.
[8] THIS LAYER IS DRAFT. Significant Woodlands layer provided by City of Hamilton. Please refer to City for more details.
[9]ESAs provided by City of Hamilton.
[10] NEF/NEP noise contours derived from City of Hamilton's Airport Master Plan.

May 26, 2005

DILLON CONSULTING

The TBL Evaluation Tool

The six growth concepts were evaluated using a Triple Bottom Line (TBL) Evaluation tool. This tool identifies "desired results" and "considerations" that are used to compare how well options meet the "desired results".

TBL Evaluation Toolkit

TBL Evaluation Framework

Triple Bottom Line		Desired Results	Considerations
Community Well-Being	1.1	This Growth Option will support the delivery of public services in an equitable manner	• Affordable & Accessible Housing • Public Transit • Recreation & Leisure Activities • Health Care • Rural Communities
	1.2	This Growth Option will enhance employment opportunities in Hamilton, and ensure they are accessible to all Hamiltonians.	• Transit-Accessible Employment Lands • Integration of Employment and Residential Lands
	1.3	Human health will be protected through this Growth Option.	• Protecting Air Quality • Secure Water Supply • Promotion of Physical Activity • Protecting Public Health & Safety
Economic Well-Being	2.1	This Growth Option will help to attract and retain a skilled, innovative and diverse workforce.	• Population to Employment Ratio • Cultural & Heritage Amenities • Higher Education • Housing & Community Choice • Commuter Transportation Network
	2.2	This Growth Option will position Hamilton as a leading centre of economic growth.	• Goods Movement • Diversified Employment Base • Property & Business Taxes
	2.3	This Growth Option will maintain and enhance Hamilton's high-quality environmental amenities.	• Eco-Tourism • Agri-Tourism & Locally-Grown Food
Ecological Well-Being	3.1	This Growth Option will ensure that Hamiltonians share equally in the benefits of a healthy natural environment.	• Equitable Access to Green and Open Space
	3.2	This Growth Option will enhance economic development in an eco-efficient manner.	• Brownfields, Infill, Redevelopment, Revitalization & Intensification • Protection of the Agricultural Land Base • Reducing Energy Consumption • Infrastructure Needs & Costs
	3.3	This Growth Option will protect eco-system health.	• Vegetation Cover • Watershed Health • Protection of Ecologically Sensitive Areas • Protection of the Atmosphere

Question 6 - Do you have any additions or changes you would like to see to the "desired results" (Table 2 - column 2) that are being used to assess the growth options? Are there other "considerations" (Table 2 - column 3) that should have been included in determining a preferred conceptual growth option?

Question 7 – Do you have any other thoughts you would like to offer on the use of the Triple Bottom Line Evaluation Framework?

Question 8: Are there any other thoughts you would like to share about the Growth Related Integrated Development Strategy? (A reminder that there will be further opportunity to discuss specifics about water, wastewater, stormwater and transportation in June)

_____

_____

_____

_____

_____

_____

_____

_____

Thank you!

BUILDING A STRONG FOUNDATION HAMILTON

PLEASE RETURN completed workbooks by June 17, 2005 to:

Steve Robichaud
GRIDS Project Manager
Office of the City Manager,
71 Main Street W., City of Hamilton, L8P 4Y5
Fax: 905-546-2573

OR

Christine Lee-Morrison
Integrated Master Plan Coordinator
Public Works Department
320-77 James Street, City of Hamilton, L8R 2K3
Fax: 905-546-4435

Please add me to the mailing list:

Name:

_____

Address:

_____

Phone:_____ Email: _____

(3)

- AIRPORT - Commercial — good transport link to employment from neighbouring residentials.
- RAILWAY LANDS. - redevelopment for any part of these lands.
- PORT is very important and increasing especially if "assembly" was also involved.
- movement of goods is a very important factor
-

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(4) PUBLIC TRANSIT. - living + working in same node encourages this.
- what is/will be the impact of fuel prices rising ↑ on use of public transit?
-

---

(5)

Appendix C: Workshop Invitation List

The following stakeholder groups were invited to attend the afternoon workshop on May 30th.

Beasley Neighbourhood Association
Eastmount Community Council
Flamborough Ward 7 Ratepayers
Ministry of Community & Social Services Hamilton Area District Offices
Hamilton Urban Core Community Health Centre
Mohawk College
McMaster University
Strathcona Community Council
Citizens for Citizens
CANEW Neighbourhood Association
Crown Point Community Council (Ward 3)
Hamilton Ratepayers Association (Flamborough)
Friends of Battlefield House Museum
Hamilton & Region Arts Council
Arts Hamilton
North End Neighbourhood Association
Blakely Neighbourhood Association
Huntington Park Community Council
Ontario Healthy Communities Coalition
Ratepayer's Association Creighton Neighbourhood
Access to Opportunity Project
CMHC
Durand Neighbourhood Association
Ainslie Wood/Westdale Community Assoc. of Resident Homeowners Inc.
Red Hill Valley Neighbourhood Association
Ancaster Community Council
Highride South Community Association
Gourley Community Association
Labourers International Union of North America (Local 837)
Pleasant View Neighbourhood Ratepayers Association
Hamilton and District Labour Council
The Hamilton Spectator
St. Clair Community Council
Alternatives for Youth
Eleanor Community Council
Hamilton Community Foundation
Dundas Community Services
Rosedale Community Council
Ancaster Heights Community Association
Berrisfield Community Council
Ancaster Information Centre and Community Services Inc
Transport 2000 Ontario

Stinson Neighbourhood Association
Hamilton Beach Preservation Committee (Ward 5)
Social Planning & Research Council
North Central Community Council
Dundas Heritage Association
Carlisle Ratepayers Association
Community Information Service Hamilton Wentworth
Gibson Neighbourhood Associated
Delta West Community Association
Kirkendall Neighbourhood Association
Hamilton Association for Community Living
Corktown Community Association
Ministry of Municipal Affairs
Highride South Community Association
Quinndale Community Council
Hamilton Regional Indian Centre
Strathcona Neighbourhood Association
Landsdale Neighbourhood Watch
Central Neighborhood
Beach Strip/Woodward Community Council
Riverdale Community Council
Clear Committee
Dundas Heritage Residents Association
Access and Equity Coordinator
Strengthening Hamilton/s Community
Hamilton Council on Aging
Citizens for a Sustainable Community
McMaster Institute of Environment and Health
Hamilton Health Sciences
Immigrant Culture and Art Association
Settlement &Integration Services Organization
YWCA
Stelco Inc.
Industry-Education Council of Hamilton
King Street West B.I.A.
Ottawa Street B.I.A.
Business Advisory Center
James Street Merchants/ International Village BIA
Main Street West BIA
Stoney Creek Chamber of Commerce
Flamborough Chamber of Commerce
Barton Village B.I.A.
Hamilton and Burlington Architect's Association
Westdale Village BIA
Dofasco
Hamilton Chamber of Commerce
Hamilton Chamber of Commerce

Downtown Hamilton B.I.A.
Hamilton-Wentworth Home Builders' Association
Hamilton International
Hamilton International
"City Lites" Business Association
Glanbrook Business Association
Hamilton Association of Business Improvement Areas
Waterdown BIA
Canadian Automobile Association
Kenilworth Avenue Merchants Association
International Village BIA
Hamilton Port Authority
Stoney Creek BIA
Hess Street Merchants Association
Locke Street Business Association
Dundas Downtown BIA
Concession Street B.I.A.
Hamilton Burlington Real Estate Board
Bay Area Restoration Council
Stoney Creek Horticultural Society
Royal Botanical Gardens
Community Advisory Panel - Hamilton Industrial Environmental Association
Hamilton Air Monitoring Network
Rockton Agricultural Society
Hamilton Environmental Action Team (HEAT)
Canada Trust: Friends of the Environment
Hamilton Wentworth Soil and Crop Improvement Association
Ancaster Township Historical Society
Alternative Commuting and Transportation
Architectural Conservancy of Ontario, Hamilton Region Branch
Municipal Heritage Committee
Hamilton Community Energy
Halton Region Conservation Authority
Environment Canada
Green Venture
Ministry of Natural Resources
Minister of Agriculture, Food & Rural Affairs
Green Hamilton Committee, HIEA
GASP
Hamilton Harbour Remedial Action Plan, Environment Canada
ESAIEG
Niagara Escarpment Commission
Christian Farmers Association
Friends of Red Hill
Dundas Heritage Association
Glanbrook Heritage Society
Bruce Trail Association

Bruce Trail Association
Bruce Trail Association
Clean Air Hamilton
Niagara Peninsula Conservation Authority
Niagara Peninsula Conservation Authority
Hamilton Conservation Authority
Hamilton Conservation Authority
Canadian Environmental Law Association
Binbrook Agricultural Society
Wentworth Dairy Producers
Grand River Conservation Authority
Grand River Conservation Authority
Agricultural Advisory Committee
Hamilton Wentworth Federation of Agriculture & Golden Horseshoe Pork Producers Assoc
Hamilton Waterfront Trust
Earth Day Hamilton
Ministry of the Environment
Hamilton Naturalist Club
Hamilton-Wentworth Federation Of Agriculture
Ancaster Agricultural Society
Wentworth Soil & Crop Improvement Association
Ontario Federation of Agriculture
Ancaster Horticultural Society
Environment Hamilton
Hamilton Health Sciences Foundation

Appendix D – Event Notification Material

Hamilton

Mailing Address:
City Hall, 71 Main Street West
Hamilton, Ontario
Canada L8P 4Y5
www.hamilton.ca

City Manager's Office
Strategic Initiatives Division
Phone: 905-546-2424 Ext. 7828
Fax: 905-546-2573

May 17, 2005

Re: GRIDS Workshop, May 30, 2005

Dear Community Organization Representative:

The purpose of this letter is to invite you, or someone else from your organization, to attend a workshop for the City's Growth Related Integrated Development Strategy (GRIDS) on May 30, 2005 from 12:00 noon to 4:00 pm at the Hamilton Convention Centre (Albion Room).

The City is currently planning the best way to accommodate anticipated growth in population and employment over the next 25 to 30 years. GRIDS is the planning process that will help the City decide where and how Hamilton should grow. GRIDS will integrate land use planning and infrastructure planning and consider environmental, community and economic issues when making decisions.

The May 30th workshop will allow for discussion on different growth concepts with key organizations in the community.

An evening Public Information Centre from 6:00 - 9:00 pm (with a presentation beginning at 7:00 pm) is also planned as an opportunity for all members of the public to learn about the GRIDS project and provide input.

Enclosed you will find an agenda for the workshop as well as a notice for the evening Public Information Centre, and a Building a Strong Foundation (BASF) Bulletin which provides an overview of upcoming events.

We hope that your organization would be interested in participating in the afternoon workshop discussion. ***We would appreciate receiving a call or email to confirm your attendance.***

GRIDS Phone Line – (905) 546-2424 ext. 7828
GRIDS email – grids@hamilton.ca

We look forward to working with you to plan Hamilton's future.

Sincerely,

S. E. Robichaud, M.C.I.P., R.P.P.
Manager, Growth Related Integrated Development Strategy, City Manager's Office

SR/sr

BUILDING A STRONG FOUNDATION HAMILTON

Growth Related Integrated Development Strategy: Growth Management Context

Public Information Centre

May 30, 2005
The Hamilton Convention Centre
1 Summers Lane,
Hamilton
Albion Room
6-7 pm Open House
7-9 pm Presentation & Discussion

By 2031, up to 190,000 new residents and 100,000 jobs are expected to come to the City of Hamilton. The City is currently planning the best way to accommodate this anticipated population and employment growth over the next 25 to 30 years.

This Public Information Centre (PIC) kicks off the first of a series of public events that will be held between now and the end of the year for the City's Growth Related Integrated Development Strategy (GRIDS).

GRIDS is a made in Hamilton balanced growth strategy. Its purpose is to identify the most ideal places for growth and the type of growth based on environmental priorities, social issues, economic opportunities and population studies. GRIDS will also identify strategies to provide infrastructure servicing to future growth areas.

Comments, Questions or to be added to the project mailing list

Call us at: 905-546-2424, ex. 7828
Email us at: grids@hamilton.ca
Fax or mail:

Steve Robichaud
GRIDS Project Manager
Office of the City Manager
71 Main Street W.,
City of Hamilton,
L8P 4Y5
Fax: 905-546-2573

OR

Christine Lee-Morrison
Integrated Master Plan Coordinator
Public Works Department
320-77 James Street,
City of Hamilton,
L8R 2K3
Fax: 905-546-4435

The purpose of this PIC is to present for discussion, a collection of long-range growth concepts and the evaluation tool being used to assess these concepts. The growth concepts are not specific to Hamilton but suggest different ways the City could accommodate more people and jobs. This PIC is your opportunity to provide input on these growth concepts and the evaluation tool.

Visit http://www.hamilton.ca/City-Manager/grids for more information

Notice issued May 20, 2005

Appendix E – Written Comments Raised

GRIDS May 30 Event – Written Comments Received	
Organization	**Comments Received**
General Public Comment Forms and Emails	*Growth Concepts* ▪ Concepts 2 and 4 have some areas that are not planned properly. Once these are removed they appear more advantageous when compared to the other concepts. ▪ Don't see the need to push beyond the existing urban boundary. Prefer concept 2 although Concepts 4 and 5 are ok *TBL* ▪ TBL is a reasonable tool but based on value judgments ▪ Introduction of community and ecological considerations into TBL is to be commended ▪ Unfortunately the economic piece is sometimes applied while neglecting the centrality of social cohesion, cultural vibrancy and dense inter-sectoral personal networks to economic growth ▪ The quality of downtown living (alternative transportation, culture, civic activity) has been constantly raised as issues in attempting to attract high level researchers to live and work in Hamilton ▪ TBL should have been used for the aerotropolis, failure to do so brings disrepute to the City's planning credibility as a whole *Things to Consider when identifying areas growth?* ▪ Successful cities require fairly high level of density, supporting cultural and economic exchange and a rich civic sphere ▪ Current modes of growth encourage suburbanization. This is expensive to service and hurts the core by pulling resources from central neighborhoods ▪ Need to support residential and business growth in the core to get economic growth and socio-cultural vitality
	Growth Concepts ▪ Not enough focus on communities ▪ Need to consider where employment/work will be created ▪ Push hard for increased density in urban boundary *TBL* ▪ Like the TBL evaluation ▪ Politicians are not willing to follow and implement increased density so need to force City to have less available land than needed *Things to Consider when identifying areas growth?* ▪ Keep good agricultural land in agriculture; follow LEAR study
	Growth Concepts ▪ Hamilton airport is ideally suited to handle flight traffic to USA and Western Canada; don't wait or Pickering will pass us ▪ *TBL* ▪ Too rigid ▪ Someone has to make decisions to go ahead with employment land plans and be

GRIDS May 30 Event – Written Comments Received	
Organization	**Comments Received**
	goal driven by people rather than a potentially flawed computer program *Things to Consider when identifying areas growth?* ▪ Accessibility to international borders for employment lands (airport increases air accessibility; Mid Pen road accessibility) ▪ City needs to move forward quicker as we are missing opportunities (eg. Toyota, UPS)
	▪ Growth concepts and TBL seem appropriate *Things to Consider when identifying areas growth?* ▪ How to attract industry to harbourfront industrial area ▪ How realistic is it to expect a lot of employment near airport? ▪ How to encourage intensification in built-up areas and discourage urban sprawl ▪ How to get mixed communities with residential, employment and shopping
	▪ Hamilton can't move forward until it develops a better way to resolve differences; need to abandon majority rules approach – everyone's wisdom is needed. Citizen Consensus Councils can help to minimize obstacles and tap into creative potential of this wonderful diverse community
	Growth Concepts ▪ Goods and people have to move; before we worry about where to put the people, need to fix problems with roads and alternate transportation systems ▪ Concepts 3, 5 and 6 seem logical ▪ Maps have some inaccuracies that need to be addressed especially in outlying rural areas – should talk to people who know areas and get out and see them *TBL* ▪ Growth has to take place in harmony with environment, services, etc (i.e. roads, water, schools, recreation, cultural needs, agricultural land, environmentally sensitive features); short term economic gain will eventually lead to future problems *Things to Consider when identifying areas growth?* ▪ Keep residences and employment areas in close proximity to minimize travel and pressure on transportation system and environment ▪ Industry and commerce has to be compatible with the neighborhood (e.g. don't put rendering plant next to residential area, don't put quarry at headwaters of a rural community on well water)
	Growth Concepts ▪ Include minor growth to rural settlement areas to help re-establish them as service centres for the rural communities and allow them to become more self sustaining (e.g. Freelton once played a major role as service centre in North Flamborough but not longer) ▪ Some rural settlements already have strong infrastructure to support growth (e.g. water, parks, libraries, fire hall, good transportation access, etc) *TBL* – very intelligent approach *Things to Consider when identifying areas growth?* ▪ Freelton has major infrastructure investment ($4 Million for water); is

GRIDS May 30 Event – Written Comments Received	
Organization	**Comments Received**
	strategically located; close to excellent transportation route (Hwy 6)
	▪ Scrap airport idea, remember Westjet ▪ Firm urban boundary; infill, restore brownfields ▪ Affordable housing ▪ Better community for old areas of city ▪ We need jobs now for the unemployed and poor ▪ Restore heritage areas and create tourism (do we need a new hotel? The Connaught just went under)
	▪ Why no bus transportation in Glanbrook ▪ Route up Glancaster, up to turn around and back, to Glancaster Village and Twenty Place and down to Upper James to Downtown would pick up close to 1000 homes or more
	Growth Concepts ▪ Neighborhoods need to be people friendly, not just roads ▪ Trees in meridians will be exposed to heat, drought, salt, pollution ▪ 3 story townhouses are not practical for many people because of stairs ▪ need to consider public transit routing, role of brownfields, human rights issues associated with re-export of 3rd world goods ▪ should have a set of options that don't include airport expansion; aerotropolis would not pass TBL evaluation as it includes employment land sprawl, environmental failure (eg. will produce excessive garbage), probable economic failure, noise stress, etc ▪ should have an option "none of the above" ▪ employment and residential elements need to be integrated ▪ rezoning agricultural lands should be seriously reconsidered ▪ too much focus on transportation of goods as a single issues (aerotropolis, Red Hill Creek, Mid Pen, Port) ▪ have an option that focuses on local markets and local food supply rather than transportation/distribution for global markets ▪ consider roads as a last resort; need to consider what will happen if oil prices continue to rise and what effect it will have on transportation industry *TBL* ▪ not used for aerotropolis ▪ TBL needs to consider future generations, globalization and localization, world events and finite natural resources ▪ City has not involved general public in planning/decision making *Things to Consider when identifying areas for growth?* ▪ Diversity in both employment and residential ▪ Property taxes; cost to citizens; infrastructure costs ▪ Environment – trees; natural areas within walking distance; eco-tourism; protect waterfront and escarpment from development; noise and pollution issues; excessive waste loading to harbour; work with Hamilton's local wonders ▪ Community – play areas; happy neighborhood communities; walk, bike to work

GRIDS May 30 Event – Written Comments Received	
Organization	**Comments Received**
	or shopping; public transit; don't build on parks; practical homes; high density surrounded by greenspace; no high-rises; downtown as gathering place and for major events ▪ Influences – aging population; oil peak ▪ Population growth may be negative ▪ Encourage return of local economy (fishing, farmers market) ▪ Excessive wear and tear on roads
	▪ Plan seems to be a dream ▪ Use Hamilton's fabulous landscape to attract tourism; Pier 4 is great but need a Master Plan to include the natural balcony ▪ Opening lands at airport is good, now need to open more land on the east mountain to diversify from airport
	▪ need to shorten list of growth concepts ▪ provide some incentives for using public transit ▪ consider home based business regulations
	Comments on Growth Options Report: ▪ Don't consider the population projections as inevitable ▪ Increased employment through an aerotropolis development is not an aim to be sought; do we want to become Mississauga west?; better to spend money on downtown, tourism and the harbour to achieve a sustainable and livable city *Status Quo* – assumes boundary can be expanded whenever someone wants to; not acceptable *No Expansion* – meets GRIDs and most of Vision 2020 parameters *Distributed Development* – very little difference between this and status quo *Downtown Focus* – could be done if pursued with great energy, will improve downtown and relieve pressure for sprawl; might result in lesser population for a time *Nodal Development* – possibilities as long as nodes don't become contiguous; look at nodes and downtown together *Build to the Limit and Stop* – with medium density housing it would meet the provincial population figures; population growth is not the be all and end all
Hamilton Chamber of Commerce	*Long Range Vision for City should include all lands outside Greenbelt Plan* ▪ Should consider all lands outside of greenbelt for future urban development; develop through staged growth ▪ Comprehensive and long range planning in this manner is pro-active rather than incremental process that can result in ad-hoc boundary revisions on a 5 year basis ▪ Looking longer term can help properly plan infrastructure improvements and facilities such as schools, natural areas and linkages can be identified earlier an be better protected as a foundation to urban form ▪ Allows for clearer decision making for business investment; eliminates uncertainty for agricultural investments outside of greenbelt ▪ Consistent with sustainable development as there are definable boundaries;

GRIDS May 30 Event – Written Comments Received	
Organization	**Comments Received**
	new growth accommodated in logical and predictable pattern ▪ Future urban development must include higher densities; when combined with nodes and corridors strategy this approach can lead to the establishment of new, more compact communities on a staged basis in a predefined urban context as an alternative to an incremental subdivision by subdivision growth pattern. ▪ Minimizes leapfrog development ▪ defined boundary supports existing infrastructure and growth areas in Hamilton including downtown, waterfront and airport *Urban Form should be modeled on nodes and corridor framework* ▪ consistent with historical development in Hamilton; continue to build on this success in new urban communities ▪ helps create separate communities with their own identity and centre of urban activity ▪ allows for the greatest variety in urban design and density; maximizes choice and alternative housing options ▪ supports continued prominence of downtown Hamilton ▪ best for staged growth ▪ consistent with node role Hamilton plays in regional context *TBL* ▪ supports the HHHA response and shares concern regarding TBL ▪ agree with need for a balanced tool however, TBL has a heavy environmental bias and does not fully address economy. Importance of economy is vital to long term prosperity and community sustainability. TBL does not fully recognize the importance of economic development in a sustained model of community development
Centre for Community Study	*Growth concepts* ▪ Economic viability of each growth concept is missing (e.g can city afford to grow in a low density form? – cost of public services and infrastructure, cost of decline of older parts of city, low tax base) ▪ If reviving downtown is a goal, each concept should be evaluation on how it meets this goal ▪ No need to include concept 1, unworkable *TBL* ▪ Priority of downtown renewal should be incorporated into TBL; add "revitalized downtown" under 2.1 Considerations for helping to attract and retain a skilled, innovative and diverse workforce; 2.2 Considerations that will position Hamilton as a Leading centre of economic growth; and 3.2 Considerations that will enhance economic development in an eco-efficient manner. *Things to Consider when identifying areas for growth?* ▪ Residential development should be located to integrate with Hamilton's urban structure (e.g. locate with access focused on Hamilton not Toronto and the

GRIDS May 30 Event – Written Comments Received	
Organization	**Comments Received**
	GTA) ▪ Employment lands should be located considering the types of jobs that are being sought. Downtown tends to attract knowledge workers and should be a target area for growth
Ancaster Community Committee Planning Sub-Committee	▪ Recommend the concept or concepts that results in strengthening the live, work and play balance within each Hamilton community ▪ need healthy strong and unique communities to create successful city ▪ Health of communities can be measured by ability of people to live, work and play in community; within each community. Look at need for jobs, housing and places to play and provide strategies to improve for each community ▪ Transportation issues are reflection of live, work and play imbalances within and between communities – tolerable until all communities become healthy ▪ Concept means no one downtown; many "downtowns" to serve each community ▪ Approach would likely result in less work by Council and Staff and more effective solutions; total removal of live, work play imbalance not likely but worth striving for
	▪ Schools in or near industrial areas are declining in enrolment and suburb schools are overloaded. What if a partnership between school boards, City and local industry was developed to allow parents to drop off kids close to their place of employment and then kids would be transported to the school with day care centres at drop off point. ▪ Use of school buses for other transit purposes (e.g. after school hours; allow some access by seniors or others during school hours ▪ Coordination of all transportation (school board, DARTS, Laidlaw and Attridge Transportation wheelchair buses and Minibuses) to improve the transportation system for disabled and aged.
Hamilton Halton Builders Association	*Growth Concepts* ▪ Places to Grow Plan and Greenbelt Plan will limit the growth options. The market functions best with fewer government interventions. Status Quo is not likely to be an option under Places to Grow. ▪ The no expansion concept would have horrendous impacts on existing built form, neighborhoods, public open space and community, further consideration of this option is not recommended. ▪ Distributed development concept merits further study, as it could make efficient use of existing infrastructure. ▪ The HHHBA supports the designation of the downtown as a Priority Urban Centre and wholeheartedly supports its revitalization. The important issue facing the municipality is the impact of the various intensification models on the form and character of the downtown. Clearly the intensification targets of 200 person/jobs per hectare prescribed by the province, and as currently characterized by downtown Toronto or the Yonge and Eglinton area, are not suitable for Hamilton and are not supported by the Association.

GRIDS May 30 Event – Written Comments Received	
Organization	**Comments Received**
	▪ The nodes and corridors concept would also provide for the efficient use of existing infrastructure, transit and social services. Currently, Hamilton acts as a residential node for approximately 50,000 residents with Highway 403/QEW acting as the corridor to their employment in the GTA. This commuter deficit must be reversed. This concept in conjunction with the 'Distributed Development' model would provide for strong community development throughout the city. ▪ This built to the limit and stop concept chooses to ignore the inevitable population influx, and makes no effort to plan for its eventuality. No further consideration is necessary. ▪ The Hamilton-Halton Home Builders' recommends Option 3, the 'Distributed Development' model, as the preferred option for the reasons stated above. The municipality should also incorporate the 'Nodes and Corridors' concept as outlined in Option 5 in conjunction with this model. The linking of residential nodes to traditional growth and employment areas has the opportunity to sustain and enhance these existing vibrant communities while maximizing existing infrastructure. *TBL* ▪ The TBL has a heavy environmental bias in the TBL that has yet to be overcome. It fails to recognize the existing economic resources of the municipality, the approved economic cluster strategy, or council's direction that economic growth is the number one priority of the municipality. Tool must be fixed before further evaluation is carried out.
Realtors Association of Hamilton-Burlington	*Growth Concepts* ▪ Nodes and corridors would be the best growth concept ▪ Directs growth towards establishing and building up areas that already have existing infrastructure, good transportation access; builds on already strong nodes and linkages; allows the development of downtown ▪ Continued revitalization of nodes and corridors within the existing urban structure will increase people's access to green space, cultural and recreational facilities and transportation that that City has already invested in. ▪ Stakeholder driven and consensus building approach that GRIDS has embraced is an excellent approach to analyzing and approaching growth and development within the City
Hamilton International Airport	*Growth Options Report* ▪ Concern that the GRIDS Options report evaluates how well employment clusters meet the GRIDS directions which is inconsistent with the understanding that all clusters have already been identified as priorities by the City of Hamilton ▪ Any analysis of employment growth options should consider Hamilton's relative competitiveness compared to other municipalities ▪ The assessment of the aerotropolis cluster should take the following into consideration:

GRIDS May 30 Event – Written Comments Received	
Organization	**Comments Received**
	○ Airport provides mixed use opportunity. Live, work and play can be situated within the airport area. Almost 5 million passenger trips per year occur in the Regions around Hamilton – the airport minimizes the distance residents from Hamilton have to commute to conduct air travel. ○ The Greenbelt provides for urban development area in the vicinity of the airport. If this is not used, it provides a strong argument to develop Pickering airport to support airport related economic growth which will have a much greater negative impact on the preservation of rural lands. ○ Hamilton airport provides inter-regional transportation connections and provides a node that supports public transit and private transit (airport shuttles and taxi). ○ The Aerotropolis strategy allows for maximization of underutilized existing infrastructure at the airport ○ If all air travel originating from around Hamilton was served by the Hamilton Airport, this would reduce approximately 200 million car km per year saving more than 60,000 tonnes of greenhouse gases per year and relieving congestion on highways. ○ Airports have opportunity to provide attractive public spaces often considered 'gateways' to the community which can showcase local art
Enbridge	Enbridge goal is to keep the rights-of-way clear to ensure safety and integrity of existing pipeline infrastructure. The following conditions of development around pipelines were suggested: ▪ No permanent structures permitted within right-of-way area ▪ Lot lines nor incorporated over Enbridge right-of-way ▪ Maintain Enbridge right-of-way as greenspace, park or open space to ensure permanent maintenance access ▪ Proposed crossings of rights-of-way by roads, lanes, bike/walking paths, services, utilities are permitted but subject to Enbridge approval ▪ Any excavation within 30 metres of right-of-way required Enbridge approval ▪ Use of heavy machinery, grading, placement of fill, or landscaping within right-of-way requires Enbridge approval ▪ Work on right-of-way requires presence of Enbridge inspector
Niagara Escarpment Commission	The NEC provided comments on the Growth Options Working paper as follows: ▪ Both the recent Greenbelt Act and the recent changes to the Niagara Escarpment Planning and Development Act will influence potential areas for urban expansion ▪ Any intensification development areas within areas designated as Urban Areas in the Niagara Escarpment Plan must be compatible with the visual and natural environment of the escarpment ▪ Any intensification development areas within Minor Urban Centres must be environmentally sustainable, compatible with the identity of the Minor Urban Area and direct growth away from the Escarpment Natural and Escarpment Protection areas.

GRIDS May 30 Event – Written Comments Received	
Organization	**Comments Received**
Transport Canada	No construction shall take place within navigable waters without the approval of Transport Canada, Navigable Waters Protection

Appendix C: PEIL Neighbourhood Concept Plan

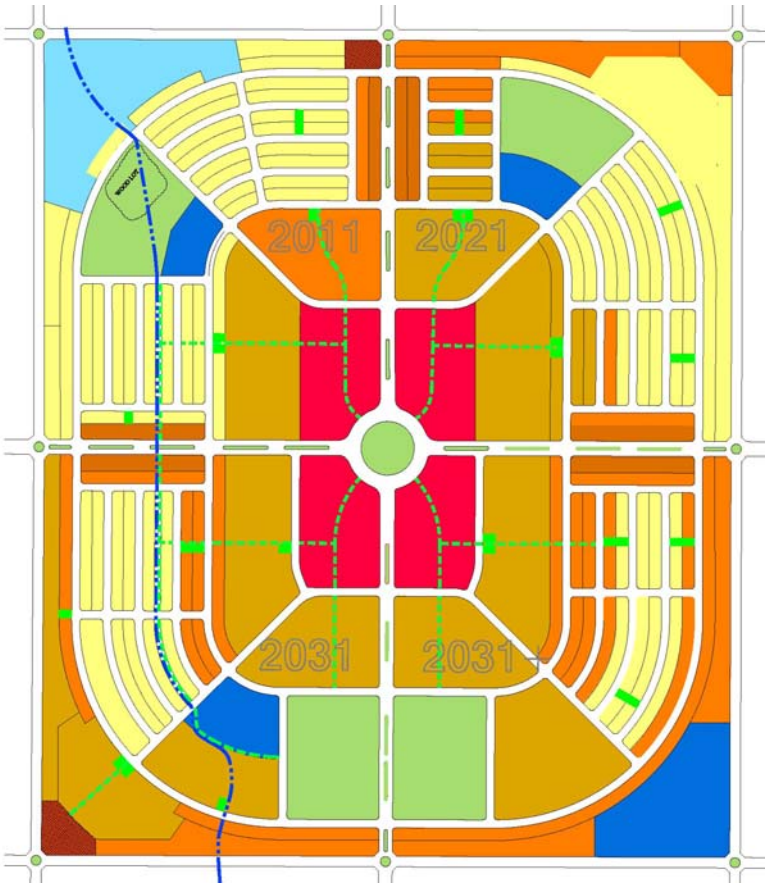
INTRODUCTION

Over the next 30 years, the City of Hamilton's population is projected to reach 700,000 persons. In February of 2003, Hamilton City Council adopted a "balanced Growth Strategy" called GRIDS (Growth Related Integrated Development Strategy).

The purpose of this Development Strategy is to recognize the best places for growth in Hamilton. The type of growth is also considered based on "environmental priorities, social issues, economic opportunities and population studies as well as identifying strategies to fund the servicing of these areas" (City of Hamilton website, 2001-2005).

Hamilton's future neighbourhoods will be different. In order to balance social, economic and environmental considerations there has been a trend to reduce the amount of developable land in new neighbourhoods to protect and enclose environment features. This has resulted in land being developed more efficiently. New neighbourhoods will be more dense, more compact and contain a variety of land uses to facilitate transit linkages and to provide opportunities for live, work and play. The range of density will increase over time with less lower density and more prominent medium and high density residential uses.

Planning and Engineering Initiatives Ltd. ("PEIL") were retained by the City of Hamilton Planning Department to graphically illustrate how these future neighbourhoods will change over time as they accommodate higher density uses.



Overall Neighbourhood Plan

A general neighbourhood was developed consisting of a 200 acre grid block. Conceptual Neighbourhood Plans were developed for 2011, 2021 and 2031 based on a predetermined housing mix and increasing density. These conceptual Neighbourhood Plans provide a visual presentation of the future neighbourhoods as higher densities are accommodated.

To guide the development of the Conceptual Neighbourhood Plans some underlying planning principles and objectives were established. They are as follows:

1. Focal Point: PEIL has suggested that each neighbourhood should consist of a central focal point with higher activity concentrated around that point. A focal point will contribute to a neighbourhood identity and create a sense of place. A mix of uses will be integrated at this focal point where residents can shop, eat and meet one another;

2. Neighbourhood Park: A park that is also a neighbourhood focus is a key element of the neighbourhood. Neighbourhood Parks are to be located close to High Density and be the centre of active recreation. Walkways and pedestrian/bicycle linkages also provide key elements;

3. Pedestrian and Bike Linkages: These linkages should be integrated along greenways, natural land patterns, corridors and buffers through the community to provide access to parks, open space and commercial uses;

4. Curvilinear Design: PEIL has suggested a curvilinear design be implemented to enhance existing landscape features and to allow for better flow of pedestrians and vehicles. In addition, there will be sensitivity and responsiveness to existing physical and cultural features. While there is a curvilinear design, local streets are established in a more traditional grid pattern, as shown on the concept plans; and,

5. Transit: The proposed development and road pattern allows for better transit opportunities. Transit stops would be integrated within 400 ft. (121 m) of proposed residential and be integrated to minimize walking distance for the greatest number of residents in each neighbourhood.

These neighbourhood plans represent how development could occur – they are conceptual, not definitive, and are intended to be a starting point to guide the planning process as new neighbourhoods are planned, and developed over the next 25 – 30 years.

RESIDENTIAL LAND USES

LOW DENSITY RESIDENTIAL

Proposed Low Density Residential ("LDR") areas would consist primarily of single detached, semi-detached and duplex dwellings. Townhouse dwellings and multi-residential unit conversions may also be permitted. Multiple residential housing forms shall locate near Arterial and Collector roads. A variety of housing elevations shall be encouraged with careful attention to streetscape.

Change key elements of residences to avoid repetition and bland designs (e.g. windows, roof peaks, brick colours).

Avoid the domination of the garage on the street. Encourage the use of the front of houses to promote social interaction with neighbours (e.g. porches, front yard terraces).

MEDIUM DENSITY RESIDENTIAL

Proposed Medium Density Residential ("MDR") areas would include primarily multiple attached dwelling unit types, consisting of street and block townhouse dwellings, triplex and fourplex dwellings, low rise apartment buildings (up to 4 storeys) and stacked townhouses. A mix of long and short townhouse blocks should be encouraged and a variety of elevations are also encouraged, which will add to the streetscape. The Medium Density units are proposed to be located along Arterial and Collector roads.

Street Townhouse Dwellings

Provide an appealing streetscape. Have regard for heights, massing, scale and type of dwelling unit compatible with that permitted by the zoning by-law for nearby residential properties.

Proper interaction with High Density and Low Density Residential areas. Consider reduced front yard setbacks and rear lane parking.

Stacked Townhouse Dwellings

Three storey apartment dwellings

Provide housing opportunities that encourage usage of public transit, pedestrian and bicycle transportation networks and decrease dependence on the car.

HIGH DENSITY RESIDENTIAL

Proposed High Density Residential ("HDR") areas would consist mainly of apartments, townhouses and stacked townhouses. High Density structures would be a maximum of 9 storeys. The High Density areas would also abut commercial areas as well as Arterial and Collector roads. Furthermore special design guidelines will be applied to High Density uses.

Provide sufficient off-street car and bicycle parking for residents and visitors. Locating and massing new buildings to minimize shadow impacts on adjacent properties particularly lower-scale densities.

Locate and screen service areas, ramps and garbage storage to minimize the impact on adjacent streets and residences. HDR structures should have a maximum of 9 storeys.

Provide infill developments when possible, such as condominium conversion with the objective of good residential amenity and quality of life for new and existing residents.

MEDIUM DENISTY RESIDENTIAL LIVE/WORK UNITS

Live/Work Units are a combination of residential and non-residential uses in one space. They are permitted within the MDR designation and are located along Arterial and Collector Roads. Live/Work Units reduces the dependence on the automobile and results in a more energy efficient neighbourhood.

Provide continuation of special landscape or built-form features that contribute to the character of the neighbourhood.

Encourage a strong live/work relationship by providing a variety of housing that reflects the existing and future socio-economic and demographic characteristics of local residents and job opportunities.

MIXED USE COMMERCIAL

Mixed Use Commercial consists of a full range of retail, service commercial, personal and business services, offices, medical centers, entertainment facilities, and restaurants. Residential, Institutional and other uses are also permitted above ground floor. Adequate off-street parking, loading and maneuvering facilities would be provided and appropriately designed as well. Mixed Use Commercial uses provide for the daily and weekly shopping needs of the surrounding residential areas. Furthermore, screening and/or buffering shall be provided between commercial and sensitive adjacent land uses.

Employment Areas could also locate within the Mixed Use Commercial areas if the opportunity arose. Employment uses permitted should not be noxious and should be limited in scale and intensity. A full range of employment opportunities for the residents of these neighbourhoods shall be provided beyond traditional retail type employment. Strictest design guidelines shall be implemented and any potential effects of permitted uses on adjacent land uses shall be investigated.

Regard for the orientation of buildings. Provide land-scaping on the front and any flanking yard and adjacent to any public parks and open space to create an attractive streetscape and screening parking, loading and service areas.

Neighbourhood retail uses should provide a neighbour-hood focus and be within an easy walk for local residents.

INSTITUTIONAL

Institutional uses include schools, places of worship, day care centres, long term care facilities and government services. Schools are encouraged to be located adjacent to Parkland designations.

Institutional facilities that serve a broader regional population should wherever possible locate close to transit lines. Provide a balance of facilities to encourage the educational, health and social well-being of the residents.

Be compatible with adjacent land uses. Create visual & physical connections. Minimize traffic infiltration on adjacent streets.

Local Institutions play an important role in residents' daily life. Schools should provide open space for outdoor activities and landscaping and should be designed to limit noise, privacy and traffic impacts on neighbouring residents. Large scale Institutional uses can locate in the focal point and contribute to the identity of the neighbourhood.

PARKLAND

Parkland shall constitute neighbourhood level parks. These parks may be used for active or passive purposes and are proposed to be located adjacent to or in conjunction with school sites. Trail and linkages would connect the neighbourhood/community. Parkland would be distributed throughout the neighbourhood and urban squares will also be utilized for additional open space activities close to higher densities. Neighbourhood Parks will serve approximately 5,000 people and will contain a mixture of passive areas, unlit sports fields, informal and formal play areas. A community park will also be supplied, as shown in Neighbourhood 2031 and 2031+, which would serve all four (4) quadrants.

In addition, parkland, bicycle and pedestrian paths are encouraged on lands zoned for transportation, utility or communication purposes where compatible. Utility corridors provide an opportunity to connect each neighbourhood.

Locate parks with frontage on streets which will have front doors of houses facing the park to enhance access, safety and security. Integrate natural features into parks.

Parks should provide a continuous network through the community by being connected to walkway and bicycle linkages. Provide opportunities for a variety of active and passive recreation activities and be able to accommodate change in demographics.

STORM WATER MANAGEMENT

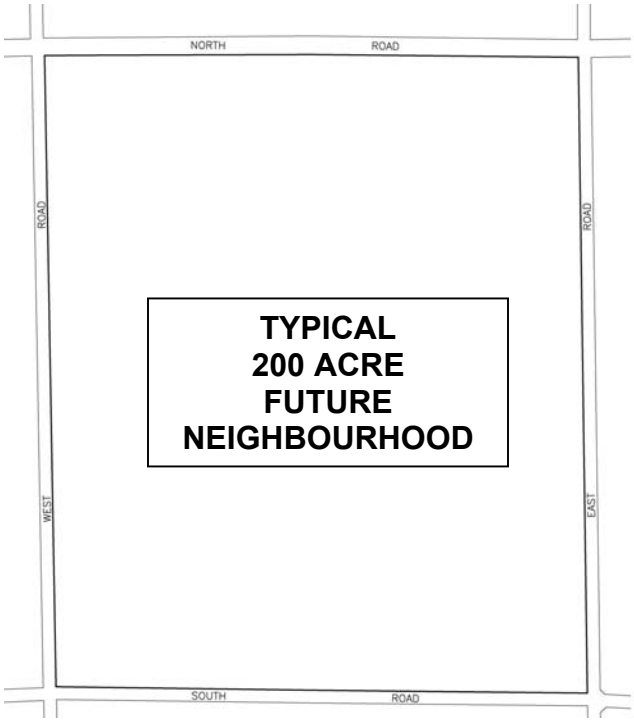
Storm Water Management ("SWM") is based on a comprehensive drainage area. They consist of Natural Channels and Ponds and are used for compatible trails or recreational purposes.

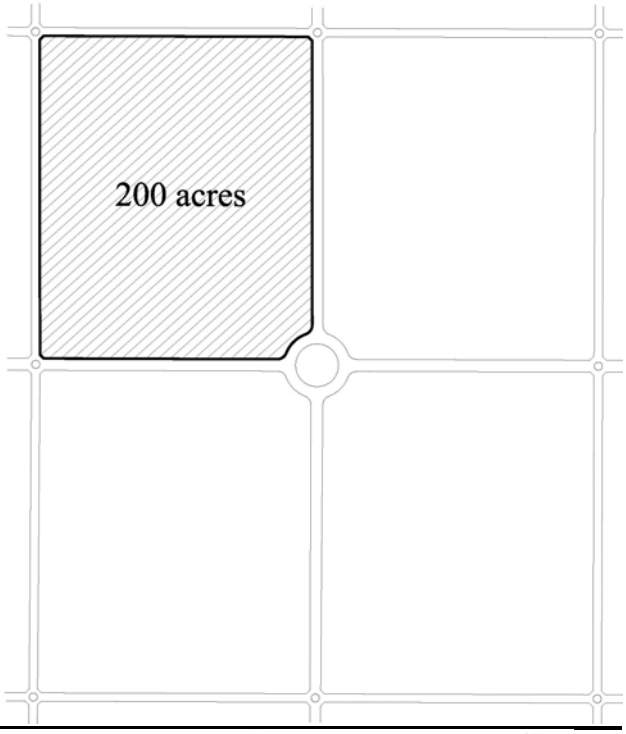
SWM areas should be multi-functional and be integral parts of a multi-use open space system.

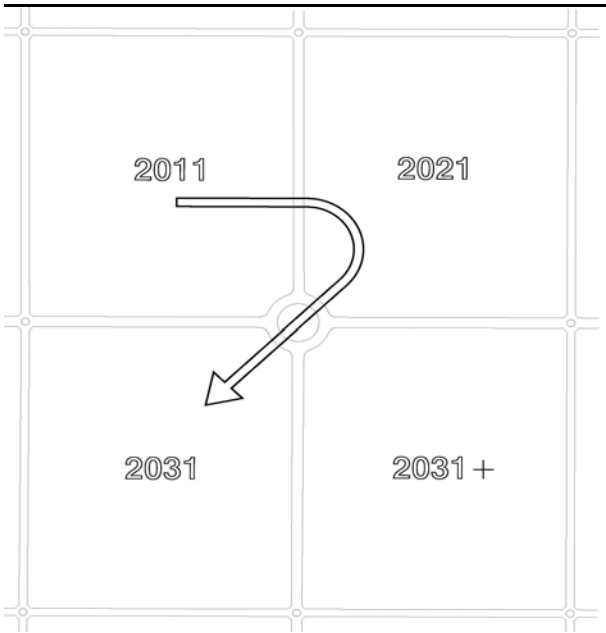
Implement innovative approaches to municipal servicing to enhance landscaping and quality of life for neighbouring residents. Minimize impact on the natural environment.

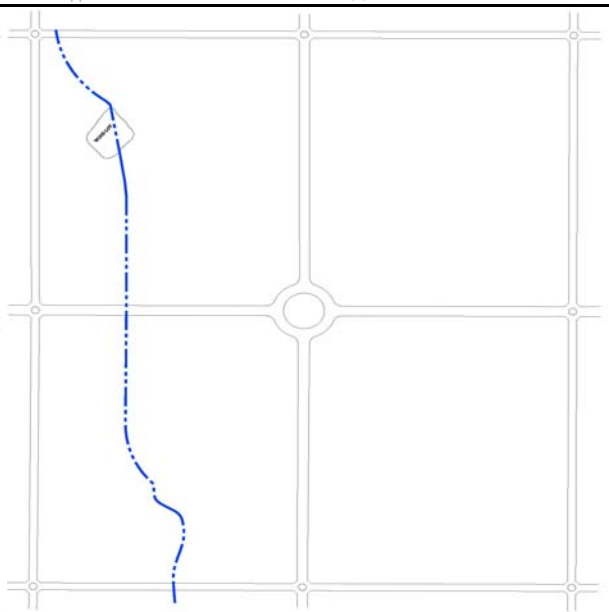
PROCESS

PEIL used a typical 200 acre neighbourhood and then fit that within a community. A natural progression was developed and environmental constraints were integrated. This would become the underlying template to illustrate the future land uses within the community.



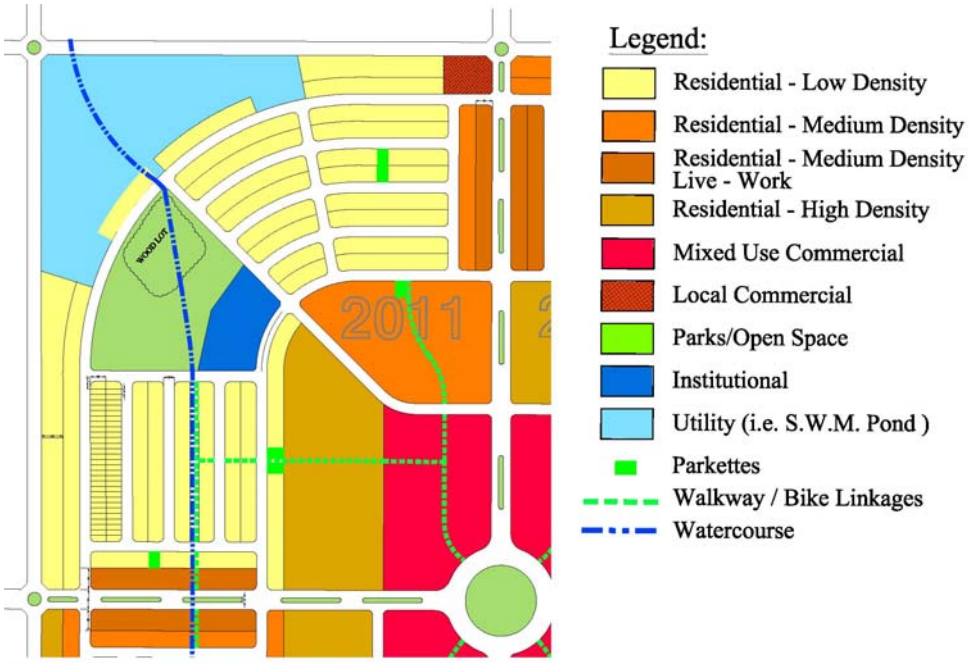






NEIGHBOURHOOD PROGRESSION	ENVIRONMENTAL CONTRAINTS

2011 NEIGHBOURHOOD PLAN



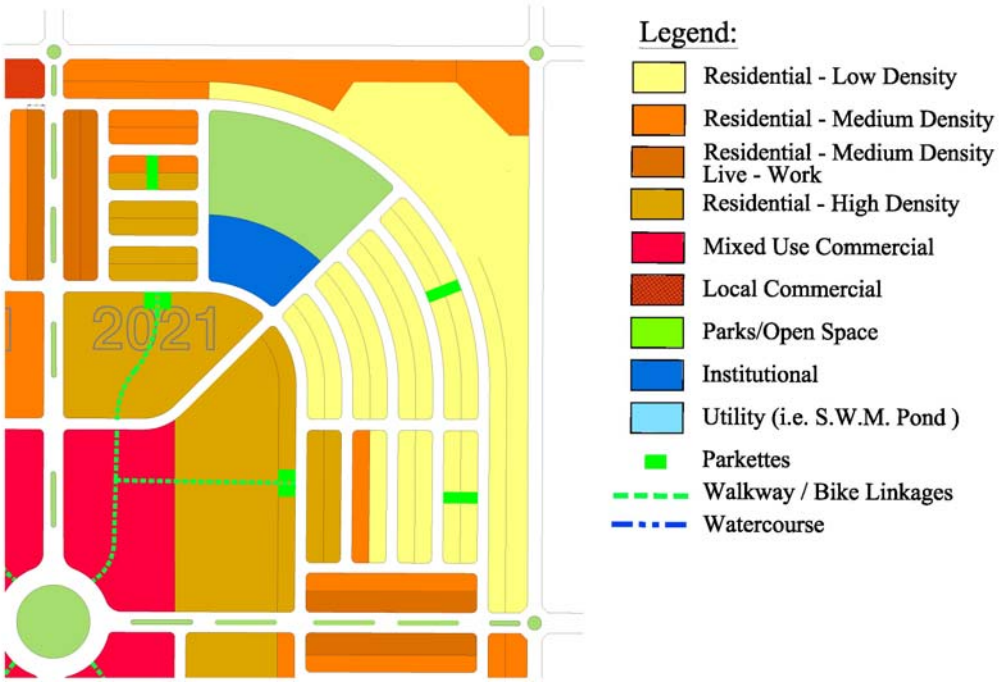
Development Details:

Area Description	Density %	Acreage	Units/Acre	Units	Persons/Unit	Persons
Low Density Residential	65.0	92.56	9.0	833	2.75	2,291
Medium Density Residential	20.0	29.07	22.0	640	2.72	1,740
High Density Residential	15.0	20.67	30.0	620	1.65	1,023
Commercial/Mixed Use	-	20.38	-	-	-	-
Parks	-	15.10	-	-	-	-
Schools	-	5.44	-	-	-	-
SWM	-	25.57	-	-	-	-
Total	100.00	208.79	-	2,093	-	5,054

Proposed LDR uses would consist of 65% of the total density of the neighbourhood, account for 92.56 acres and are primarily situated in the interior of the neighbourhood in the year 2011. Proposed MDR uses account for 20%, occupy 29.07 acres of the neighbourhood and are located primarily around the periphery. HDR uses are located close to the centre of the neighbourhood alongside LDR. In 2011, HDR accounts for 15% of the total density and occupies 20.67 acres. Mixed Commercial and higher density uses are located in the centre of the future community and contribute to the focal point.

Note: Persons/Unit is based on Average Household Size as provided by City of Hamilton staff.

2021 NEIGHBOURHOOD PLAN



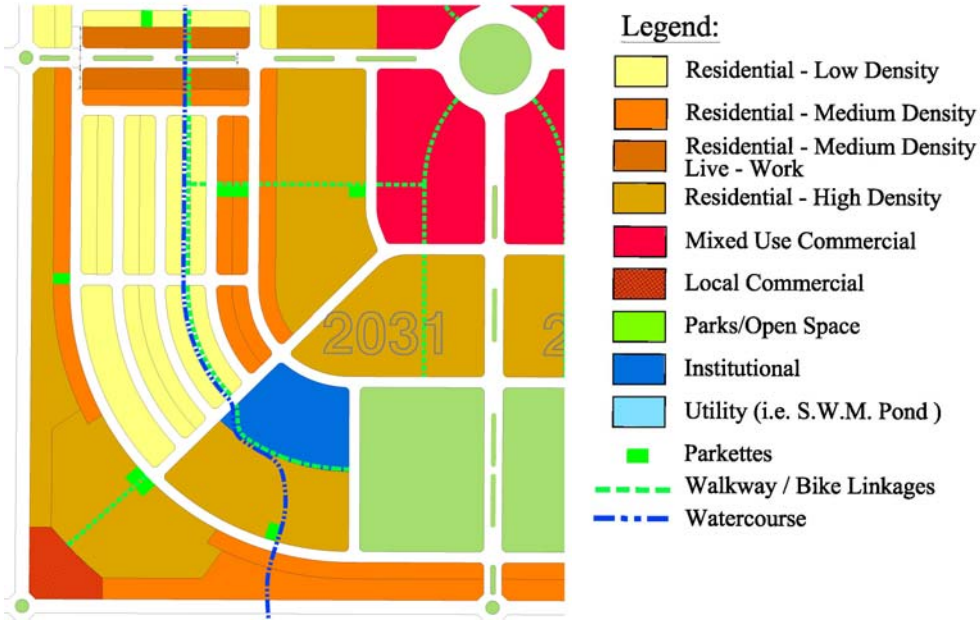
Development Details:

Area Description	Density %	Acreage	Units/Acre	Units	Persons/Unit	Persons
Low Density Residential	44.0	75.38	9.0	678	2.65	1,798
Medium Density Residential	22.0	37.44	22.0	824	2.64	2,175
High Density Residential	33.0	56.89	30.0	1,707	1.59	2,714
Commercial/Mixed Use	-	16.76	-	-	-	-
Parks	-	16.24	-	-	-	-
Schools	-	6.12	-	-	-	-
Total	100.00	208.83	-	3,209	-	6,687

Proposed LDR uses slowly decrease and occupy 44% of the total density and occupy 75.38 acres. MDR uses marginally increase to 22% and occupy 37.44 acres of the neighbourhood. Proposed HDR uses more than doubles in density in 2021 and now occupies 56.89 acres of the neighbourhood. A strong central area is now reinforced with higher densities.

Note: Persons/Unit is based on Average Household Size as provided by City of Hamilton staff.

2031 NEIGHBOURHOOD PLAN



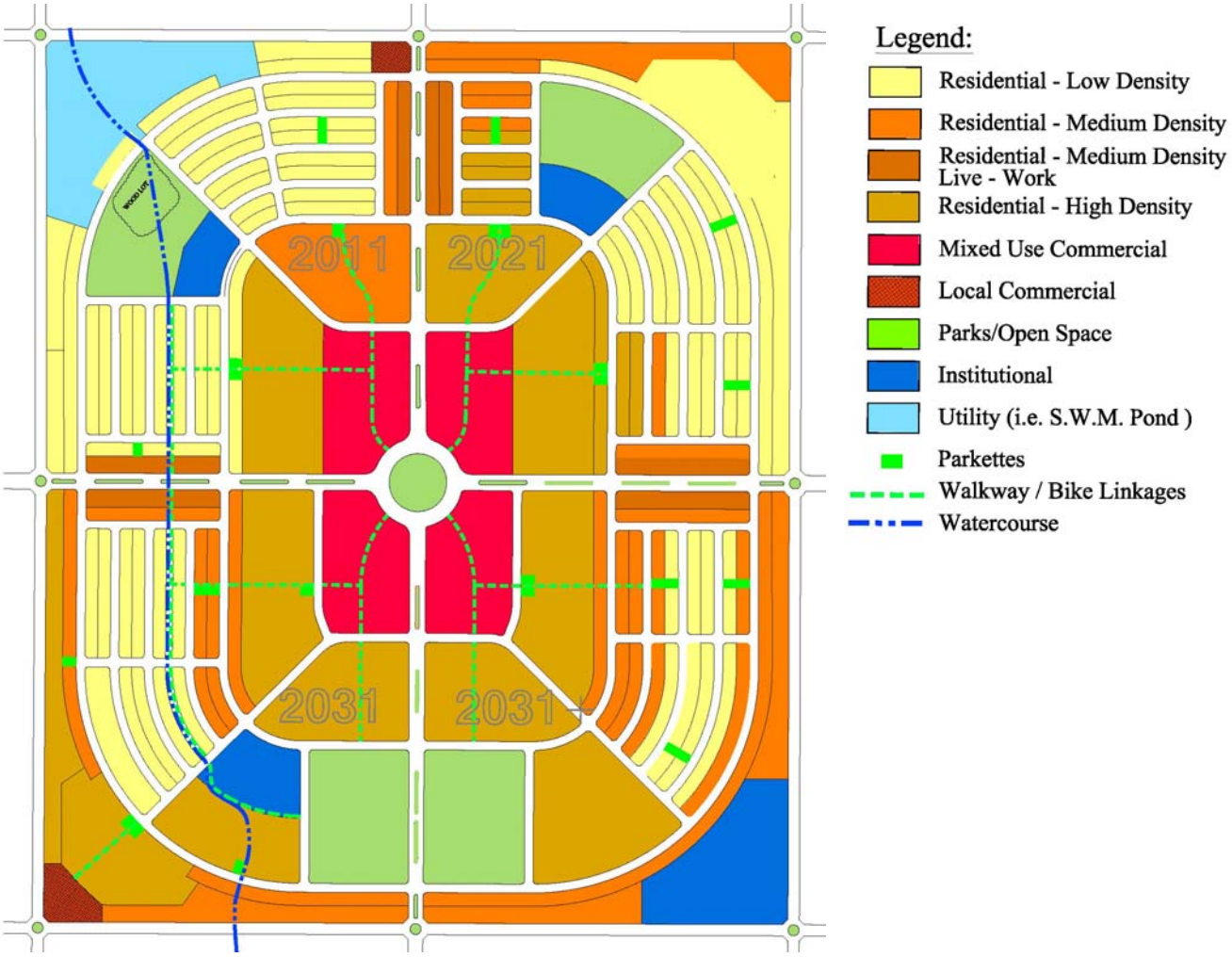
Development Details:

Area Description	Density %	Acreage	Units/Acre	Units	Persons/Unit	Persons
Low Density Residential	25.0	40.19	9.0	362	2.66	963
Medium Density Residential	26.0	41.00	22.0	902	2.64	2,382
High Density Residential	49.0	77.82	30.0	2,335	1.59	3,712
Commercial/Mixed Use	-	20.07	-	-	-	-
Parks	-	20.12	-	-	-	-
Schools	-	9.60	-	-	-	-
Total	100.00	208.80	-	3,599	-	7,057

Proposed LDR uses have significantly decreased to 25% of the total density and occupies 40.19 acres. Proposed MDR uses again marginally increase to 26% and account for 41.00 acres. Proposed HDR uses dominate in 2031 with 49% total density and 77.82 acres. More parkettes are used for an integrated open space system. High and Medium Density Residential now predominate the neighbourhood and reinforce the central core area.

Note: Persons/Unit is based on Average Household Size as provided by City of Hamilton staff.

OVERALL NEIGHBOURHOOD PLAN



Mixed Use Commercial is located mainly in the centre of the neighbourhood and is proposed to occupy 20.38 acres in 2011, 16.76 acres in 2021 and 20.07 acres in 2031.

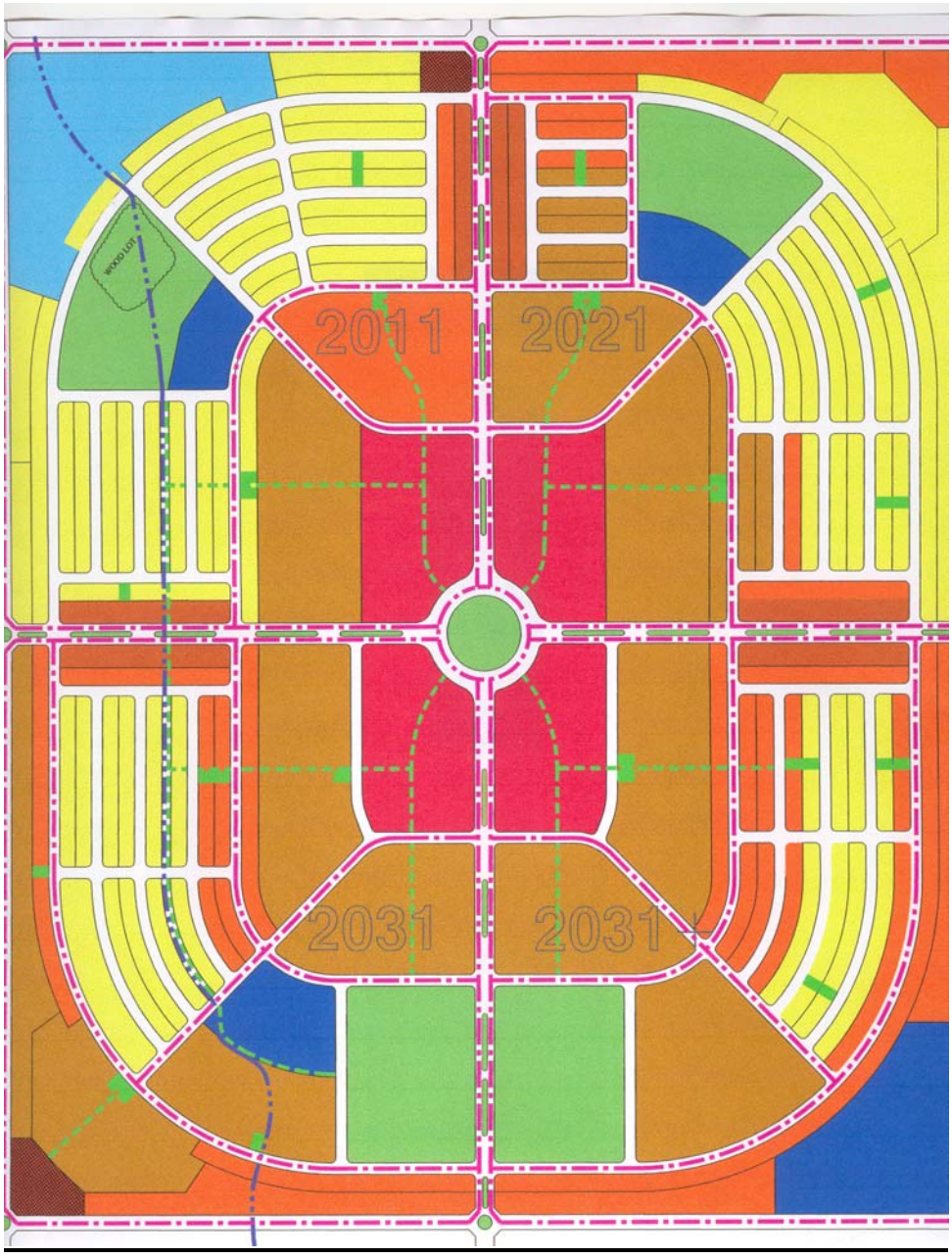
In 2011, 2021 and 2031 Institutional Uses are located next to open space. In 2011, Institutional uses occupy 5.44 acres. In 2021, they occupy 6.12 acres and in 2031 they account for 6.12 acres.

In 2011, Parkland is located in the centre and along the periphery of the neighbourhood. It occupies 15.10 acres. In 2021, parks are also located in the centre and around the periphery and total 16.24 acres. Finally, in 2031, parkland is located in the centre and to the south of HDR and occupies 20.12 acres.

Storm Water Management occupies 25.57 acres of the entire community.

TRANSPORTATION

Public Transportation routes are proposed around the entire neighbourhood. In 2011, Transportation Routes are along the Arterial road surrounding the neighbourhood and on a Collector road through and around the centre. In 2021, the routes stay the same as 2011, but some routes are added due to the increase in HDR. Finally in 2031, more internal routes are added to accommodate those residents in higher density areas.



PROPOSED OVERALL TRANSPORTATION ROUTE

DESIGN GUIDELINES

Design guidelines are an integral part of the Secondary/Community planning process and the creation of desirable communities. Design guidelines aid in the shaping and proper planning of a neighbourhood. Below are examples of design guidelines which will need to be included and expanded upon as new neighbourhoods are developed. This report is not intended to be the definitive discussion on design guidelines for new neighbourhoods in the City of Hamilton.

Streetscape design would include special consideration of paving patterns and materials, planting, lighting, street furniture (such as transit shelters, benches, waste receptacles, bicycle stands, signage and mail boxes). Encourage landscaped streets that are visually stimulating with interesting architecture and public spaces. Roundabouts should be used to create a sense of place and direct the flow of traffic.

Buildings should have front walls parallel to the street with front doors and windows on the street. Garages should not protrude beyond the front wall of the house. Porches, stairs, canopies and other entrance features can encroach beyond an established build-to line. Buildings should be set closer to the lot line at intersections and higher density buildings should be terraced to enhance the streetscape.

Parking and servicing access should typically be from the rear or side. Large scale parking areas for Institutional and commercial buildings should not be located between the front of the building and the street right-of-way.

Phasing of development should be provided in an economically and environmentally sustainable manner. Municipal services, schools and parks will be extended in a proper manner to accommodate growth. If mixed uses or higher densities are found to be required around the periphery of the neighbourhood, lands could be swapped with internal uses to accommodate this need. Edges of the neighbourhoods will be designed to create a pleasant streetscape for the traveling public and provide gateways for those that live within the community.

Intensification opportunities can also be built into a new neighbourhood. For example, a surface parking lot in the commercial core could be redeveloped into a more intensified use, such as a stacked parking facility or a high density residential use with an underground parking facility.

CONCLUSION

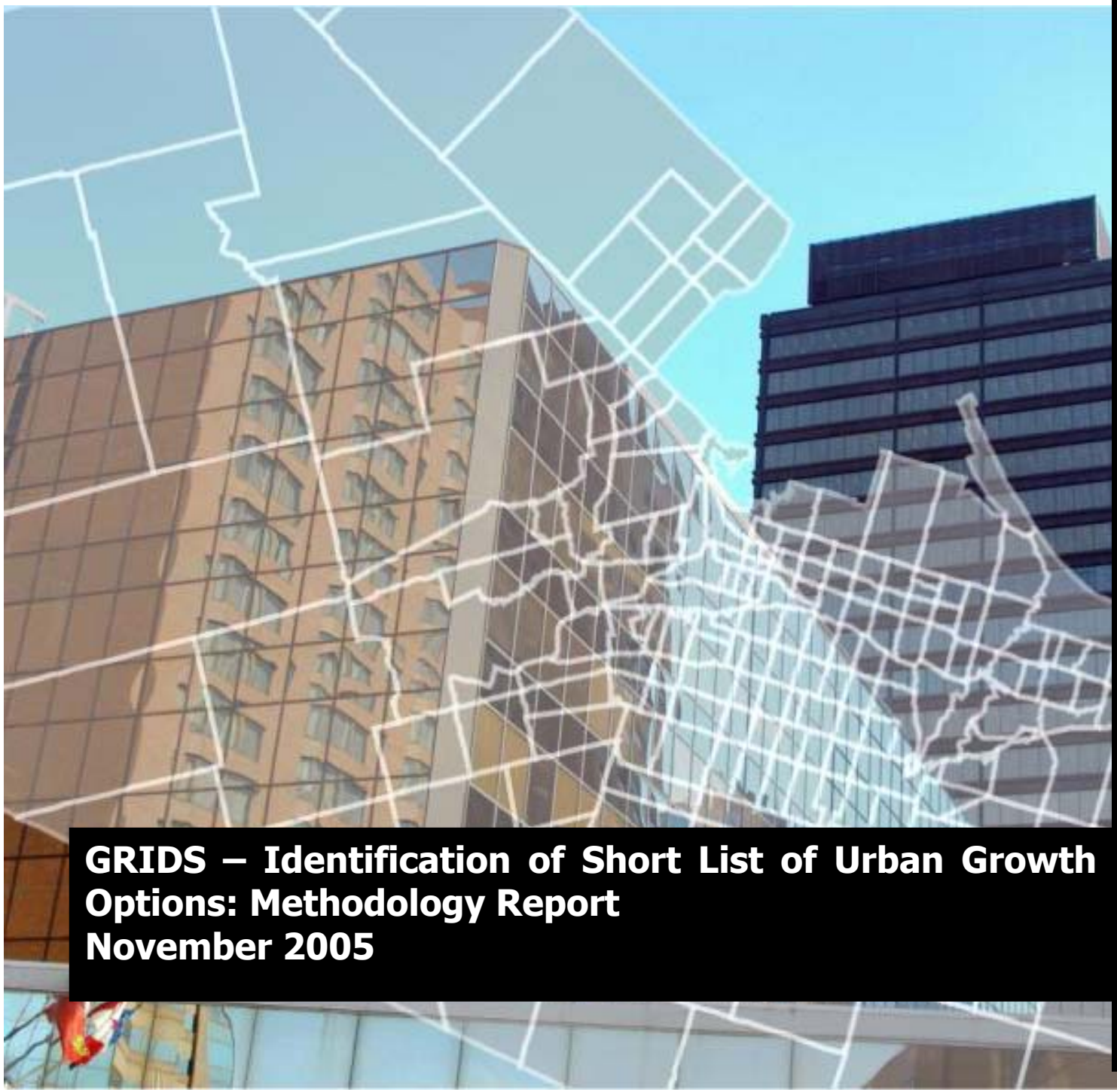
Over the next 30 years, the City of Hamilton is expected to experience an increase in population to 700, 000 people. Low Density Residential would eventually decrease over the years being replaced by higher densities. This report provides a graphic representation of how the future neighbourhoods will change to accommodate higher densities. Key design guidelines will be necessary as the City expands its urban boundary to create new neighbourhoods. Urban design will be a critical component of the future neighbourhoods to ensure a high quality and pleasant living environment will result.

John Ariens, MCIP, RPP
Vice President and Senior Planner

George T. Zajac, BA, CPT
Planner

I hereby certify that this Planning Justification Report was prepared by a Registered Professional Planner, within the meaning of the Ontario Professional Planners Institute Act, 1994.

Appendix D: Identification of Short List Of Urban Options, Methodology Report



GRIDS – Identification of Short List of Urban Growth Options: Methodology Report
November 2005

DILLON CONSULTING

Table of Contents

1.0 INTRODUCTION

1.1 Understanding/Approach

The City of Hamilton has undertaken the Growth-Related Integrated Development Strategy (GRIDS) to help determine where the future growth of the City will take place over the next thirty years. This unique approach integrates land use, transportation, water/wastewater and storm water planning into one project. GRIDS is intended to reflect the principles of sustainable growth, creating compact, affordable and liveable communities.

In general, the identification of a preferred growth strategy is a three step process:

1) Identification of growth concepts;
2) Identification of a short list of growth options; and
3) Identification of a preferred growth option.

This report documents the process undertaken to identify the short list of growth options. More specifically, the steps for GRIDS are as follows:

- Building a Strong Foundation (BASF) process identified nine Strategic Directions to guide GRIDS *(Consultation Report for Phase1 of the City of Hamilton's BASF Process, Sept. 2003*);
- Growth Concepts were identified and screened to a short list of three reasonable concepts for further analysis using a Triple Bottom Line Methodology *(City of Hamilton, Staff Report CM05025);*
- The Growth Concepts have been refined and mapped and are called the Short List of Urban Growth Options (*documented in the remaining section of this report*);
- The Short List of Urban Growth Options will be evaluated and compared to existing conditions/Base Case Options. First infrastructure Servicing Scenarios will be identified for each option and then the combined land use and servicing options will be evaluated using a Triple Bottom Line Methodology considering a wide range of effects and benefits (social, cultural, environmental and economic). *This step is currently underway;*
- Infrastructure Master Plans will be completed for the preferred urban growth option (*planned for early 2006*);
- Phasing for residential and employment uses and financing strategies will be developed; and

- The Official Plan for Hamilton will be prepared incorporating the outcomes of GRIDS.

Extensive consultation has taken place throughout this process to review and provide input to each step. This consultation process is on-going for current and future steps in the GRIDS process.

2.0 PROCESS FOR IDENTIFICATION OF THE SHORT LIST OF GROWTH OPTIONS

2.1 Introduction

The TBL process identified three Growth Concepts to use as a starting point for identification of a short list of growth options. The selected Concepts adopted by Council in Aug. 2005 are:

- No expansion to the urban area boundary;
- Distribute the development across the City in a balanced manner, with some degree of urban area expansion; and,
- Encourage development in nodes and along corridors, with some degree of urban area expansion.

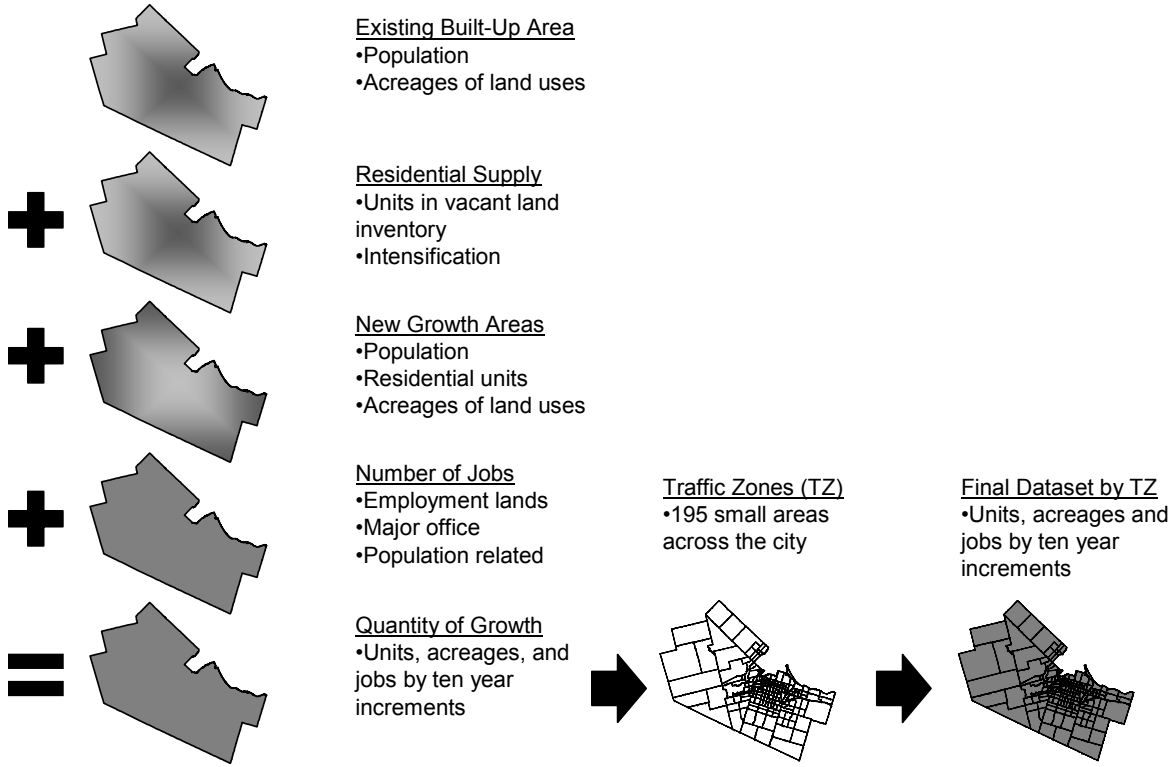
In order to understand the incremental effects of growth compared to the current approved urban envelope Base Case options will also be evaluated in subsequent steps. The first will reflect the existing (2001) urban boundary and associated approved land use and infrastructure. The second will reflect the incremental land and infrastructure requirements of the Council endorsed airport expansion.

It is important to note that the overall purpose of the evaluation of a short list of growth options is to identify broad opportunities, impacts and costs for different forms of growth (i.e. what are the broad impacts of higher intensification or growing out in many different directions versus in only one direction?). Thus, it is expected that the final form of the preferred land use option will be "fine tuned" in future stages of GRIDS to optimize existing and future neighbourhood/infrastructure characteristics and to reflect practical implementation requirements. In addition, in coming months the City will establish a phasing and capital works financing program for the preferred growth option to ensure support for a vibrant employment economy, an appropriate jobs/housing mix and to assure that sustainable financing is available for the preferred growth option.

2.2 Overview of the Analysis and Contents of this Report

This report documents the process undertaken to refine and map the Growth Concepts. The City of Hamilton required that the changes over the next 30 years be quantified in terms of housing units, jobs and acres of land use. The overall process of assembling the data inputs to quantify the volume of growth is illustrated in ***Figure 1***.

Figure 1
GIS Process for GRIDS Growth Options and Data Preparation for Master Plan Teams



The analysis comprised three key phases of work:

Phase 1: Determine the supply of potential residential units on lands within the urban area boundary, including both vacant/designated lands and residential intensification, and compare this to the 30-year forecasted demand for new development;

Phase 2: Map the new growth areas, identify the location of new neighbourhoods, and calculate the resulting number of units, acreages of land use, and jobs, by 10-year increments; and,

Phase 3: Assign the data from Phase 2 into geographic area small enough to enable the infrastructure Master Plan team's evaluation of the growth options.

This report documents the inputs to the analysis, the methodology, and the results for these three phases.

It should be noted that the analysis to quantify the scale of growth for the options was a collaborative effort involving the City of Hamilton, Dillon Consulting Limited, as well as other specialists and professionals. This report also generally documents the sources of data used for GRIDS and those responsible for the inputs / analysis.

3.0 PHASE 1 METHODOLOGY: LAND SUPPLY AND DEMAND

3.1 Residential Supply within the Existing Urban Boundary

The Province of Ontario contracted Hemson to prepare population growth projections for municipalities in Ontario as part of the "Places to Grow" program (Source: Hemson Consulting, *Growth Outlook for the Greater Golden Horseshoe*). The City of Hamilton has selected the "Compact" and "More Compact" projections for GRIDS. The Distributed Development and Nodes and Corridors Concepts use the "More Compact" scenario by Hemson Consulting, with an overall 30-year projected increase of 100,000 new housing units. This scenario best reflects Council's desire to accommodate significant growth in Hamilton and to explore the implications of accommodating such growth. The No Expansion to the Urban Boundary Concept uses the lower population "Compact Scenario" by Hemson because of the challenge involved in accommodating all growth without an urban boundary expansion. This Scenario projects an increase of 80,000 new housing units.

There are two main geographic locations which will accommodate this projected growth in Hamilton in the next 30 years – within the existing urban boundary and on urban area expansion lands. On lands within the existing urban boundary, new growth will be accommodated by residential intensification and the building-out of lands already designated for new growth. Phase 1 of the methodology quantifies the volume of development in the existing built-up area of the City of Hamilton, as well as the capacity of the lands to absorb residential intensification.

It should be noted that the three growth concepts each required a unique approach to considering residential supply within the existing urban boundary. For example, the growth option which considers no expansion to the urban area boundary requires that all growth be satisfied through residential intensification in the existing built-up area (and the building-out of lands already designated for new growth). Therefore, a slightly different approach to quantifying the residential intensification for the three Growth Concepts required and is documented in this section of the report.

3.1.1 Residential Supply on Lands Designated for Growth within the Urban Area Boundary

City staff undertook an analysis of vacant residential lands which could support growth. The lands included all registered, draft approved, and pending development applications, as well as lands which are designated for growth but which are not currently subject to a development application. Each parcel's development potential and constraints were evaluated to determine a timeframe for its likely development based on current capital programs, development/owner performance and relationships. Build-out timing and densities were applied to the forecasted demand in each five-year time increment. Additional details of City staff's analysis are available on file with City staff.

3.1.2 Residential Intensification

For the Distributed Growth options, residential intensification is expected to satisfy the demand for approximately 28,000 housing units in the next 30 years. For the "No Expansion to the Urban Area Boundary" option, residential intensification would have to satisfy all of the demand for new housing units by 2031 which can not be otherwise accommodated on greenfield lands within the existing urban boundary – approximately 62,000 units. For the Nodes and Corridors option, RI would satisfy demand between these extremes – i.e. for approximately 42,000 units. For the latter two options, the mix of residential building types demanded by the market would have to change, placing greater emphasis on apartments under the No Expansion and Nodes and Corridors forecasts (see (b) and (c) below). The approach to determining the supply of residential units through intensification is described below.

a. Base-Case Approach to Defining Residential Intensification ("RI") For Distributed Growth Options

City staff identified areas across the City that had the potential to accommodate residential intensification activity. Existing arterial and mainstreet corridors, community cores, existing commercial, greyfield areas and brownfields, areas that had been recently subject to secondary planning were identified. Other sites were also identified through staff knowledge and a reconnaissance survey of the City. All the areas identified were then analysed to estimate the number of intensification units that could be reasonably constructed in each area with a proactive intensification policy. The data produced for the study includes an estimate of the number of

intensification units by housing types that could reasonably be anticipated by ten-year increments. GIS mapping of the potential intensification areas was also produced. The initial dataset estimated approximately 44,000 units as the potential residential intensification unit supply for long term growth planning purposes. The following adjustments were then made:

Step 1 – Timing for Build-Out: Based on current land use and planned infrastructure across the City, staff estimated the number of the total residential intensification units in ten-year time frames based on input from City staff and preliminary findings of the City's Residential Intensification Study.

Step 2 – Adjustment from 44,000 to 28,000 units of RI: Using the original dataset of 44,000 in the GIS database, City Staff factored out the more constrained redevelopment districts identified in the initial residential intensification dataset to arrive at a total of 28,000 units of residential intensification. This number is considered to be a reasonable balance of supply and demand and also meets the current draft "Places To Grow" 40% intensification forecast identified by the Province in the draft "Places to Grow" discussion paper. This number of 28,000 units was used for all of the Distributed Growth options. Future steps will refine the specific locations for residential intensification and establish policy to guide this growth.

Additional details are provided in ***Appendix 'A1'***.

b. Specific Approach to Defining Residential Intensification (RI) for the "No Expansion" Option

The "No Expansion to the Urban Area Boundary" growth option requires that all new growth which can not be accommodated on vacant designated lands be satisfied through residential intensification. Therefore, a specific approach was needed to factor-up the base RI, given no expansion to the urban area boundary.

Three key assumptions were used by the City of Hamilton to facilitate this analysis without a wholesale, block-by-block re-evaluation of the residential intensification study:

i. The sub-areas identified for intensification would remain the same as for the Base-case;

ii. The level of intensification within targeted sub-areas would be factored up to address a higher demand for housing units. The RI supply for this option, was derived based on assumptions regarding the percent of properties that may redevelop, the type and density of development.; and,

iii. There would be no increase in the potential density of currently designated, vacant lands within the existing urban boundary to take on additional units.

The mix and supply of potential units derived from Residential Intensification Study was adjusted in targeted areas by City staff, to attain a total RI of 62,000 units over the 30-year horizon. Note that the total number of units thus exceeds the 80, 000 unit Hemson "Compact" forecast (when the 62,000 of RI is added to a vacant land unit forecast of 35,800). The higher unit count for RI was necessary to reach the "Compact" population forecast of 150,000 after applying the Hemson PPU values to the units.

This intensification level is significantly higher than projected demand and would therefore require a very high level of policy intervention by the City and Province to be accomplished.

c. Specific Approach to Defining RI for the "Nodes and Corridors" Option

The City identified eight community nodes and defined the geographic area for these nodes *(see **Figure 6**)*. The nodes chosen were areas of the City that were already high activity or high intensity areas. Some nodes are the downtown areas of the former area municipalities that have evolved over time into mixed use centres for their local areas. Other nodes are the larger commercial areas that serve the broader community in terms of retail and services and also serve as major hubs for the transit and are highly accessibly by a road network of arterials and highways. Boundaries for the nodes were defined by City staff for the purposes of projecting population and employment within the nodes. Boundaries were generally based on a 500 metre radius from a centre feature of the node with adjustments to the boundary to follow major road, natural features, or to round out a neighbourhood.

The number of units and the population figures for the RI nodes were established using the Maximum scenario for Residential Intensification (62k units). All RI that fell within the node geography was given the appropriate RI portion of units for each traffic zone.

Outside of the node areas, the unit counts from the projected 28,000 units of intensification were used. This applies to the corridors shown on ***Figure 6***. The resulting residential intensification for the Nodes and Corridors option was approximately 42,000 units.

3.2 Approach to the Land Supply and Demand Analysis

An analysis of supply versus demand was undertaken by Dillon Consulting together with staff from the City of Hamilton. The analysis quantifies the volume of urban boundary expansion lands needed to support growth. The approach generally follows the methodology established by the Province of Ontario for land supply and demand calculations.

The individual estimates of supply – vacant land inventory and residential intensification – were summarized by City staff and used as inputs to this analysis. The variables considered in the land supply and demand calculations for Hamilton are identified below, and the detailed land supply and demand calculations for the Base-case are provided in ***Appendix 'A2'*** *Tables A2-1 to A2-3*. Certain assumptions were also used in the calculations, which are fully documented in *Section 3.2.1* and *Section 3.2.2*.

Column A – 2001 to 2031 Demand: The demand for residential units over the next thirty years (Source: Hemson Consulting, *Growth Outlook for the Greater Golden Horseshoe*).

Column B – Total Supply: The number of residential units available in the urban area as determined by City staff as described in *Section 3.1*. The two major components of supply, vacant/already designated land for growth and residential intensification, are broken out in Columns B1 and B2.

Column C – Residual Demand: The residual unit demand, once the existing lot supply has been subtracted from the overall demand. This demand must be satisfied by an urban area expansion.

Column D – Average Density: The planned density for new development, in terms of units per net developable acre (refer to assumptions below).

Column E – Residential Land New Growth: The volume of net residential land (refer to assumptions below) needed to support growth.

Column F – Supporting Non-Residential Supply: The volume of non-residential land needed to "round-out" a neighbourhood (such as small-scale commercial, institutional, and utility uses).

Column G – Total Neighbourhood Land Required: The total volume of the new residential and non-residential lands which need to be designated to support the projected growth.

3.2.1 Assumptions Used in the Land Supply and Demand Analysis

a. Overall Assumptions

A variety of assumptions were used to support the land supply and demand analysis, and provide insight to both the inputs and results of the calculations.

i. The projected demand for the Distributed Development and Nodes and Corridors Concepts provided in ***Appendix 'A2'*** are based on the "More Compact" scenario by Hemson Consulting, with an overall 30-year projected increase of 100,000 new housing units. The No Expansion to the Urban Boundary Concept used the lower population "Compact Scenario" by Hemson Consulting.

ii. Hemson projected unit counts for single-detached, semi-detached, row houses and apartments. These were slightly adjusted by City staff to reflect the 2001 PPU values. These appear in ***Appendix 'A2'*** as low density (singles and semis), medium density (row houses) and high density (apartments).

iii. Total supply of units was developed to meet the Hemson forecasts for both population and unit count.

iv. City staff calculated the supply of units in the vacant land inventory by 5-year intervals and RI by 10-year intervals. However, the Ministry of Municipal Affairs policy does not support the use of incremental land supply constraints in determining urban boundary expansions. Dillon therefore subtracted the 2001 counts from the 2031 counts to get the 30-year supply by unit type.

v. The average units per net developable acre is based on a conceptual 200 acre template for new greenfield neighbourhoods developed by Planning and Engineering Initiatives Limited (PEIL) for Hamilton's GRIDS project. This template reflects objectives for mixed use, compact urban form and transit supportive densities which are considered highly desirable in defining future urban form.

vi. The team identified a reasonable approach to "gross versus net" lands for urban development. Gross refers to the total land requirement for all land uses (e.g. residential and commercial) as well as the lands set aside for infrastructure, public uses (e.g. recreation, park spaces) and for environmental protection. Typically, the split is in the range of 50/50 to 65/35 in the GTA for residential to non-residential uses. PEIL's neighbourhood template suggested an approximate split of 65/35 between the residential and non-residential lands needed to form an ideal neighbourhood. Dillon noted an over-allocation for commercial uses (office and retail) in the template, and reduced the amount to approximately 5 acres in the PEIL template. The revised acreage would translate to roughly 50,000 square feet of commercial space which we considered more appropriate in a 200 acre neighbourhood. The greenfield urban areas are all being assigned to lands that contain very few environmental constraints so that there is less need to set aside environmental protection lands in establishing the net land areas. The resulting split between residential and non-residential uses based on Dillon's adjustment was closer to 75/25 which is considered reasonable for the environments being considered for boundary expansions. It will be important to revisit this assumption should significant constraints be identified for greenfield growth areas in the future.

3.2.2 Specific Assumptions Used by City in Projecting Supply

A more detailed description of the methodology for projecting the supply of units (residential intensification, build-out of vacant lands and existing lots of record) is on file at the City, RI assumptions are summarized in Appendix ***'A1'*** and the results of their calculations are provided in ***Appendix 'A2'***. In general, their assumptions were:

i. The supply did not include lands in the Stoney Creek Urban Boundary Expansion or lands in any other current application to expand the urban area boundary which is not approved;

ii. The approach to calculating supply within the existing built-up area was based on figures extracted from the City's land use database. Note that the assessment data base is up to 18 months behind in recording new units and land use changes and contains some record errors with respect to easement for example. The land use data base corrects these deficiencies on an on-going basis;

iii. The majority of the City's rural area is regulated by the Greenbelt Plan, which provides very limited opportunity for new residential expansion or the intensification of development on private services. The number of rural residential units was assumed to be constant, which assumes that rural settlement area boundaries experience minimal change and private servicing systems will be maintained;

iv. The analysis of residential intensification unit potential is gross, as opposed to net. This means that where residential intensification is anticipated on lands with existing development, the number of existing units (if any) was not subtracted from the total anticipated intensification; and,

v. The take-up of residential intensification is based on City's Staff's understanding of the current (and anticipated future) take-up of residential development from preliminary results of the RI Study.

3.3 Results from the Supply/Demand Analysis

Based on the approaches and assumptions described above, the results from the land supply analysis vary between the Distributed Development Options and the Nodes and Corridors Option due to differences in RI assumptions. The analysis indicates that:

- FOR DISTRIBUTED OPTIONS: 3,230 acres of developable lands[1] outside the current urban boundary are required to support the 30-year growth of the City of Hamilton, comprised of:
    - 15,000 low density units on 1,670 net developable acres;
    - 4,400 medium density units on 200 net developable acres;
    - 16,500 high density units on 550 net development acres; and,
    - 800 acres of non-residential lands to create functional neighbourhoods.

[1] Lands not constrained by wetlands, ANSI's, significant habitat, topography, etc.

- FOR THE NODES AND CORRIDORS OPTION: 2,570 acres of developable lands[2] outside the current urban boundary are required to support the 30-year growth of the City of Hamilton, comprised of:
    - 15,100 low density units on 1,680 net developable acres;
    - 3,800 medium density units on 180 net developable acres;
    - 2, 400 high density units on 80 net development acres; and,
    - 650 acres of non-residential lands to create functional neighbourhoods.

[2] Lands not constrained by wetlands, ANSI's, significant habitat, topography, etc.

4.0 PHASE 2 METHODOLOGY: URBAN BOUNDARY EXPANSION OPTIONS

4.1 Mapping of Short List of Growth Options

As noted above, in early 2005, three Growth Concepts were selected for further consideration. The land supply assumptions for the Growth Concepts described in the previous sections were used as a starting point for mapping the growth options (*summarized below*). Given that ecosystem protection and environmental sustainability are fundamental to GRIDS, the mapping process began with the identification of significant environmental constraints as the primary context for mapping the Growth Options (*described in Section 4.2*). A team of City staff and technical advisors worked collaboratively to identify Growth Options that: 1) reflect each Growth Concept; 2) minimized or avoided completely all impacts to significant environmental features/systems; and 3) met the identified land supply requirements.

A workshop was held with City staff and the consultants completing the Master Plans for Transportation, Water, Wastewater and Stormwater as well as Dillon Consulting Limited staff. This group identified the following five Growth Options for further analysis and consultation ***(see Figures 2-6***). The boundaries of the options were selected to match existing roads and to avoid known environmental constraints. Sections 4.3 to 4.6 describe the methodology used to identify the land use mix and job numbers that are summarized below:

No Expansion to the Urban Area Boundary Concept

Option 1

- All new growth is satisfied on lands within the existing urban area boundary and through intensification;
- Growth forecast: 80k new units (*Hemson, "Compact" Projection*);
- Units provided: 97,810 to meet population forecast by Hemson;
- Residual demand for some unit types (medium and high) may be oversupplied for this option;

- Residential intensification: 62k units based on enhancing the Distributed Development Concept value of 28k for intensification to address a higher demand for certain housing units (see *Section 3.1.2*);
- Remaining forecasted housing units addressed through vacant land development;
- Forecasted population: 150,000 persons; and
- New jobs for this option: 96,000 .

Appropriately Distributed Development Concept
All Options:

- Growth is appropriately distributed along the fringe of the existing urban area boundary to make efficient use of existing infrastructure including transit and social services;
- Some degree of urban boundary expansion is anticipated;
- Forecasted population: 190,000 persons;
- Growth forecast: 100k new units (*Hemson, "More Compact" projection);* and
- Residential intensification: 28k units.

Distributed Option 2A

- 500 acres of new growth allocated to Stoney Creek Urban Boundary Expansion area (SCUBE) to recognize Council approved and appropriate urban boundary expansion. (*The allocation of growth to the SCUBE area is consistent for all of the Distributed and Nodes and Corridor Options*);
- 2,730 acres of new growth allocated to an urban expansion area south-east of the current urban boundary and bounded by Golf Club Road to south, Mud Street and Highland Ave to the north, Upper Centennial Parkway and Trinity Church Road to the west and Hendershot Road to the east;
- This option concentrates growth in essentially one new growth area to facilitate mixed use, higher density, transit friendly development that optimizes existing infrastructure. Some prime agricultural land is lost by this option. Although agriculture is highly valued in the City, it was found that it was impossible to identify a concentrated new growth area without impacting prime agricultural land because of the extent of such land in the City;
- Residential units in greenfield growth areas: 35,900;
- New jobs for this option : 104,000;
- Residential units of intensification inside the urban boundary: 28,310; and
- Units allocated to vacant designated land: 35, 810 .

Distributed Options 2Bi and 2Bii

- Two additional Distributed Options were identified that spread out most greenfield growth areas into the unconstrained lands adjacent to the existing urban boundary;
- 2,730 acres of land are identified for growth along the southern existing urban area boundary for Option 2Bi. In addition, 200 acres of land in the Pleasantview area are identified for growth. This area is within the Greenbelt lands but was under application for urban uses prior to the Greenbelt approval. In order to assess this application appropriately, this area is being considered for growth within the GRIDS context as part of Option 2Bi; and
- Option 2Bii differs from 2Bi only in that the Pleasantview lands are not considered for appropriately distributed growth. 2,730 acres of land are identified for growth. The land need is accommodated by expanding the area at the southeast edge of the current urban boundary southward to increase the connection to the Glanbrook industrial park near Trinity Church Road and Golf Club Road. The objective is to increase opportunities for live/work and non-auto modes of travel.

Nodes and Corridors Concept

Option 3

- 42k units are allocated to intensification areas with an emphasis on eight key neighbourhood nodes and support for intensification along selected corridors within the existing urban area (*See Section 3.1.2*);
- Similar to Option 2A, 2080 acres. of new growth is also targeted to a single greenfield node adjacent to the south-east boundary of the existing urban boundary with the objective of creating dense, mixed use, transit supportive neighbourhoods. The area of the node is smaller than for Option 2A because of the greater intensification for Option 3. The land area is reduced southward to avoid a watershed divide and westward to avoid impacts on prime agricultural land;
- Like the Distributed Options, the SCUBE lands were also identified for growth;
- Growth forecast: 100k new units (*Hemson, "More Compact" projection*);
- Residential units in greenfield growth areas: 21,320;
- Residential units of intensification inside the urban boundary: 42,870;
- New jobs for this option: 104,000;
- Forecasted population: 190,000 persons; and
- Units allocated to vacant designated land: 35, 810.

4.2 Identification of Constraint Areas for Development

The City and Dillon Consulting analysed areas not suitable for development by mapping a variety of known constraints. These areas were delineated by:

- The Greenbelt Plan;
- The Niagara Escarpment Plan;
- The Parkway Belt West Plan;
- Aggregate resource areas;
- Provincially significant wetlands;
- Areas of Natural and Scientific Interest;
- Prime agricultural lands, as defined by Hamilton's Land Evaluation and Area Review (LEAR) Study;
- Significant woodlands (significance defined by the City);
- Regionally and/or locally significant wetlands (significance defined by the City);
- Environmentally Significant Areas; and,
- Airport noise contours (28-30 NEF/NEP in Year 1996).

At the time of the study, the City did not possess accurate digital flood and fill line mapping for all areas in Hamilton and therefore flood constraints and hazard lands were not considered at this stage. The results of this exercise indicated that there is relatively little unconstrained area for urban boundary expansion in the City of Hamilton (***Figure 7***). It is also recognized that additional constraints may be identified based on more detailed analysis of local features and uses that will further limit the area available for development.

4.3 Build-Out of Neighbourhoods within the New Growth Areas

In May 2005, the City of Hamilton undertook an exercise to define an "ideal" neighbourhood. This study, conducted by Planning and Engineering Initiatives Limited ("PEIL"), considered a 200 acre conceptual area, and illustrated the changing land uses and density over 10-year time periods. The concepts define the densities, acreages, and populations for a variety of residential and commercial land uses, as well as other land uses needed to comprise a functioning neighbourhood (parks, institutional, and utilities).

The PEIL Neighbourhood Concepts were used as templates for determining the build-out of Hamilton in the new growth areas. It should be noted that neighbourhood concepts were not created for different GRIDS options (i.e., separate neighbourhood templates were not created for the Distributed Development and Nodes and Corridors options). Based on discussions with City staff, it was decided that the neighbourhood template would be used for all options. It was anticipated that the mix of uses would be maintained with the expectation that commercial / mixed uses would be directed to and / or gravitate towards nodes and corridors in terms of actual build-out.

The process for determining the number of full or partial neighbourhood templates in the new growth areas, as well as the breakdown of units, land uses and population, is described below.

Step 1 - Development Blocks: Identify blocks of developable land in the new growth area (bounded by environmentally significant areas and/or major roads).

Step 2 – Count Potential Neighbourhoods: Calculate the area of each development block, and determine the number of 200-acre neighbourhood templates which could be fitted to each development block.

Step 3 – Development Block Calculations: Based on a ratio of 75/25 residential/non-residential, calculate the acreages for residential-only lands and non-residential lands needed to support a residential neighbourhood. Multiply the neighbourhood template (i.e., units, acreages of land use and population) by the factor calculated in Step 2.

Step 4 – Total Development in All Neighbourhoods: Add the units, land uses, and population figures calculated on a block-by-block basis in Step 3 to determine the sum total units, land uses and population in the new growth area. All of this development was targeted for the 2021-2031 time frame.

4.4 Jobs in Employment Areas

Dillon undertook an exercise to quantify the number of jobs in seventeen employment areas across the City of Hamilton.

Dillon's original approach was to calculate the number of existing jobs, the number of occupied acres, determine an employee-per-acre factor for each employment area, and then calculate the

number of jobs which could be expected on undeveloped lands in the employment areas. The number of employees over 10-year increments would be estimated based on information regarding servicing for these areas. This approach had to be modified since consistent future servicing information was not available, data on the number of occupied acres was only available for six business parks, and individual employee-per-acre factors for all 17 employment areas could not be determined.[3]

An analysis of existing jobs by census tract in employment areas based on the 2001 Census "usual place of work" data was undertaken. The variables considered in the analysis of jobs in employment areas for 2001 are identified below, and the detailed calculations are provided in ***Appendix 'B'***.

1. Column A – 2001 Census Place of Work: This column identifies 2001 "usual place of work" employment data for census tracts which include some or all of the City's employment lands. Usual place of work data *excludes* employment for those who worked from home.

2. Column B – Revised 2001 Estimate (Employment Lands Only): Many of the census tracts included lands other than employment lands. Therefore, the number of jobs had to be adjusted to reflect the jobs solely on employment lands. This was calculated by considering existing land use in the census tract and then determining the proportion of jobs that could be attributed inside the census tract to employment lands. For example, in a census tract where 50 percent of the area was designated Employment and the remaining area was designated Greenbelt, all of the jobs in that census tract would be attributed to the respective employment area. However, in this same zone, if the remaining 50 percent of the area were designated residential, then a representative proportion of the jobs would be allocated to the employment lands.

3. Column C – 2001 Estimate with a Factor of 1.5: There was a discrepancy between Hemson's employment projections based on labour force participation and the Census place of work job counts for 2001. The Census counted 176,040 jobs, while Hemson projected 200,000 jobs. To adjust for this discrepancy, the 2001 employee figures identified in Column B where factored up to equal the 200,000 jobs projected by Hemson. This was done by multiplying Column B by a factor of 1.5.

[3] In Hemson's *Growth Outlook for the Greater Golden Horseshoe* report, a target of 15 employees per acre was mentioned. However, in a previous report by Hemson, *Providing Employment Land in Hamilton – Financial Options (2003)*, they indicated a range of employment levels, from 3 to 15 employees-per-acre. Therefore, applying a broad target of 15 employees per acre across all of Hamilton's business parks was not considered appropriate.

Employment growth in each of the Employment Lands was calculated to the year 2011, 2021, and 2031, using the growth factors projected by Hemson. This exercise was completed for both the "Compact" and "More Compact" growth scenarios. The variables considered for the employee growth projections up to 2031 are identified below, and the detailed calculations are provided in ***Appendix 'B'***.

4. Column D – 2011 Estimate: This column identifies 2011 employment projections for each of the Employment Land areas in the City of Hamilton. The growth rate used was 16 percent in both the "Compact" and "More Compact" growth scenarios, in order to match the employment growth as projected by Hemson Consulting.

5. Column E – 2021 Estimate: This column identifies 2021 employment projections for each of the Employment Land areas in the City of Hamilton. The growth rate used was 15 percent in the "Compact" scenario and 16 percent in "More Compact" growth scenarios, in order to match the employment growth as projected by Hemson Consulting.

6. Column F – 2031 Estimate: This column identifies 2031 employment projections for each of the Employment Land areas in the City of Hamilton. The growth rate used was 12 percent in the "Compact" scenario and 13 percent in "More Compact" growth scenarios, in order to match the employment growth as projected by Hemson Consulting.

These employment figures were discussed with City staff who noted that the approach to the analysis placed emphasis on new jobs emerging in areas of already significant employment. They noted that there were certain employment areas in Hamilton which were not likely to see a major increase in employment and that reassignment of jobs to other areas was necessary. Through further discussions, it was determined that the projections which were the most skewed were those for the Bayfront area. Staff believed that employment levels in this area would remain constant over the next 30 years in Bayfront. Consequently approximately 20,000 jobs were reassigned on future employment lands around Hamilton's airport.

7. Columns G, H and I – Reassignments: These columns identify the reassignments of jobs suggested by City staff.

8. Columns J, K and L – Final Jobs Estimate: These columns identify the final jobs estimate over the next thirty years, once the reassignments have been factored in.

It should be noted that the above reassignment causes the total count of jobs on employment lands to differ from the Hemson projections in 2011 and 2021, although the total jobs on employment lands in 2031 does correlate with Hemson's projections.

Once the jobs in each employment area were calculated, the numbers were assigned to their respective shapes in the GIS mapping.

4.5 Major Office Employment

Dillon undertook an exercise to quantify the number of jobs in major offices across the City of Hamilton. Dillon calculated the existing jobs by census tract using the 2001 Census "place of work" data. The existing policy framework is to direct and encourage major office development to the downtown. Consequently, as directed by City staff, Dillon allocated 50% of future office jobs to the downtown and 50% of future office jobs to employment lands. The variables considered in the analysis of jobs are identified below, and the detailed calculations are provided in ***Appendix 'C'***.

1. Column A – 2001 Census Place of Work – This column identifies 2001 "usual place of work" employment data for census tracts either fully or partially within any of the city's employment areas and the downtown. Usual Place of Work data ***excludes*** employment for those who worked from home.

2. Column B – Revised Place of Work – Major Office Only – The total "Place of Work" data was proportionally assigned to both the downtown and employment areas, by comparing the area of the census tract(s) against the area of downtown / employment lands.

3. Column C – 2001 Estimate – To correlate the Census employment figures to the projections by Hemson Consulting, the gross employment was factored down to meet the Hemson's base total of 13,000 jobs in the major office category.

Employment growth in major office was then projected to year 2011, 2021, and 2031. Growth factors were based on the 2005 report by Hemson Consulting. This exercise was completed for both the "Compact" growth and "More Compact" scenarios. The variables considered for the employee growth projections up to 2031 are identified below, and the detailed calculations are provided in ***Appendix 'C'***.

9. Column D – Share of Growth – 50% of the growth in office jobs was allocated to the downtown. The remaining 50% of the growth was shared to the employment areas based on existing levels of employment.

10. Column E – 2021 Estimate – The projected growth in employment was multiplied by the share of growth, and then added to the 2011 employment, to determine the employment level in 2021.

11. Column F – 2031 Estimate – The projected growth in employment was multiplied by the share of growth, and then added to 2021 employment, to determine the employment level in 2031.

Once the job levels in each employment area were calculated, the numbers were assigned to their respective shapes in the GIS mapping.

4.6 Population-Related Employment

The Hemson forecast estimates future employment by unique categories that are useful for urban growth planning. Population related employment describes the diverse jobs which primarily serve and normally occur in proximity to a City's residential population. These include most retail, education, health and government jobs together with home-based businesses of all types. The Hemson forecast recognizes that part of this population-related employment provides City-wide services (hospitals, university/colleges, most government and regional shopping centres, etc.) and is normally concentrated, while the remainder occurs in close association with residential neighbourhoods.

City staff assigned 'local' population related employment to traffic zones based on their current and projected share of population. 'Regional' population related employment was distributed based on local knowledge of the location and scale of such major land uses to traffic zones where they currently exist. The forecasted growth in regional population-related employment was then apportioned to the traffic zones where such uses are planned or likely to expand or locate over the forecast period within the current urban boundary. In certain situations, traffic zones that currently accommodate notable shares of this employment have little potential for growth. For example, Dundas is unlikely to retain its current share of regional population-related employment due to its limited geography. In such cases, part of the traffic zone's growth share was allocated

to nearby traffic zones (Hamilton, in the case of Dundas) with significant existing regional population employment and further growth potential.

5.0 PHASE 3 METHODOLOGY: MAPPING THE RESULTS

The last phase of the work involved the mapping of the growth options and the spatial computation of the growth data into a format suitable for use by the City of Hamilton's Water/Wastewater, Storm Water and Transportation Master Plan teams. The data required by the teams included the number of housing units by type, acreage of land use, and the number of employees, broken down by 10-year increments and in geographic pieces small enough to facilitate a reasonable degree of accuracy in their modelling. This section of the report describes how the growth options and data derived in the earlier phases of the methodology are broken down to support the analysis by the Master Plan teams.

5.1 Definition of the Smallest Geographic Unit (SGU)

Many regional municipalities such as Peel and Halton maintain population, housing, traffic, water, wastewater and storm water data within an area referred as the "smallest geographic unit" (SGU). This area is usually smaller than an individual census tract or recognized neighbourhood, and provides a suitable scale to conduct socio-economic and infrastructure analysis / projections at a fine grain. Hamilton has not yet developed a corporate standard for SGU.

At the outset of this study, eight areas (Ancaster, Dundas, Flamborough, Glanbrook, Lower Stoney Creek, Lower Hamilton, Upper Stoney Creek, and Upper Hamilton) were the smallest areas that the City. Data at this level of aggregation would have to be subdivided by the Master Plan teams to fit their models. This meant that each Master Plan team might disaggregate the data differently, potentially introducing significant mathematical error into the numbers already calculated by the City and Dillon.

To address the concern of data segregation within eight areas and the anticipated resulting error, it was determined through discussions with City staff and the Master Plan teams that traffic zones would be the acceptable SGU. There are 195 traffic zones across all of Hamilton's urban and rural communities. It should be recognized that the traffic zones may be further disaggregated by the Master Plan teams to support their analyses (most notably the Water Master Plan team

which will break down the 195 traffic zones into approximately 1,000 water pressure zones). However, delivery of the base data to all teams in a consistent small geographic unit with some reasonable level of detail will help reduce the degree of mathematical error which will be introduced through the Master Plan team's calculations.

5.2 Methodology to Assign Data to the Traffic Zones

5.2.1 Methodology Used by City for Base Units, Population and Residential Intensification

The number of units projected was derived from assessment data and the City's Land Use Data Base. Persons per unit (PPU) figures were issued for a Compact and More Compact growth scenario. Those PPUs were applied to each unit according to dwelling type over the projection period to obtain projected populations. Units and associated population figures were aggregated from a property level into traffic zones.

5.2.2 Methodology Used by Dillon for Greenfield and Non-Residential Calculations

The methodology used to assign data derived through the Dillon calculations for greenfield growth, major office employment, employment areas and population-related employment to TZs is described below.

Step 1 – Geo-Spatial Division into Traffic Zones (TZ) : Using GIS tools, the TZ mapping was overlaid on the base layers to break them up into pieces that would fit with the TZ.

Step 2 – Proportionate Allocation Data: The areas of the new polygons created in Step 1 were calculated as a proportion of the area of the original polygon shapes. This proportion was then used as a factor to calculate the unit type, acreages, number of jobs. For example, if an TZ divided a 44 acre polygon into a 16 acre polygon and a 28 acre polygon, then the resulting units/acreages/jobs would be factored by 0.3636 (16 divided by 44) and 0.6464 (28 divided by 44), respectively, for each 10-year period.

Step 3 – Aggregation of Individual Polygons to TZ: To ensure consistent input to the Master Plan teams, polygons smaller than the TZ's were then aggregated to create GIS layers which were perfectly matched to the boundaries of the TZ.

6.0 OBSERVATIONS, DISCUSSION AND NEXT STEPS

6.1 Observations and Discussion

Some preliminary observations and discussion emanate from this exercise of analyzing the demand/supply for housing units, quantifying the land area needed to satisfy growth, and the related levels of employment.

6.1.1 Individual Numbers May Not Total Due to Rounding

Care was taken to match base year estimates, most notably 2001 and 2031, to those published in the Hemson report. However, the segregation of city-wide numbers into traffic zones required a variety of computations in both ArcGIS and Microsoft Excel. Through these computations, some rounding of decimals occurs, and as a result, individual numbers may not total to exactly match the base year estimates.

6.1.2 Changes in Land Uses within the Existing Urban Area Could Not Be Quantified

Changes in non-residential land uses related to residential intensification in the built-up area could not be quantified. For example, where significant intensification was projected, additional schools, community centres, parks, etc., within the existing built-up area were not specifically identified. It is difficult to document all of the potential changes in non-residential land uses needed to support intensification, since an understanding of existing 'capacity' and standards of service for these land uses was not available.

Similarly, changes in population numbers and demographics must be addressed at a neighbourhood level to implement important objectives such as aging in place and to provide

family support based on demographic characteristics and family evolution. As Hamilton grows, it is expected that these matters will be accommodated through incremental changes (i.e. instead of a new inner-city park where it might be warranted a health club or travel to a nearby facility could provide opportunities for alternative physical recreation without requiring land area) and/or sub-area plans.

6.1.3 Phasing and Financial Strategies for Preferred Growth Option

It is recognized that key questions remain regarding phasing of development over the next thirty years in each neighbourhood as well as sustainable financing of infrastructure, environmental and social programs. These issues are of key concern to citizens and Council. Over the next months, the GRIDS process will establish a phasing and capital works financing program for the preferred growth option to ensure support for a vibrant employment economy, an appropriate jobs/housing mix and to assure that sustainable financing is available for the preferred growth option.

6.2 Next Steps

Following this analysis, the information will be forwarded to the consulting teams working on the Water/Wastewater, Stormwater and Transportation Master Plans. These teams will evaluate the five GRIDS growth options and provide feedback to the City on the infrastructure strategy, feasibility and cost implications of each growth option.

Following the initial feedback from the Master Plan teams and the City on social, economic, land use and environmental issues, it is anticipated that public consultation and some additional technical analysis will lead to the identification of a preferred growth option for the City of Hamilton. This growth option will then be used to update the City's Official Plan and establish the capital works program in the Master Plans.

List of References

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APPENDIX "A1"

Residential Intensification Supply

City of Hamilton, Planning Department

Criteria for Choosing Potential Residential Intensification Areas and Estimating Potential Intensification Units

1. Area for potential residential intensification (corridors, nodes, blocks, etc) were chosen by windshield survey and collective knowledge by City staff with advice on specific commercial corridors, plazas and malls by a private consultant working on the City's commercial policy strategy. The City was broken down into Sectors. Within the sectors, sub-areas were further identified based on groupings of the properties and areas identified.

   Note: This was not a street-by-street survey or a detailed assessment of the intensification potential within specific neighbourhoods of the City.

2. For properties within the areas identified, the properties eligible for intensification were identified as follows:

   - Property is 2 stories or less
   - Frontage must be greater than 75'.
   - Land Use cannot be:
     - Institutional (school, church, etc.)
     - Conservation/park land
     - Utility/communication/pipeline
     - Railway
     - Right-of-way
     - Row/townhouse
     - Walk-up, medium highrise or apt/condo

   - If two adjacent parcels have frontage less than 75' but meet the other requirements above, the two frontages are combined and considered eligible

3. For eligible properties, intensification potential was calculated in a variety of ways, depending on the individual area characteristics and previous intensification performance.

(a) For corridors where apartments were the likely building type, a formula was applied that estimated the unit count that would equate to adding 2 additional stories of apartments to a building and assumed

- 75% lot coverage
- 2 stories
- 1000 square foot average unit size

On corridors, assumptions were made regarding the level of intensification that would reasonable occur. Some larger properties found within the corridor were removed from the unit total and calculated in an alternate way (see below) and then an assumption on the remainder of the properties within the area was made (for example, of the eligible properties in the sub-area, only ½ are likely to be redeveloped for intensification).

(b) For areas/properties where ground related units (e.g. townhouses) were most likely to be the form of intensification, a general 'units per acre' level was applied to the lot area or combined lot areas of assembled properties. Most often, 20 units/acre was applied.

(c) For sites such as commercial plazas that were identified as potential intensification sites, general assumptions were made on the area of the site to be redeveloped for residential purposes as well as assumptions on the form of residential intensification that would best suit the property (e.g. townhouse complex, 3 or 6 storey towers). For large properties likely to redevelop to a mix of dwelling types and densities, assumptions were made regarding the amount of acreage to be devoted to the different dwelling types with specific units per acre identified.

APPENDIX "A2-1"
ANALYSIS OF RESIDENTIAL URBAN GROWTH: No Expansion

Based on Hemson GGH "Compact" Projection and City's Projection of Intensification

	A	B1+B2= B	*B1*	*B2*	A-B= C	D	C div. D= E	G*0.25= F	E div. 0.75= G
Unit Type	**2001-2031 Demand[2]** Units	**Total Supply[3]** Units	***Supply of Vac./Desig.*** *[3]* *Units*	***Supply of Intens.*** *[3]* *Units*	**Residual Demand** Units	**Average Density[4]** per net Ac.	**Res Land New Growth** Acres	**Non-Res Supply[5]** Acres	**Total Nbhd Lands Req'd** Acres
Low	40,000	27,740	*24,060*	*3,680*	12,260	n/a	n/a	n/a	n/a
Med	17,000	18,790	*10,020*	*8,770*	(1,790)	n/a	n/a	n/a	n/a
High	23,000	51,390	*1,730*	*49,660*	(28,390)	n/a	n/a	n/a	n/a
Total	80,000	97,810	*35,810*	*62,000*	**(17,920)***	n/c	0	0	0

Total Urban Area Expansion Required (acres): **0**

Notes:

1. This table must be read in conjunction with the text of this report.
2. Source: Hemson Consulting Ltd.
3. Source: City of Hamilton Planning Department
4. Source: Planning and Engineering Initiatves Ltd.
5. Source: Planning and Engineering Initiatves Ltd. (for 75/25 split)
6. Numbers may not sum due to rounding

*GRIDS Option 1 does not meet the forecasted housing demand. There is a discrepancy / oversupply of units, and policy intervention coupled with a shift in the market would be needed. Oversupply of units provided to meet population forecasts by Hemson.

APPENDIX "A2-2"
ANALYSIS OF RESIDENTIAL URBAN GROWTH: Distributed Development

Based on Hemson GGH "More Compact" Projection and City's Projection of Intensification

	A	B1+B2= B	*B1*	*B2*	A-B= C	D	C div. D= E	G*0.25= F	E div. 0.75= G
Unit Type	**2001-2031 Demand[2]** Units	**Total Supply[3]** Units	***Supply of Vac./Desig.*** *[3]* *Units*	***Supply of Intens.*** *[3]* *Units*	**Residual Demand** Units	**Average Density[4]** per net Ac.	**Res Land New Growth** Acres	**Non-Res Supply[5]** Acres	**Total Nbhd Lands Req'd** Acres
Low	41,000	25,980	*24,060*	*1,920*	15,020	9	1,670	560	2,230
Med	23,000	18,570	*10,020*	*8,560*	4,430	22	200	70	270
High	36,000	19,550	*1,730*	*17,830*	16,450	30	550	180	730
Total	100,000	64,100	*35,810*	*28,310*	**35,900**	n/c	2,420	810	3,230

Total Urban Area Expansion Required (acres): 3,230

Notes:

1. This table must be read in conjunction with the text of this report.
2. Source: Hemson Consulting Ltd.
3. Source: City of Hamilton Planning Department
4. Source: Planning and Engineering Initiatves Ltd.
5. Source: Planning and Engineering Initiatves Ltd. (for 75/25 split)
6. Numbers may not sum due to rounding

APPENDIX "A2-3"
ANALYSIS OF RESIDENTIAL URBAN GROWTH: Nodes and Corridors

Based on Hemson GGH "More Compact" Projection and City's Projection of Intensification

	A	B1+B2= B	*B1*	*B2*	A-B= C	D	C div. D= E	G*0.25= F	E div. 0.75= G
Unit Type	**2001-2031 Demand[2]** Units	**Total Supply[3]** Units	***Supply of Vac./Desig.[3]*** *Units*	***Supply of Intens.[3]*** *Units*	**Residual Demand** Units	**Average Density[4]** per net Ac.	**Res Land New Growth** Acres	**Non-Res Supply[5]** Acres	**Total Nbhd Lands Req'd** Acres
Low	41,000	25,880	*24,060*	*1,820*	15,120	9	1,680	560	2,240
Med	23,000	19,160	*10,020*	*9,140*	3,840	22	170	60	230
High	36,000	33,640	*1,730*	*31,910*	2,360	30	80	30	110
Total	100,000	78,680	*35,810*	*42,870*	**21,320**	n/c	1,930	640	2,570

Total Urban Area Expansion Required (acres): 2,570

Notes:

1. This table must be read in conjunction with the text of this report.
2. Source: Hemson Consulting Ltd.
3. Source: City of Hamilton Planning Department
4. Source: Planning and Engineering Initiatves Ltd.
5. Source: Planning and Engineering Initiatves Ltd. (for 75/25 split)
6. Numbers may not sum due to rounding

APPENDIX 'B'

Projections for Jobs on Employment Lands

"Compact" Scenario

	A	B	C=B*1.15	D=C*1.16	E=D*1.14	F=E*1.12	G	H	I	J=D+G	K=E+H	L=F+I
NAME	2001 Census Place of Work[2]	Revised 2001 Place of Work - Employment Lands Only[3]	2001 Estimate with a factor of 1.5	2011 Estimate[4]	2021 Estimate[4]	2031 Estimate[4]	Reassignment in 2011[5]	Reassignment in 2021[5]	Reassignment in 2031[5]	2011 Final Jobs Estimate	2021 Final Jobs Estimate	2031 Final Jobs Estimate
ABERDEEN	4,060	2,920	4,380	5,080	5,790	6,480	0	0	0	5,080	5,790	6,480
ANCASTER	520	390	590	680	770	870	0	0	0	680	770	870
ANCASTER/AIRPORT	2,220	1,770	2,660	3,080	3,520	3,940	0	0	0	3,080	3,520	3,940
BAYFRONT	36,480	27,500	41,250	47,850	54,550	61,100	-6,600	-13,300	-19,850	41,250	41,250	41,250
DUNDAS	2,120	1,060	1,590	1,840	2,100	2,350	0	0	0	1,840	2,100	2,350
FAMBOROUGH	2,770	1,570	2,360	2,730	3,120	3,490	0	0	0	2,730	3,120	3,490
HAMILTON EAST	7,420	7,040	10,570	12,260	13,970	15,650	0	0	0	12,260	13,970	15,650
HAMILTON MOUNTAIN	5,040	4,050	6,070	7,040	8,030	8,990	0	0	0	7,040	8,030	8,990
HESTER	1,070	430	640	750	850	950	0	0	0	750	850	950
MOHAWK	8,980	4,490	6,740	7,810	8,910	9,980	0	0	0	7,810	8,910	9,980
NORTH GLANBROOK/AIRPORT	2,580	2,450	3,670	4,260	4,850	5,430	0	5,000	19,850	4,260	9,850	25,280
RIFLE RANGE	1,680	840	1,260	1,460	1,660	1,860	0	0	0	1,460	1,660	1,860
STONEY CREEK	7,410	6,790	10,190	11,820	13,480	15,090	0	0	0	11,820	13,480	15,090
STONEY CREEK WEST	4,260	4,050	6,070	7,040	8,030	8,990	0	0	0	7,040	8,030	8,990
STUART STREET	1,910	1,270	1,900	2,200	2,510	2,810	0	0	0	2,200	2,510	2,810
TOTAL	**88,490**	**66,610**	**99,910**	**115,900**	**132,120**	**147,980**	**-6,600**	**-8,300**	**0**	**109,300**	**123,830**	**147,980**

"More Compact" Scenario

	A	B	C=B*1.5	D=C*1.16	E=E*1.16	F=E*1.13	G	H	I	J=D+G	K=E+H	L=F+I
NAME	2001 Census Place of Work[2]	Revised 2001 Place of Work - Employment Lands Only[3]	2001 Estimate with a factor of 1.5	2011 Estimate[4]	2021 Estimate[4]	2031 Estimate[4]	Reassignment in 2011[5]	Reassignment in 2021[5]	Reassignment in 2031[5]	2011 Final Jobs Estimate	2021 Final Jobs Estimate	2031 Final Jobs Estimate
ABERDEEN	4,060	2,920	4,380	5,080	5,890	6,660	0	0	0	5,080	5,890	6,660
ANCASTER	520	390	590	680	790	890	0	0	0	680	790	890
ANCASTER/AIRPORT	2,220	1,770	2,660	3,080	3,580	4,040	0	0	0	3,080	3,580	4,040
BAYFRONT	36,480	27,500	41,250	47,850	55,510	62,720	-6,600	-14,260	-21,470	41,250	41,250	41,250
DUNDAS	2,120	1,060	1,590	1,840	2,140	2,410	0	0	0	1,840	2,140	2,410
FAMBOROUGH	2,770	1,570	2,360	2,730	3,170	3,580	0	0	0	2,730	3,170	3,580
HAMILTON EAST	7,420	7,040	10,570	12,260	14,220	16,070	0	0	0	12,260	14,220	16,070
HAMILTON MOUNTAIN	5,040	4,050	6,070	7,040	8,170	9,230	0	0	0	7,040	8,170	9,230
HESTER	1,070	430	640	750	860	980	0	0	0	750	860	980
MOHAWK	8,980	4,490	6,740	7,810	9,060	10,240	0	0	0	7,810	9,060	10,240
NORTH GLANBROOK/AIRPORT	2,580	2,450	3,670	4,260	4,940	5,580	0	5,000	21,470	4,260	9,940	27,050
RIFLE RANGE	1,680	840	1,260	1,460	1,690	1,910	0	0	0	1,460	1,690	1,910
STONEY CREEK	7,410	6,790	10,190	11,820	13,710	15,490	0	0	0	11,820	13,710	15,490
STONEY CREEK WEST	4,260	4,050	6,070	7,040	8,170	9,230	0	0	0	7,040	8,170	9,230
STUART STREET	1,910	1,270	1,900	2,200	2,550	2,880	0	0	0	2,200	2,550	2,880
TOTAL	**88,490**	**66,610**	**99,910**	**115,900**	**134,440**	**151,920**	**-6,600**	**-9,260**	**0**	**109,300**	**125,190**	**151,920**

Notes:

1. This table must be read in conjuction with the text of the report.
2. Source: Statistics Canada and City of Hamilton
3. Numbers based on existing employment land uses within census tracts
4. Determined using growth factors calculated by Hemson Consulting.
5. Source: City of Hamilton
6. Numbers may not sum due to rounding

APPENDIX "C"

Projections for Jobs in Major Office Category

"Compact" Scenario

	A	B	C	D	E	F	G
NAME	2001 Census Place of Work	Revised Place of Work	2001 Estimate	Share of Growth	2011 Estimate[2]	2021 Estimate[3]	2031 Estimate[4]
ABERDEEN	4,060	2,920	430	2.19%	470	580	670
ANCASTER	520	390	60	0.29%	60	80	90
ANCASTER/AIRPORT	2,220	1,770	260	1.33%	290	350	410
BAYFRONT	36,480	27,500	4,060	20.64%	4,470	5,500	6,330
DOWNTOWN	22,550	21,470	3,170	50.00%	4,170	6,670	8,670
DUNDAS	2,120	1,060	160	0.79%	170	210	240
FAMBOROUGH	2,770	1,570	230	1.18%	260	310	360
HAMILTON EAST	7,420	7,040	1,040	5.29%	1,150	1,410	1,620
HAMILTON MOUNTAIN	5,040	4,050	600	3.04%	660	810	930
HESTER	1,070	430	60	0.32%	70	90	100
MOHAWK	8,980	4,490	660	3.37%	730	900	1,030
NORTH GLANBROOK/AIRPORT	2,580	2,450	360	1.84%	400	490	560
RIFLE RANGE	1,680	840	120	0.63%	140	170	190
STONEY CREEK	7,410	6,790	1,000	5.10%	1,100	1,360	1,560
STONEY CREEK WEST	4,260	4,050	600	3.04%	660	810	930
STUART STREET	1,910	1,270	190	0.95%	210	250	290
TOTAL	**111,030**	**88,080**	**13,000**	**100.00%**	**15,000**	**20,000**	**24,000**

"More Compact" Scenario

	A	B	C	D	E	F	G
NAME	2001 Census Place of Work	Revised Place of Work	2001 Estimate	Share of Growth	2011 Estimate[2]	2021 Estimate[3]	2031 Estimate[4]
ABERDEEN	4,060	2,920	430	2.19%	500	610	740
ANCASTER	520	390	60	0.29%	70	80	100
ANCASTER/AIRPORT	2,220	1,770	260	1.33%	300	370	450
BAYFRONT	36,480	27,500	4,060	20.64%	4,680	5,710	6,950
DOWNTOWN	22,550	21,470	3,170	50.00%	4,670	7,170	10,170
DUNDAS	2,120	1,060	160	0.79%	180	220	270
FAMBOROUGH	2,770	1,570	230	1.18%	270	330	400
HAMILTON EAST	7,420	7,040	1,040	5.29%	1,200	1,460	1,780
HAMILTON MOUNTAIN	5,040	4,050	600	3.04%	690	840	1,020
HESTER	1,070	430	60	0.32%	70	90	110
MOHAWK	8,980	4,490	660	3.37%	760	930	1,130
NORTH GLANBROOK/AIRPORT	2,580	2,450	360	1.84%	420	510	620
RIFLE RANGE	1,680	840	120	0.63%	140	170	210
STONEY CREEK	7,410	6,790	1,000	5.10%	1,160	1,410	1,720
STONEY CREEK WEST	4,260	4,050	600	3.04%	690	840	1,020
STUART STREET	1,910	1,270	190	0.95%	220	260	320
TOTAL	**111,030**	**88,080**	**13,000**	**100.00%**	**16,000**	**21,000**	**27,000**

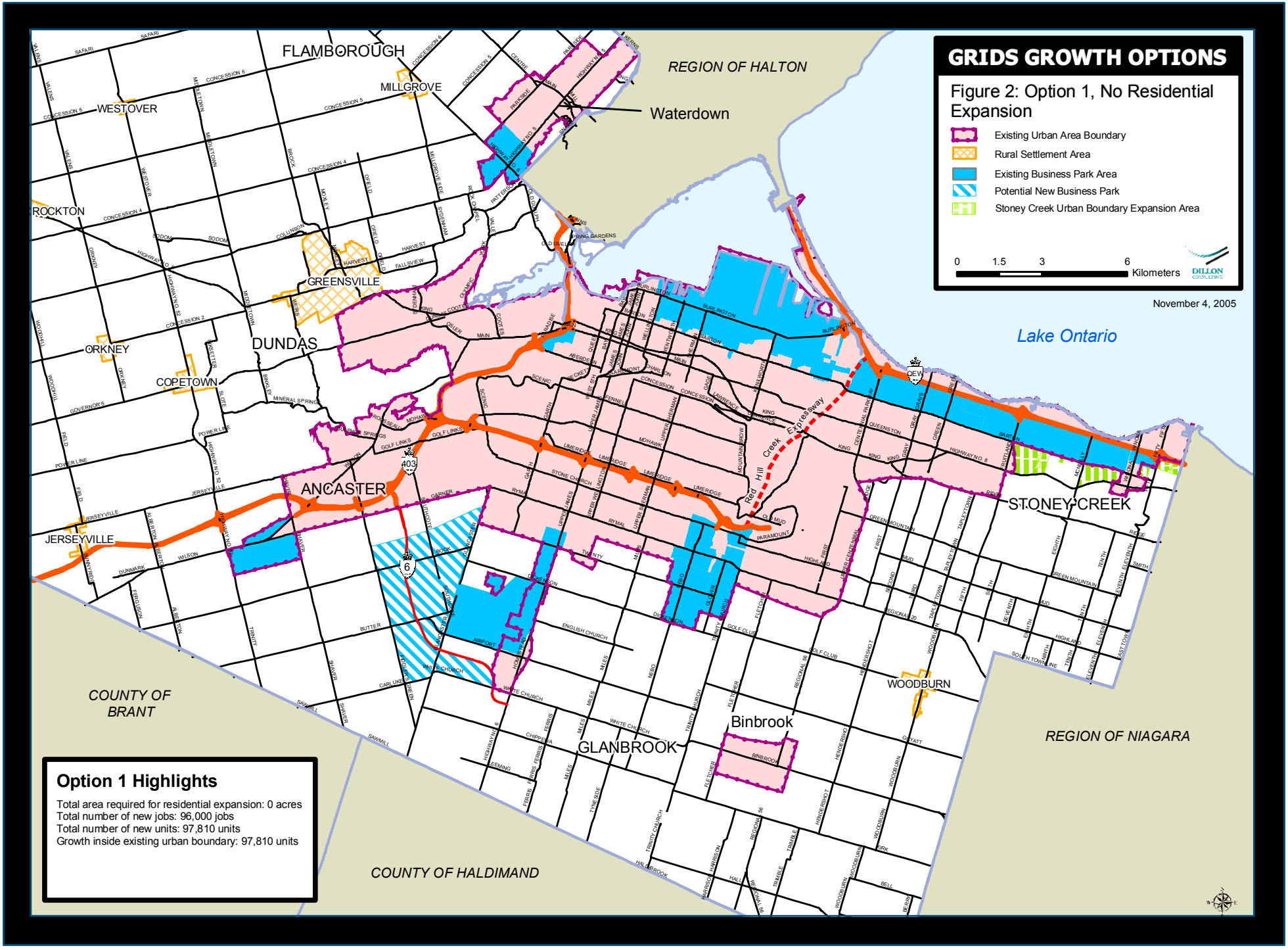
Notes: 1. This table must be read in conjuction with the text of this report.

2. Based on a growth of 2,000 major office jobs (Compact) and 3,000 jobs (More Compact)

3. Based on a growth of 5,000 new major office jobs (Compact and More Compact)

4. Based on a growth of 4,000 new major office jobs (Compact) and 6,000 jobs (More Compact)

5. Numbers may not sum due to rounding



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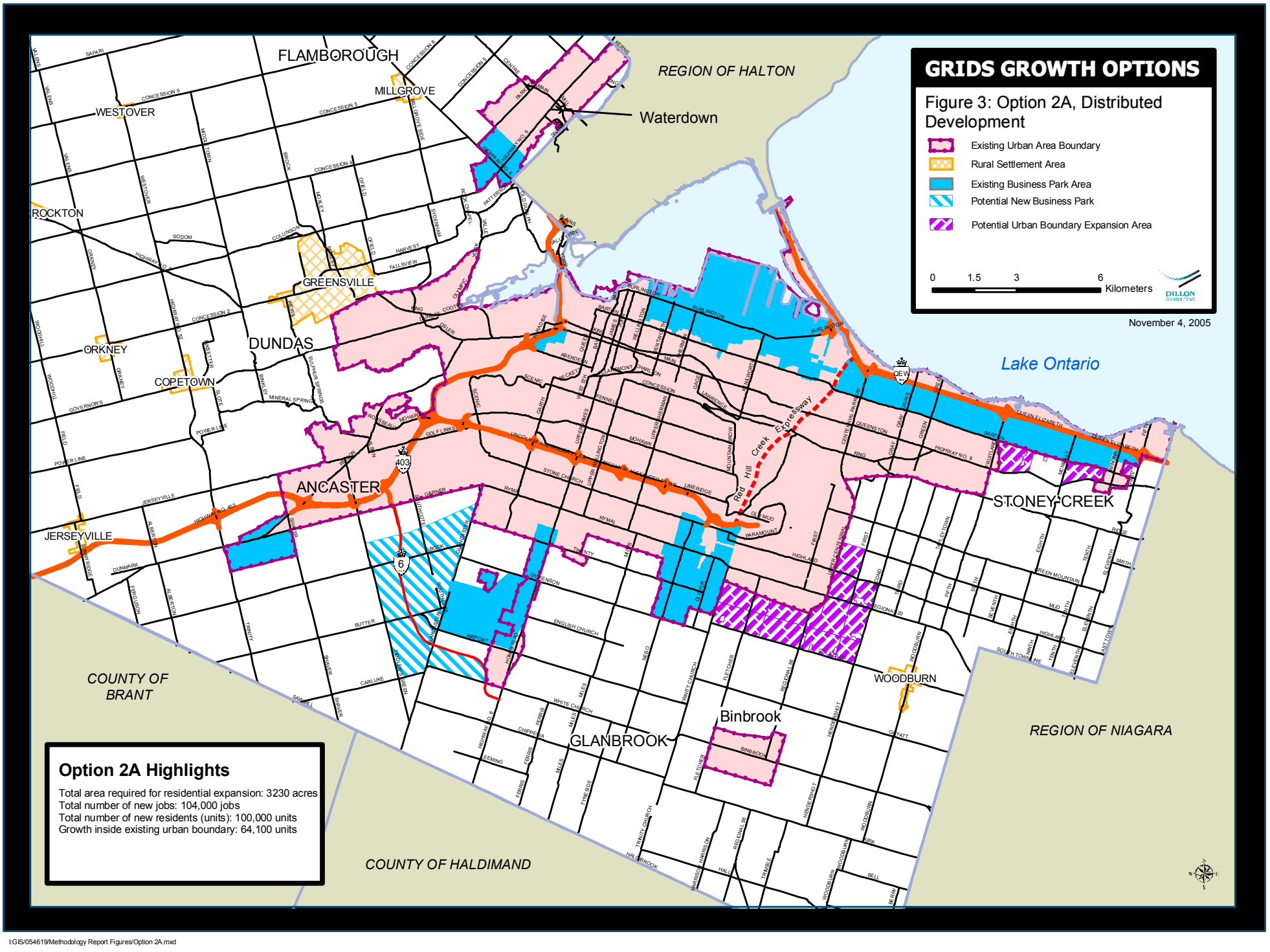

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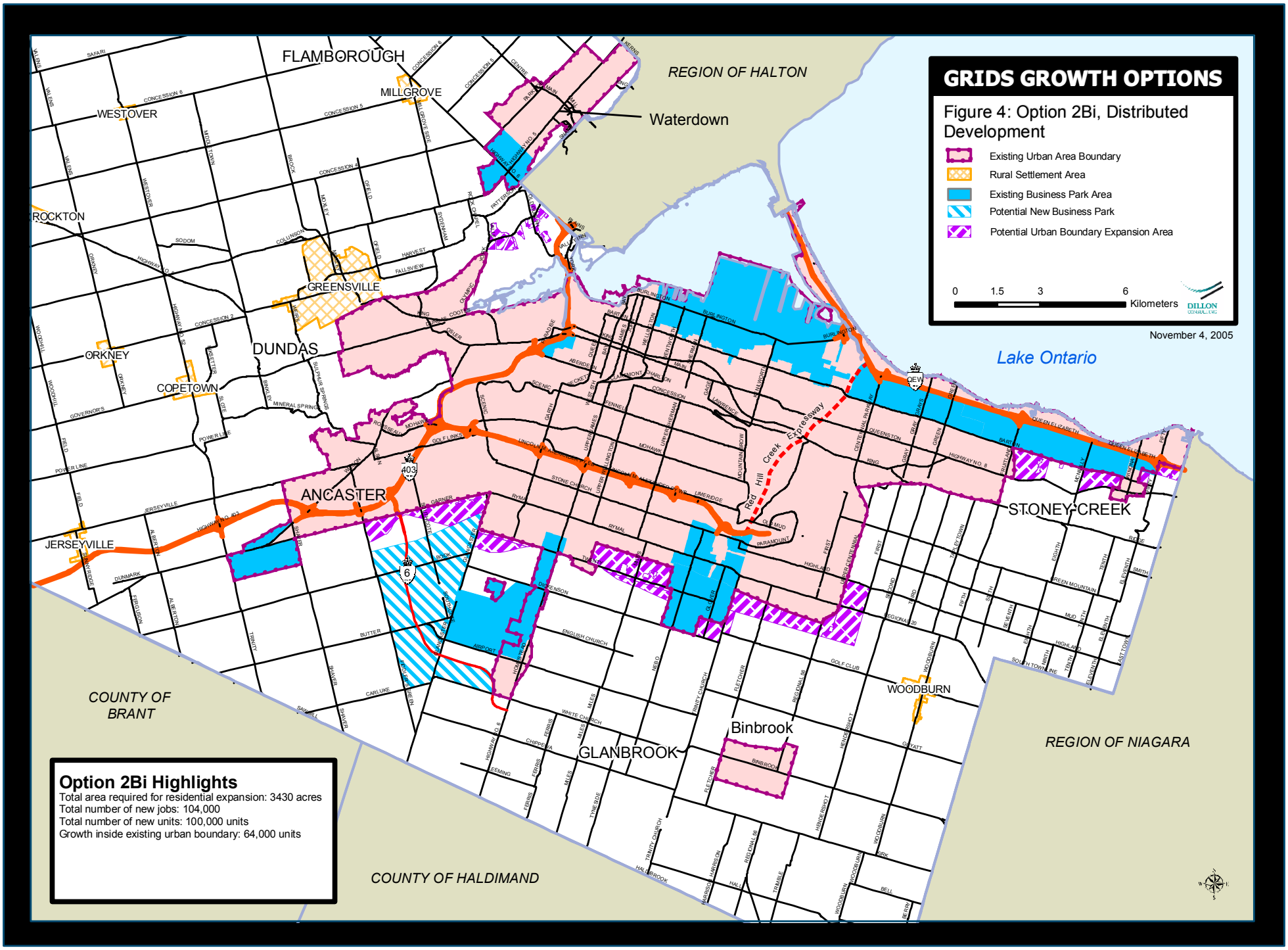
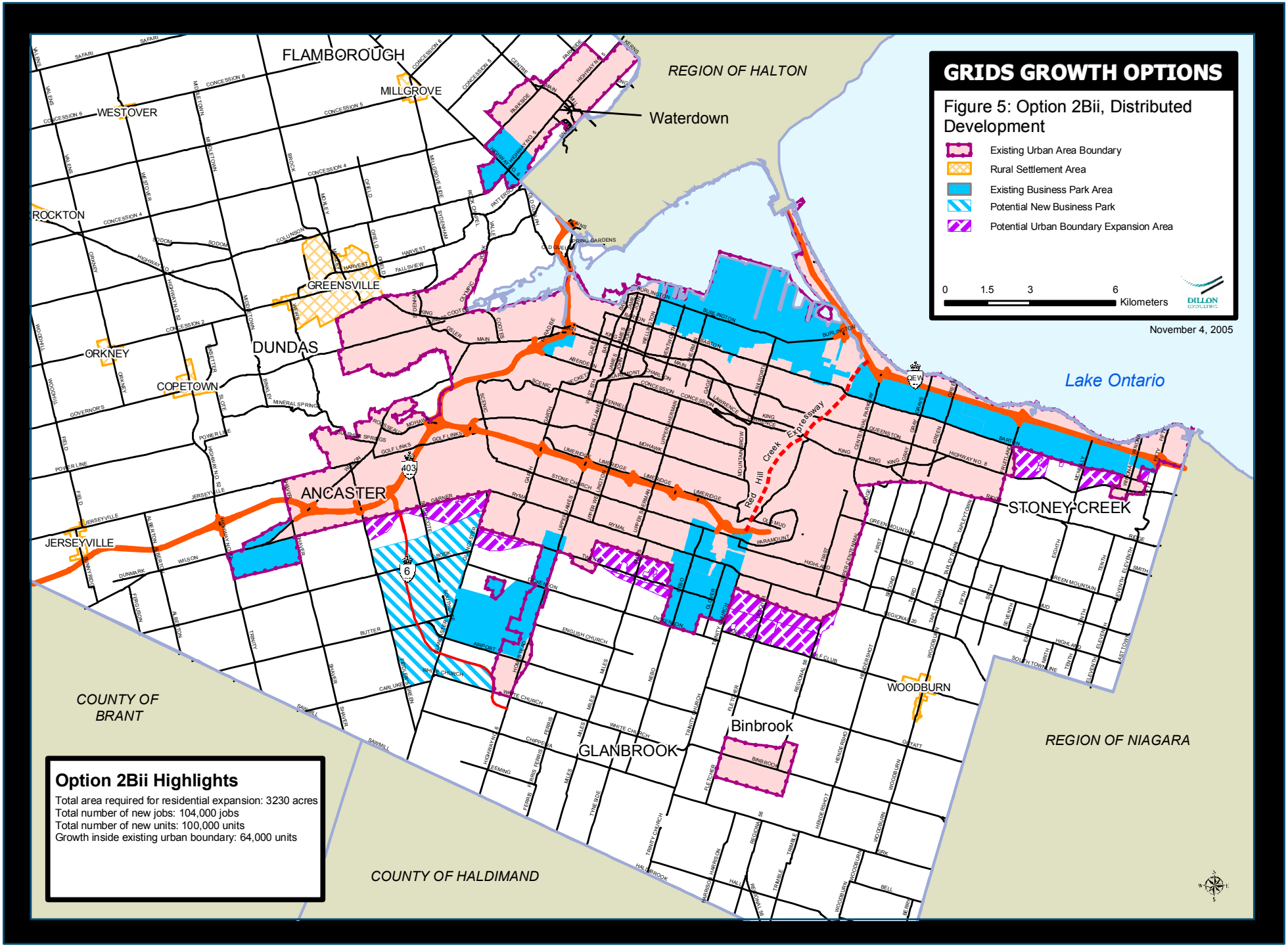

GRIDS GROWTH OPTIONS
Figure 4: Option 2Bi, Distributed Development
Existing Urban Area Boundary
Rural Settlement Area
Existing Business Park Area
Potential New Business Park
Potential Urban Boundary Expansion Area
0 1.5 3 6 Kilometers
DILLON CONSULTING
November 4, 2005
Option 2Bi Highlights
Total area required for residential expansion: 3430 acres
Total number of new jobs: 104,000
Total number of new units: 100,000 units
Growth inside existing urban boundary: 64,000 units
REGION OF HALTON
Waterdown
FLAMBOROUGH
MILLGROVE
WESTOVER
ROCKTON
GREENSVILLE
ORKNEY
COPETOWN
DUNDAS
ANCASTER
JERSEYVILLE
Lake Ontario
STONEY CREEK
WOODBURN
Binbrook
GLANBROOK
REGION OF NIAGARA
COUNTY OF BRANT
COUNTY OF HALDIMAND
Red Hill Creek Expressway
403
6
I:GIS/054619/Methodology Report Figures/Option 2Bi-Distributed Development.mxd



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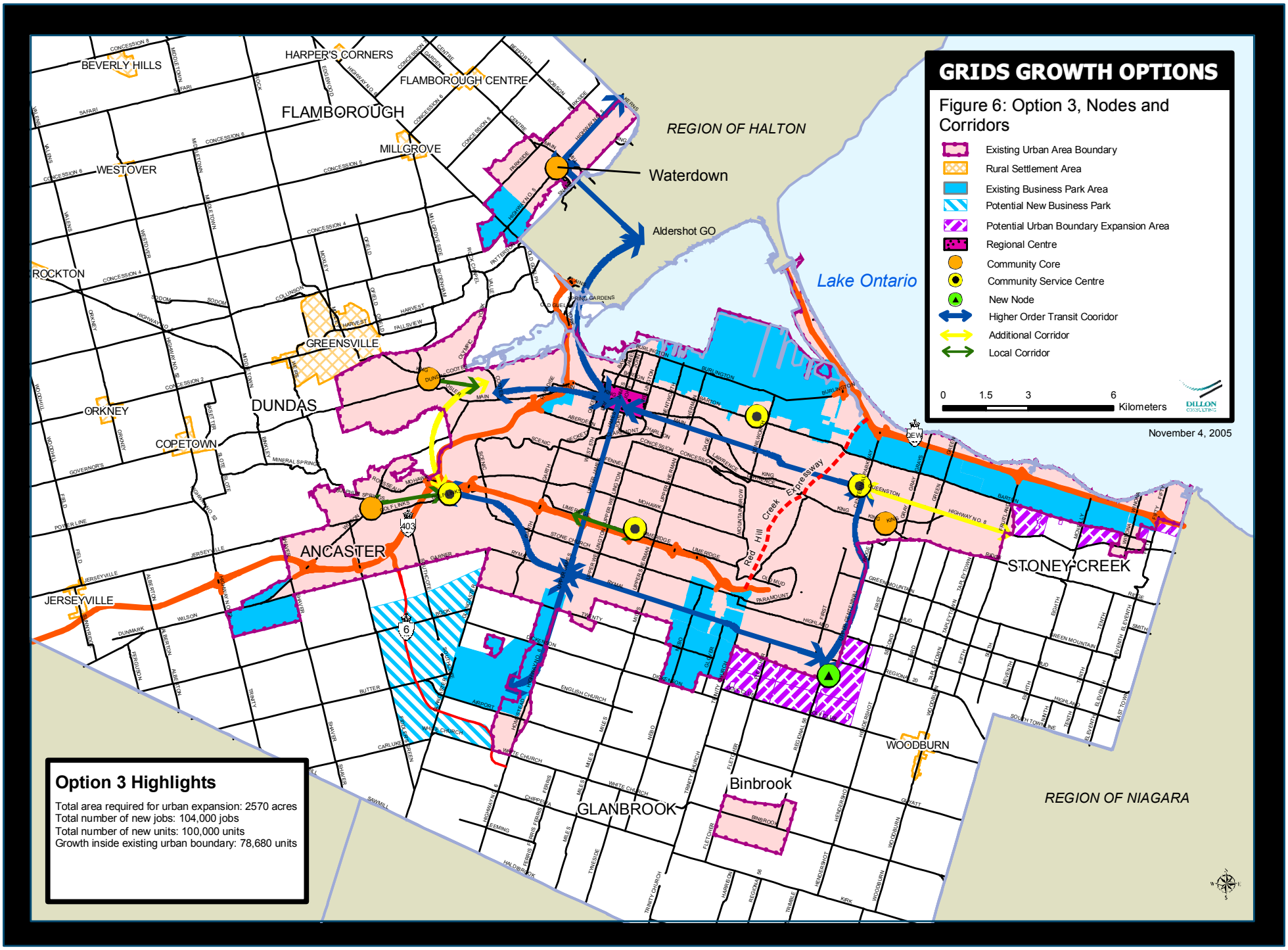

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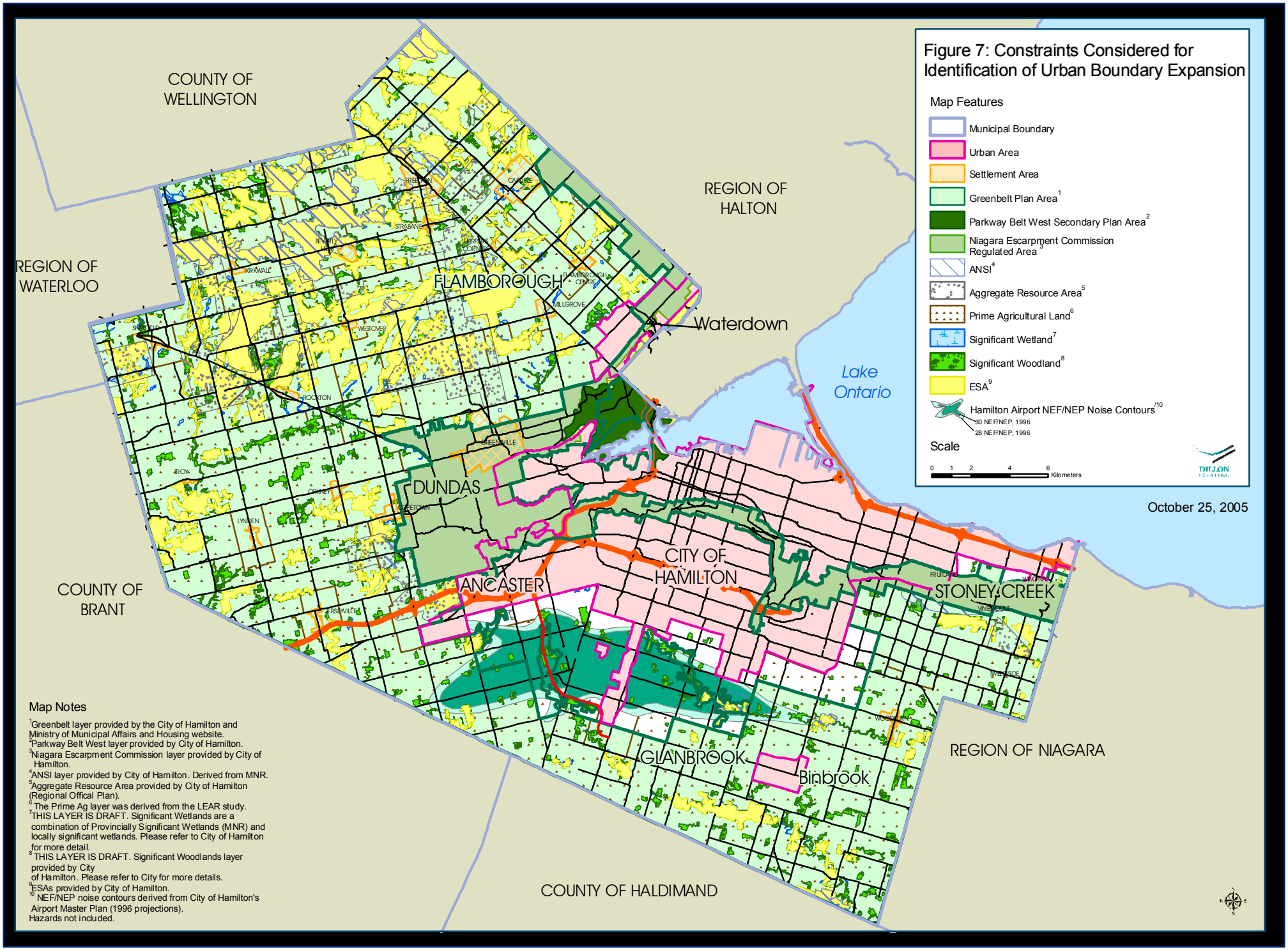

COUNTY OF WELLINGTON
REGION OF WATERLOO
REGION OF HALTON
COUNTY OF BRANT
COUNTY OF HALDIMAND
REGION OF NIAGARA
FLAMBOROUGH
Waterdown
DUNDAS
ANCASTER
CITY OF HAMILTON
STONEY CREEK
GLANBROOK
Binbrook
Lake Ontario
Figure 7: Constraints Considered for Identification of Urban Boundary Expansion
Map Features
Municipal Boundary
Urban Area
Settlement Area
Greenbelt Plan Area[1]
Parkway Belt West Secondary Plan Area[2]
Niagara Escarpment Commission Regulated Area[3]
ANSI[4]
Aggregate Resource Area[5]
Prime Agricultural Land[6]
Significant Wetland[7]
Significant Woodland[8]
ESA[9]
Hamilton Airport NEF/NEP Noise Contours[10]
30 NEF/NEP, 1996
28 NEF/NEP, 1996
Scale
0 1 2 4 6 Kilometers
October 25, 2005
Map Notes
[1]Greenbelt layer provided by the City of Hamilton and Ministry of Municipal Affairs and Housing website.
[2]Parkway Belt West layer provided by City of Hamilton.
[3]Niagara Escarpment Commission layer provided by City of Hamilton.
[4]ANSI layer provided by City of Hamilton. Derived from MNR.
[5]Aggregate Resource Area provided by City of Hamilton (Regional Offical Plan).
[6]The Prime Ag layer was derived from the LEAR study.
[7]THIS LAYER IS DRAFT. Significant Wetlands are a combination of Provincially Significant Wetlands (MNR) and locally significant wetlands. Please refer to City of Hamilton for more detail.
[8]THIS LAYER IS DRAFT. Significant Woodlands layer provided by City of Hamilton. Please refer to City for more details.
[9]ESAs provided by City of Hamilton.
[10]NEF/NEP noise contours derived from City of Hamilton's Airport Master Plan (1996 projections). Hazards not included.

Appendix E: November/December Public Consultation Report

Growth Related Integrated Development Strategy
City of Hamilton

NOVEMBER/DECEMBER
PUBLIC CONSULTATION REPORT

Submitted by
Dillon Consulting
January 30, 2006

Hamilton

BUILDING A STRONG FOUNDATION HAMILTON

DILLON CONSULTING

NOTE: The purpose of this report is to summarize the input received at the public event sessions and subsequently through comments submitted. Throughout the GRIDS process, comments and submissions received are reviewed and considered by staff, but because comments on the growth options were requested by December 21, 2005 only those received up to this point are included in this report.

It is noted that the comments/claims made by the public and documented in this summary have not been assessed or endorsed by City of Hamilton staff.

1.0 Introduction

The City of Hamilton hosted a series of consultation events in November and December 2005 to obtain input on five growth options being considered to accommodate population and employment growth within the City to the year 2031. The five growth options were presented to the public at three public information sessions on November 28th, 30th and December 5th and discussed with key stakeholders at a workshop in December 1st.

The five growth options include:
Option 1 – No Expansion (this option involves no expansion of the existing urban boundary for residential development)
Option 2, 3 and 4 – Distributed Development (the three options each show different ways development could be distributed in Hamilton)
Option 5 – Nodes and Corridors (this option focuses both intensification and new growth to specific nodes and corridors)

Consistent features of all the options include: the exclusion of constrained lands such as the Greenbelt[1], Niagara Escarpment, Significant Natural Features; inclusion of the proposed Highway 6 – Aerotropolis Business Park. Also all options include at least 40% residential intensification within the existing urban area of Hamilton.

At the workshop and Public Information Sessions, the City presented information on intensification, the five growth options, employment, and the infrastructure master plans.

The Public Information Sessions were advertised in the Hamilton Spectator and Brabant newspapers November 18th, 2005. Notice was also sent in the form of a 2 page bulletin to approximately 3000 contacts on the project mailing list. Approximately 130 of those on the mailing list received an invitation to the stakeholder workshop. Those invited included groups/individuals associated with community well being, ecological well being and economic well being representing the triple bottom line evaluation framework.

A total of 176 people attended the Public Information Session
- 38 people signed in on November 28th
- 35 people signed in on November 30th

[1] It is noted that Option 3 includes some development in the Pleasantview area. Although these lands are included in the Greenbelt Plan, the policies still defer to the Parkway Belt West plan, with the exception of lands located in the Natural Heritage System. The Parkway Belt West Plan provides for some limited development. It was decided to include consideration of development in Pleasantview to test its feasibility and confirm a City position on the future of this area.

- 103 people signed in on December 5th

A total of 26 people attended the workshop on the morning of December 1, 2005. Those in attendance represented the following groups/affiliations:

JJ Barnicke Ltd.
Hamilton International Airport
Stoney Creek Chamber of Commerce
Ministry of the Environment
City of Hamilton Staff
City of Hamilton Council – Wards 1 and 2
Hamilton Walks
McMaster ACT Office
Green Venture
Conservation Halton
Niagara Escarpment Commission
Hamilton Chamber of Commerce
Bay Area Restoration Council
HR Matters
Hamilton Agricultural Advisory Committee

One hundred and thirty nine (139) people submitted comment forms, letters and emails including those dropped off at the Public Information Centre (6 forms dropped off at Nov 28 session; 6 at Nov 30 session; and 35 at Dec 7 session). The completed comment forms, letters/emails and the December 1st workshop report are all included in Appendix C to this report.

The purpose of this report is to summarize the input we received at the sessions and subsequently through comments submitted. Throughout the GRIDS process, comments and submissions received are reviewed and considered by staff, but because comments on the growth options were requested by December 21, 2005 only those received up to this point are included in this report. It is noted that the comments/claims made by the public and documented in this summary have not been assessed or endorsed by City of Hamilton staff.

Appended to this summary is:

- Notification Material – Appendix A
- Workshop Report – Appendix B
- Copies of Written Submissions – Appendix C (under separate cover)

2.0 What You Said About Intensification

What is *intensification*?

"Development of a property, site or area at a higher density than currently exists through:

a) redevelopment, including the reuse of brownfield sites;
b) development of vacant and/or underutilized lots within previously developed areas;
c) expansion or conversion of existing buildings"

Provincial Policy Statement, 2005

At both the Public Information Sessions and the Workshop the City presented a conceptual map identifying potential areas for intensification. All five options include intensification. The 'no expansion' option includes the most significant amount of intensification as it accommodates all growth within the urban boundary (i.e. approximately 62,000 intensification units). The three 'distributed development' options involve the least amount of intensification although they still meet the Provincial requirement to satisfy 40% of residential growth through intensification (i.e. approximately 28,000 intensification units). The degree of intensification for the 'nodes and corridors' option is in the middle (i.e. approximately 42,000 intensification units).

There was overwhelming support by all who participated for the revitalization of the City of Hamilton's existing built-up area through intensification. Many people commented on the benefits of intensification highlighting its important role in revitalizing core urban areas, fulfilling the principles of Vision 2020, helping to keep greenspace and agriculture surrounding the City intact, supporting transit and mixed use communities and thus leading to a better balance and quality of life. Intensification was assumed by the general public to be the most cost-effective way to grow given the location of existing infrastructure, transit etc.

Many participants felt that all growth should be through intensification – this is further explored in the discussion on the growth options.

It is generally recognized that there are often challenges to face when it comes to implementing specific intensification/redevelopment projects within a built-up area. One participant indicated that based on their personal experience, they felt that most people would prefer not to live in a dense neighborhood but do it because of housing costs and thus to create a successful intensification strategy, housing prices would have to greatly increase.

Another strong message regarding intensification was the importance of 'doing it right' so that it is publicly acceptable and results in positive communities where people will want to live. Public education was identified as an important component to success. The development of an ad campaign that shows how non-threatening density can be and highlights the benefits was suggested by one participant.

It was suggested that the City develop a set of guiding principles for intensification. Some of the issues participants felt need to be addressed in these principles include:

- the need for new development to maintain existing community character;
- the need for recognition of and compensation for height implications;
- the importance of sufficient greenspace/open space and maintaining trees and attractive shady streetscapes;
- the allowance or even promotion of more varied uses – granny flats was provided as an example;
- the desire to protect public spaces for long term public use – redevelopment of school property into private residential use was given as an example of what not to allow;
- the need for more affordable housing and rental units;
- the importance of a strong and traceable planning process, community participation in that planning process and recognition of the importance of addressing the interests of the local community; and
- the encouragement of development that is both pedestrian and transit friendly to help improve peoples quality of life.

It was suggested that incentives be provided to landowners within the urban area to foster more redevelopment of their properties in a faster time frame. Providing specific timeframes for owners of derelict buildings to rebuild their property was one example. One other comment related to the importance of being sensitive to the economic reality that in some areas of the City that could face intensification, those who would likely be displaced would not have very many other affordable options to relocate.

It was noted that many areas within the City would benefit from intensification. It was also noted that new development should be developed with greater density. Participants stressed that the City support and foster intensification across the whole City and in industrial and commercial areas as well as residential areas. Downtown, the waterfront, existing commercial nodes, employment areas and institutional areas (around hospitals and university, college) were generally identified as priority areas for intensification. Specific suggestions included: Upper James corridor, 403/Main/Dundurn, Bayfront area, Barton Street, Queenston Road corridor; East of Centennial Parkway above escarpment – upper Stoney Creek. It was suggested that intensification that displaces low-cost housing should be avoided and that areas of heavy goods movements may not be appropriate as target areas for intensification.

To encourage intensification Participants requested that the City:

- investigate incentive programs to encourage infill development (the existing incentive program for downtown was identified as an example)

- consider allowing higher buildings in some areas
- consider waving /reducing charges for levies, park dedication, development charges
- consider more flexible zoning to encourage development downtown and in waterfront area
- commitment to focusing first on intensification and maintaining the existing urban boundary and only expanding the boundary once intensification targets are met
- allow apartments in houses in all neighborhoods
- limit square footage and footprint of new single family homes; encourage duplexes, semi-detached and row housing.
- pre-zone areas for the new types and densities of housing immediately following the approval of GRIDS. Amending the zoning by-law on a neighborhood or City quadrant level was identified as far easier with less likelihood of OMB appeals than if done on a site by site basis.

3.0 What You Said About the Growth Options

No Expansion (Option 1)

As noted above, most participants supported intensification and for many this meant that for them the only supportable option was 'no expansion' (Option 1). Others however, felt that Option 1 was unrealistic over a 20 year period. The Option 1 supporters sited reasons such as protection of greenspace and agriculture, City is big enough, more infrastructure to maintain. The key reason put forward for not supporting Option 1 was that it may not provide for the City's long term needs and is therefore unrealistic. That said, even those who had concerns with Option 1 cautioned that the future focus of growth in Hamilton should be a revitalization of what the City already has with as minimal an urban boundary expansion as possible.

Why Grow Beyond What is Already Planned for?

In Ontario, all planning decisions must be consistent with the Provincial Policy Statement (PPS). The PPS requires that:

"Sufficient land shall be made available through intensification and redevelopment, and if necessary, designated growth areas, to accommodate an appropriate range and mix of employment opportunities, housing and other uses to meet projected need for a time horizon of up to 20 years.

The draft Places to Grow plan states that "Population household and employment forecasts … contained in (the Plan) will be used for the basis for planning and managing growth"

The projected population for Hamilton is 660,000 by 2031.

Distributed Development (Options 2, 3 and 4)

Confusion was expressed regarding the reference to 'appropriately' for the distributed development options. It was suggested that this word be removed as its use implies that it is the best choice.
A few participants identified the 'distributed development' Option 4 as a preference. The key noted advantage of this option appears to be the proximity of residential development to the new Highway 6-Airport employment area.

There were few comments specific to Option 2 although a number of participants expressed the opinion that the growth options with larger contiguous land mass such as Option 2 provided better opportunity for improved Greenfield development.

Comments noted that for Options 2 and 4 are the most likely options to result in “more of the same”.

The ‘distributed development’ Option 3 included growth in the community of Pleasantview. This option was highly criticized. Generally, participants felt that given the history of the ‘development or no development’ issues in Pleasantview, which has included an OMB hearing, this area should not be considered for any future growth. Specifically, arguments for keeping development out of the Pleasantview area included:

- The Pleasantview area has been studied for decades and has been considered for protection by the Niagara Escarpment Plan, the Parkway Belt West Plan and the Greenbelt Plan. Pleasantview is suppose to be a protected area.
- GRIDS indicates that “all options exclude key natural features (e.g. ESAs, greenbelt)”. This statement should result in no development in Pleasantview as it is in the Greenbelt.
- Pleasantview receives a lack of municipal service now; how do you expect to service a larger population? Development in Pleasantview would be expensive and difficult to service.
- The area has been conclusively determined to have biologically significant flora. It is used extensively by wildlife and the fields serve as a vital link and safe passage for wildlife as they travel between different conservation lands. Suburban development would result in a loss of wildlife habitat and developing in Pleasant view could impact the fragile area of Cootes Paradise which has world recognition (National Geographic). The Pleasantview area affords a buffer to Cootes Paradise and preserving and sustaining this resource is paramount.
- Pleasantview has been found to be a challenging place for the construction and maintenance of homes and infrastructure. The water run-off from the Niagara Escarpment has caused significant damage to existing homes and has been the reason for costly and difficult to solve road maintenance issues. Patterson and Valley Roads have been rebuild more than once due to extensive water damage.
- Although the agriculture lands in Pleasantview have been identified as a Class 7, they were productively farmed (soybeans, feed corn) yearly before being purchased by speculators. Also many fruit trees in the area. This is an indication of their good agricultural value.
- City should pursue inclusion of Pleasantview with the NEC jurisdiction. The concept of a National Park from Escarpment to Cootes Paradise is very positive and would increase the profile of Hamilton.
- Greenspace such as Pleasantview should be jealously guarded by the City to help counter the pollution created by urbanization and vehicles.

A number of people also commented in support of development in Pleasantview for the following reasons:

- It is easily serviced with water and sewer (some areas were identified as already services in whole or in part).
- The land has been identified as heavy clay and therefore not good for agriculture. It was also noted that Option 3 has the least impact on agricultural land.
- It is strategically located close to major highways, downtown Hamilton, the new Airport Business Park, major employers in Dundas and the business area in Dundas.
- The beauty of the area will be attractive to those looking to live in Hamilton.

Most who supported development in Pleasantview suggested that it should be included in all the GRIDS growth options.

Nodes and Corridors (Option 5)

The 'nodes and corridors' option (Option 5) received some support. Participants liked the idea of focusing growth in specific areas. A number of participants suggested that the nodes and corridors approach is appropriate for all the growth options including the no expansion option.

General Comments on Options

There was a contingent who had issues with the growth forecasts themselves and who felt that the City should not grow at all or should limit the extent of residential growth. Growth projections were identified by some as unrealistic, and by others as just a trend that can change and does not have to be followed.

Some participants suggested changes to the growth options including filling in the lands between the airport and the City for all options due to their limited value for agriculture and including development on both sides of major transportation corridors to make the most efficient use of these corridors and recognize the pressure that will exist to develop the opposite side. Specific examples included Highway 6 new, Centennial Parkway, Highway 20, and the future MTO mid-peninsula corridor. Both these suggestions would free up other areas where urban boundary expansions were suggested.

Participants also provided general comments on growth. Consistently raised was the suggestion that the City develop its brownfields and underutilized lands prior to looking outside the current urban boundary. It was also suggested that any growth outside the current urban boundary should not take place until there is both jobs and infrastructure in place. Participants comments also emphasized that members of the community see Hamilton as more than just one Downtown and want the 'urban centres' throughout the City maintained and enhanced regardless of the Option chosen.

Participants suggested that the City take the lead in fostering a new kind of 'greenfield' development that encourages a greater mix of uses and social diversity, as well as providing for transit and walkable communities. The development of principles for new subdivisions was suggested including:

- minimum density rates to foster transit usage and discourage multi-car households;
- a principle that transit be provided immediately upon arrival of the first resident;
- defensible space and public amenity requirements; and
- permeability standards.

A number of participants felt that the growth options with larger contiguous land mass provided better opportunity for this new Greenfield development paradigm. It was also suggested that the City needs to build confidence internally, with developers, and the community including creating some examples of good quality housing and communities at higher densities.

Generally participants were quite supportive that the City is undertaking a planning process that will consider the cost and infrastructure implications of growth. There seemed to be a sense that the City should end piecemeal decision making and start acting to implement growth plans sooner rather than later.

4.0 What You Thought Should be Considered When Picking an Option

The following were identified as things the City should consider when picking a growth option:

- Ability to satisfy market demand (e.g. for intensification we need to supply the type of housing that aging baby-boomers want typically single story, no stairs, elevators).
- Consider the form/types of homes that will be the market for each area for each option (e.g. will elderly be more attracted to some areas). For example, the new large growth area is some distance from the GTA work market and thus be mindful of who will move to this area.
- The potential for creating an "improved" development in greenfield areas should be considered.
- Proximity of housing to employment areas; working opportunities with the community help reduce highway congestion.
- Impact on goods movement (the goods movement strategy is paramount).
- Add Hamilton Harbour RAP and Vision 2020 as explicit criteria; show how options conform to these documents.
- Air quality considerations. Air quality was identified as a significant issue that should be considered in GRIDS. Recent newspaper articles were submitted that made reference to the health implications of vehicle and in particular diesel exhaust.

- Consider heat effects of cement in the City within High density areas – some residents do not have air conditioning.
- Criteria should stress walkable communities.
- Consider peak oil issues and high cost of fuel when looking at transportation for each option.
- Considered the cost of extending HSR to expansion areas.
- Proximity of nearby natural areas for hiking etc., to escape the urban areas of the City should be considered. New development in the core should include recreating/restoring natural corridors between the Harbour and Escarpment.
- GRIDS should include ways to reduce our ecological footprint: driving less, walking, cycling, carpooling, public transit, eating locally grown food, retrofitting existing buildings to save energy, using renewable energy, driving energy-efficient vehicles. An article submitted indicated that the ecological footprint of Canadians is very large showing we are making unsustainable demands on the planet.
- Cost – One participant asked - How can we choose an option if not even a general sense of the financial implications are also provided?

5.0 What You Said About Employment

Generally participants seemed to be in agreement that employment and employment lands were important to the viability of the City helping to ensure that Hamilton does not become just another bedroom community for the GTA. Some participants commented on the need for additional employment lands on the mountain to keep a balance between where people live and work and thus reduce the demand on the transportation system. In keeping with this, many expressed support for the City's decision to reserve the Highway 6-airport business park area for future employment lands (subject to further study).

The PPS requires that Planning authorities shall promote economic development and competitiveness by:

1. providing for an appropriate mix and range of employment (including industrial, commercial and institutional uses) to meet long-term needs;
2. providing opportunities for a diversified economic base, including maintaining a range and choice of suitable sites for employment uses which support a wide range of economic activities and ancillary uses, and take into account the needs of existing and future businesses;
3. planning for, protecting and preserving *employment areas* for current and future uses; and
4. ensuring the necessary *infrastructure* is provided to support current and projected needs. (Section 1.3.1)

Others however did not feel that it was appropriate to assume that the 'aerotropolis' was a given. As an alternative, it was suggested that employment lands can and should be found within the existing urban boundary and all employment opportunities within the urban boundary should be fully exploited before any consideration of an urban boundary expansion for employment. It was noted that this would be consistent more with the GRIDS Direction #1 that suggests employment opportunities

should be adjacent to residential areas as the location of the Highway 6-airport business park is removed from residential areas.

Some participants expressed that the employment projections seemed unrealistic given the drop in jobs over the recent years. It was also suggested that if all the employment cannot fit within the existing urban boundary, the City should consider limiting the population to match the employment that can be accommodated.

6.0 What you Said About Infrastructure

The GRIDS project is an integrated project that will ensure that the infrastructure implications of planning decisions are considered. At the Public Information Sessions in particular, participants had the opportunity to view a number of displays regarding the Infrastructure Master Plans and speak to staff and consultants. The following comments on the Stormwater, Transportation and Water and Wastewater Master Plans were noted on written comments received:

Stormwater

- We can't be allowed to contaminate the lake.
- In the future we will have more frequent storms. We need to maintain sufficient greenspace to manage stormwater during these events.
- Pleased to see consideration of biofiltration.
- Infrastructure needs reworking anyway so why not do it while intensifying.
- How can we say that the 'no expansion' option places a burden on current infrastructure. It should be better than Greenfield development where we just add more infrastructure.
- Treat storm water organically; don't connect stormwater to the sewer system.
- Suggest the following to better manage stormwater in older areas of the city where there is no separate storm sewer infrastructure: reduce hard surfaces; disconnect all downspouts to permeable surfaces; enforce standard of a minimum of 50% frontage as permeable surface; reduce the number of allowed parking spaces per residential unit; mandate green roofs on flat buildings.
- It was questioned whether stormwater holding ponds can be made deeper to use less land.

Transportation

- The City needs more public transit. Specific suggestions included:
    - consistent and expanded HSR routes;
    - more transit frequency beyond the old city;
    - need for more frequent N/S service;

  - change bus to 2-way on James and John Streets;
  - McMaster should serve as a hub for buses; transit service in Dundas needs to be improved with a stronger transit connection between McMaster and the airport;
  - the lower city east-west transit corridor should be extended into Dundas;
  - should partner with Burlington to service Waterdown with transit.
- Transit needs to be both affordable and accessible. It was suggested that taxes pay for free public transit.
- Public transit is not needed or financially feasible in rural areas.
- Better signage to tell people about traffic movement well in advance so alternative route choices can be made.
- A by-pass road for the City was suggested.
- Need more bike trails and racks.
- Bicycle lanes should be discarded as biking is a sport not a mode of transportation.
- The City should switch its fleet to ethanol vehicles.
- All expansion options put more cars on road and increase air quality problems. A traffic noise problem was identified in the area of Highway 6 to Highway 403 ramp.
- Have you considered the cost of extending HSR to expansion areas?
- If airport business park goes ahead there will be more truck traffic which will cause greater air quality concerns in Dundas and Ancaster (the particulate matter gets trapped in the valley).
- There is no room for highway expansion; alternative transportation methods must be considered and fully utilized.
- Should consider a tunnel from the airport to downtown to avoid crossing of Escarpment.
- Transportation infrastructure or plans should be in place before any development is allowed.
- alleviate Aldershot/Hamilton congestion by placing GO station at York Road near CNR overpass with parking on east side of tracks.
- The rail network is an important transportation component. The City should protect rail corridors even if they are currently underutilized. This includes recognition of separation distances between residential uses and rail. Careful consideration should be given before allowing sensitive uses near rail corridors. Generally, there is a need for better integration of goods movement into planning. Investment, incentives and intermunicipal coordination is needed for efficient rail movement of goods. The railways should be consulted in the process.
- Centennial Parkway should be improved so that it functions as the through road it was intended to be. This would reduce or eliminate the need for another escarpment crossing.
- new parking spaces should be provided downtown including metered outlets for electric cars to encourage non-polluting vehicles.

Water/wastewater

- Need to separate the CSOs; complete the CSO tank system.
- Don't develop unless system can handle wastewater.
- Use harbour as a heating/cooling source.
- Spend money on conservation education.
- All new development on compost or low flush toilets.
- Pleasantview is too expensive to provide sewer service.
- need to recognize that improvements to existing services are necessary regardless of the growth option and the costs for this should be taken into account.
- The servicing in Pleasantview does not meet provincial policies and upgrades should be considered. This would be made more cost effective with further development of the area.
- Consideration should be given to a Zenon type system in the employment areas to reduce water consumption.
- When considering new pipes to Waterdown, should work with Burlington as they are closer than Hamilton.

7.0 Other Comments

A few comments were received that did not fit within the headings noted above. These comments are as follows:

- The mapping shown at the meeting suggested the Red Hill Creek extension had been changed to go down Pritchard Road (a relatively undeveloped business street) instead of Trinity Church Rd. (a residential street). It is hoped that this is true as it is critical that the Red Hill Creek extension does not go down Trinity Church Road as it will create another overly used residential street (like Centennial Parkway). A Red Hill Creek Expressway extension down Pritchard would also help the Glanbrook business park by providing better highway access as well as the businesses on Stone Church Road.
- There was a significant amount of information presented. Although the CD was helpful, there was generally too much information to absorb. A presentation would have helped.
- The Hamilton airport needs a highspeed taxiway to service runway 12/30. This is seen as a priority by airlines and air traffic controllers.
- People should be asked which option they prefer. The suggestion of a vote on the options based on all the technical data including cost and impacts was made.

APPENDIX A
Notification Material

Hamilton

at your Service

Hamilton

需要中文咨询，请打如下电话 • Pour des informations en français, s'il vous plaît compose le 905.546.2489 • Per informazioni in Italiano per favore chiama 905.546.2489 • Para Informações em português, por favor ligue 905.546.2489 • Po Informacje z jezyku polskim, prosze dzwonic 905.546.2489

(905) 546-CITY (2489)
519 area residents call (519) 647-2577
Campbellville residents call (905) 634-2971

NOTICES

DRAFT

2006 Water & Wastewater User Fees and Charges

In accordance with subsection 12(6) of Ontario Regulation 244/02 made under the Municipal Act, 2001, the Council of the City of Hamilton hereby gives notice that it intends to consider a water rate increase of 7.5% for 2006. This increase was approved in principle by City Council during the 2005 Rate Budget deliberations, and is consistent with the water and wastewater pricing strategy. The 2006 water and wastewater budget will introduce some new user fees and, with few exceptions, inflationary increases will be considered with respect to existing water and wastewater user fees.

Any person wishing to make a representation with respect to the water and wastewater fees and charges for 2006, may do so at a Public Meeting of the Committee of the Whole scheduled for Friday December 2, 2005 at 9:30 in the Council Chambers at City Hall, 71 Main Street West, 2nd Floor, Hamilton. The December 2, 2005 Committee of the Whole will be devoted to 2006 Water and Wastewater User Fees and Charges. Staff will make presentations to the public and committee. In addition, the public is invited to make presentations to the committee.

The recommendations from the committee will proceed to the City Council for approval and a by-law will ultimately be passed which will come into effect as of January 1, 2006.

Any person wishing to be a speaker on this matter should contact the Clerk's Department by November 28th 2005 to register their name. Please contact:

Mary Gallagher, Co-ordinator,
Council, Committee of the Whole and Budgets
905 546-2424 ext. 4304
or by e-mail mgallagh@hamilton.ca

Each speaker will have a maximum of 5 minutes to make their presentation.

The Fees and Charges information is contained in the City's 2006 Water and Wastewater Budget and will be made available on or after November 25, 2005 at no cost to any member of the public upon request by contacting 905 546- CITY (2489), by accessing the City's website at www.myhamilton.ca or by viewing this information at City Hall, City Clerk's Division, 2nd Floor.

TENDERS

Visit the Purchasing Website At... http://www.myhamilton.ca/

Contract No. C11-174-05

TENDERS WANTED

For Provision of Printing of the City of Hamilton's Green Cart Communications Package

Sealed Tenders plus **three** copies, addressed to the Manager of Purchasing, Standard Life Building, 120 King Street West, 9th Floor, Suite 900, Hamilton, ON, L8P 4V2 will be received at **only** the Purchasing Section up to and including **FOUR o'clock p.m., Local Time, Friday, December 2, 2005** for the above.

Scope:

The Waste Management Division of The City of Hamilton seeks to engage printing services for the completion of their Green Cart Communications Package. The package shall include one each of the following items: information booklet; weather resistant curb side cart sticker; and a moisture resistant kitchen container lid sticker. Approximately 165,000 quantities of each item are required. Printing, packaging and delivery of all materials are required for the end of February 2006.

Tender documents must be obtained in the Purchasing Section, 9th Floor, 120 King Street West, Hamilton, Ontario between 8:30 a.m. and 4:30 p.m. upon payment of a **$45** non-refundable, tax included, fee: cash, money order, bank draft or company cheque made payable to the City of Hamilton. Personal cheques must be certified.

If unable to attend in person to obtain documents, you must arrange to forward your completed return courier waybill, including your account number with the courier, and envelope; and have the courier pick up on your behalf. **The Purchasing Section must be contacted at telephone number 905 546-2773 and informed of this so that staff may prepare the package for pickup by courier.** Documents will not be sent out by collect shipment by courier, and the City will not be responsible for any lost deposit.

Manager of Purchasing
City of Hamilton

Contract No. C10-37-05

TENDERS WANTED

Supply of Cribs and Crib Mattresses As and When Required for the Special Supports Program

Sealed Tenders plus **two** copies addressed to the Manager of Purchasing, Standard Life Building, 120 King Street West, 9th Floor, Suite 900, Hamilton, ON, L8P 4V2 will be received at **only** the Purchasing Section up to and including **FOUR o'clock p.m., Local Time, Friday, December 2, 2005** for the above.

The City of Hamilton invites the submission of Tenders from qualified Bidders to Supply Cribs and Crib Mattresses As and When Required for our Special Supports Program.

Scope:

The purpose of this contract is to establish a source of supply at firm prices for the supply of new cribs and crib mattresses, in the homes of Ontario Works and Ontario Disability Support Program clients, within the geographical boundaries of the City of Hamilton (Ancaster, Dundas, Flambourough, Glanbrook, Stoney Creek, Hamilton East, West and Mountain)

Tender documents must be obtained in the Purchasing Section, 9th Floor, 120 King Street West, Hamilton, ON between 8:30 a.m. and 4:30 p.m. upon payment of a **$45** non-refundable, tax included, fee: cash, money order, bank draft or company cheque made payable to the City of Hamilton. Personal cheques must be certified.

If unable to attend in person to obtain documents, you may arrange to forward the fee, together with your completed return courier waybill, including your account number with the courier, and envelope; and have the courier pick up on your behalf. **The Purchasing Section must be contacted at telephone number 905 546-2773 and informed of this so that staff may prepare the package for pickup by courier.** Documents will not be sent out by collect shipment by courier, and the City will not be responsible for any lost deposit.

Manager of Purchasing
City of Hamilton

TENDERS

Visit the Purchasing Website At... http://www.myhamilton.ca/

Contract No. C11-171-05

TENDERS WANTED

Concrete Asphalt Crushing to Granular "A" & "B"

Sealed Tenders addressed to the Manager of Purchasing, Standard Life Building, 120 King Street West, 9th Floor, Suite 900, Hamilton, ON, L8P 4V2 will be received at **only** the Purchasing Section up to and including **FOUR o'clock p.m. Local Time Monday, December 5, 2005** for the above.

Scope of Work:

The Successful Bidder is responsible to provide all labour and equipment to crush the recycled products, including the blending together of the two products into 19mm Granular "A" and 50mm Granular "B". Work is to be carried out at the B.A. Court Yard (308 Rymal Road East) in the City of Hamilton.

Specifications:

Crushed material must meet the requirements for O.P.S.S. Form 1010 for Granular "A" and "B" material.

Documents must be obtained in the Purchasing Section, 9th Floor, 120 King Street West, Hamilton, ON. between 8:30 a.m. and 4:30 p.m. upon payment of a **$45** non-refundable, tax included, fee: cash, money order, bank draft, or company cheque made payable to the City of Hamilton. Personal cheques must be certified.

If unable to attend in person to obtain documents, you may arrange to forward the fee together with your completed return courier waybill, including your account number with the courier, and envelope; and have the courier pick up on your behalf. **The Purchasing Section must be contacted at telephone number 905 546-2773 and informed of this so that staff may prepare the package for pickup by courier.** Documents will not be sent out by collect shipment by courier, and the City will not be responsible for any lost deposit.

Manager of Purchasing
City of Hamilton

Contract. No. C4-02-05

TENDERS WANTED

Security Services for Various Branch Libraries and Responding to Intrusion Alarms

Sealed Tenders addressed to the Manager of Purchasing, Standard Life Building, 120 King Street West, 9th Floor, Suite 900, Hamilton, ON, L8P 4V2 will be received at **only** the Purchasing Section up to and including **FOUR o'clock p.m. Local Time Monday, December 5, 2005** for the above.

Scope of Service

To provide Central Library/Hamilton Farmers' Market (55 York Boulevard) Security services 24 hours a day, seven (7) days a week coverage. Provide Terryberry Branch Library (100 Mohawk Rd. W., Hamilton, Ont.) approximately twenty-one hours per week September to April and approximately sixteen hours per week May to August.

The Successful Bidder shall be responsible to see that qualified guards acceptable to the Library are on duty during the agreed upon times outlined and other guards and time frames that may be requested. Some of the duties of guards will be, however are not limited to, the following: fire prevention, theft prevention, crowd control, patrol property, lock up, emergency systems, reports, cash escorts, other duties as required.

Documents must be obtained in the Purchasing Section, 9th Floor, 120 King Street West, Hamilton, ON. between 8:30 a.m. and 4:30 p.m. upon payment of a **$45** non-refundable, tax included, fee: cash, money order, bank draft, or company cheque made payable to the City of Hamilton. Personal cheque must be certified.

If unable to attend in person to obtain documents, you must arrange to forward the fee together with your completed return courier waybill, including your account number with the courier, and envelope; and have the courier pick up on your behalf. **The Purchasing Section must be contacted at telephone number 905 546-2773 and informed of this so that staff may prepare the package for pickup by courier.** Documents will not be sent out by collect shipment by courier, and the City will not be responsible for any lost deposit.

Manager of Purchasing
City of Hamilton

Contract No. C11-158-05

TENDERS WANTED

Testing, Repair and Replacement as Required of Sprinkler and Standpipe Systems at the Hamilton Convention Centre Parking Garage

Sealed Tenders addressed to the Manager of Purchasing, 9th Floor, 120 King Street West, Hamilton, Ontario, L8P 4V2 will be received at **only** the Purchasing Division up to and including **FOUR o'clock p.m. Local Time, Monday, December 5, 2005** for the above.

Scope of Work

This contract is for the provision of all products, labour, equipment, materials and temporary facilities as required to perform testing, repair and replacement as needed of the sprinkler and standpipe systems at the Hamilton Convention Centre Parking Garage.

Mandatory Site Meeting

Time: 10:00 a.m.
Date: Wednesday, November 23, 2005
Location: Municipal Parking Office (front entrance), 80 Main Street West, Hamilton

Failure to attend this site meeting will result in rejection of your bid.

Documents may be obtained in the Purchasing Division, 9th Floor, 120 King Street West, Hamilton, Ontario between 9:00 a.m. and 4:30 p.m. upon payment of a **$45** non-refundable, tax included, fee: cash, money order, bank draft or company cheque made payable to the City of Hamilton. Personal cheques must be certified.

If unable to attend in person to pick up documents, you may arrange to forward the fee, together with your completed return courier waybill, including your account number with the courier, and envelope; and have the courier pick up on your behalf. **The Purchasing Division must be contacted at telephone number 905 546-2773 and informed of this so that staff may prepare the package for pickup by courier.** Documents will not be sent out by collect shipment by courier, and the City will not be responsible for any lost deposit.

Manager of Purchasing
City of Hamilton

NOTICES

BUILDING A STRONG FOUNDATION HAMILTON

HOW SHOULD HAMILTON GROW?

Notice of Public Information Sessions on the City of Hamilton's Growth Related Integrated Development Strategy and Infrastructure Master Plans

The City's Growth Related Integrated Development Strategy (GRIDS) is a made-in-Hamilton balanced growth strategy for the next 25-30 years. Its purpose is to identify the most ideal places for growth, as well as the most suitable type of growth based on environmental priorities, social issues, economic opportunities and population studies.

The options include a mix of different types and locations for growth including adding more people to the existing urban areas by planning for more townhouses and apartments in established areas, completion of the new subdivisions that are already planned for in the currently vacant lands within the City of Hamilton urban boundary, and expanding our City boundary to accommodate new residential areas.

Public Information Centres (PICs) are being held to give the general public the opportunity to learn more and to provide input on how the City of Hamilton should grow. These PICs are the third in a series of public events for the City's Growth Related Integrated Development Strategy (GRIDS). Following the information sessions, the City will select the preferred growth option based on the advantages and disadvantages of the options and input from City of Hamilton citizens.

Monday,November 28
Salvation Army
300 Winterberry Drive, Stoney Creek

Wednesday,November 30
St. Mary's Catholic High School
200 Whitney Avenue, Hamilton

Monday,December 5
Dundas Town Hall
60 Main Street, Dundas

Come anytime between **6 p.m. and 9 p.m.**
to view display material and ask questions of staff

As part of the integrated planning process, three infrastructure master plans have been initiated that will develop servicing strategies to accommodate growth. These include a Stormwater Master Plan, Water and Wastewater Master Plan and a Transportation Master Plan. Each of these plans will provide balanced strategies for servicing and operation.

The Infrastructure Master Plans will each follow Section A.2.7 Master Plans of the Municipal Engineers Association Municipal Class Environmental Assessment (June 2000) and will fulfill Phase 1 and 2 of the Class Environmental Assessment (EA) Planning and Design Process. Upon completion of the study, a Master Plan including Class EA documentation, for each of the three Master Plans, will be available for public review and comment. Another advertisement will be published at that time, indicating where and how the public can have access to the reports.

For more information, visit www.myhamilton.ca/myhamilton/cityand government/projectsinitiatives/grids or our Master Plan eConsultation web site at www.gridsmasterplans.com

Provinical projections for Hamilton in 2031:

- Hamilton's population will reach 700,000
- There will be 100,000 more households
- Hamilton will employ 100,000 more people

High Priorities for Hamilton:

Hamilton City Council has identified key priorities for all growth options:

- Revitalization of downtown
- Importance of employment
- Accommodation of residential growth

Comments, questions or to be added to the project mailing list

Call us at: 905 546-2424, ex. 6269
Email us at: grids@hamilton.ca
Fax or mail:

Steve Robichaud, GRIDS Project Manager
Office of the City Manager, 71 Main Street W., Hamilton, ON L8P 4Y5
Fax: 905 546-2573

OR

Christine Lee-Morrison,Integrated Master Plan Coordinator
Public Works Department, 320-77 James Street, Hamilton, ON L8R 2K3
Fax: 905 546-4435

HSR DETOURS - SANTA CLAUS PARADE

Saturday November 19th, 2005 - 1:30 PM to 4:00 PM

DOWNTOWN TERMINAL POINTS BY ROUTE
(Major Transfer Points while Detours are in Progress)

Hunter Street between John and Hughson
Routes 22, 23, 24, 27

Hunter Street between Hughson and James
Routes 5, 6, 21, 25, 26, 33, 35

Hunter Street, just west of James
Routes 7, 8, 34

Catharine Street, just south of King - Route 1

Mary Street, between King William and King
Route 3

Hughson St., between King William & Rebecca
Routes 2, 4

LEGEND

- Regular HSR Transit route on detour due to Santa Claus Parade
- Santa Claus Parade Route
- ✻ Hunter Street, between James and John used by the "Upper" routes 21, 22, 23, 24, 25, 26, 27, 33 and 35

Route 5 - Delaware (WB) continues on Hunter to Locke

Route 5 - Delaware (EB) continues on Augusta to Walnut

BUILDING A STRONG FOUNDATION HAMILTON

BASF BULLETIN – Nov. 2005

GRIDS Presents Five Growth Options for Hamilton

Five different growth options have been prepared to show different ways the City could grow to accommodate the anticipated 190,000 new residents and 100,000 new jobs expected in Hamilton between now and 2031.

The options include a mix of different housing types and locations for growth including adding more people to the existing urban areas by building more townhouses and apartments, building the new subdivisions that are already planned for in the currently vacant lands within the City of Hamilton urban boundary, and expanding our City urban boundary to accommodate new residential areas.

GRIDS Public Information Centres

Please come out to one of the GRIDS Public Information Centres and tell us what you think about the Growth Options, Infrastructure Master Plans and the process to select which growth option Hamilton should move forward with.

Monday **November 28**	**Come anytime between 6 p.m. and 9 pm** to view display material and ask questions of staff	Salvation Army 300 Winterberry Drive, Stoney Creek
Wednesday **November 30**		St. Mary's Catholic High School 200 Whitney Avenue, Hamilton
Monday **December 5**		Dundas Town Hall 60 Main Street, Dundas

About the Five Options

In May of this year, we presented six growth concepts to the community: status quo, no expansion, appropriately distributed development, downtown focus, nodes and corridors and build to the limit and stop. Based on input received by the community as well as work by staff, these concepts have been revised into a short list of five mapped growth options as follows:

- Status quo; Build to the Limit and Stop – No longer being considered - Based on direction from the Province this concept is not feasible. Hamilton must accept its share of future growth.
- No Expansion– This growth option accommodates all growth within the existing urban boundary through intensification in the already built up areas as well as a higher than usual density within the vacant lands within the existing urban boundary. (***Growth Option 1***)
- Appropriately Distributed Development – This growth option accommodates about 70% of the growth within the existing urban boundary and adds about 3230 acres (1310 ha) of new land to the urban area. Growth both inside and outside the current urban boundary is distributed around the municipality. Three different distributions of this new land are being considered. (***Growth Options 2, 3 and 4***)
- Downtown Focus and Nodes and Corridors – These concepts were combined. This growth option accommodates about 78% growth within the existing City urban boundary and adds about 2570 acres (1040 ha) of land to the urban area. For this option, growth is focused around key mixed use areas and corridors. (***Growth Option 5***)

Maps of the 5 options will be available for your review and comment at the Public Information Centres.

What's Similar?

All options:

- Exclude key natural features (e.g. ESAs, greenbelt)
- Maintain the City's committed employment areas including the new Highway 6 business Park
- Assume minimal growth in the rural areas
- Develop complete communities by accommodating land for parks/open space, recreational spaces, commercial/retail needs
- Assume the development of mixed use communities
- Assume that areas within the City will increase in density over time
- Accept provincial growth forecasts for Hamilton

What's Different?

	No Expansion	**Distributed Development**			**Nodes and Corridors**
	Option 1	**Option 2**	**Option 3**	**Option 4**	**Option 5**
Population	150,000	190,000			190,000
Expansion of Urban Boundary	none	3230 acres; 1310 ha			2580 acres; 1040 ha
Amount of intensification	62,000 units	28,000 units			42,870 units
Number of Jobs	96,000	104,000			104,000

Hamilton

Creating Neighborhoods

Although we all care about our City, when it comes right down to it, what is most important to us is the neighborhood in which we live. When planning for new growth, the City is using a neighborhood framework that is based on developing communities that provide for a variety of housing types and include a mix of commercial, retail and residential uses. The benefits of mixed-use communities include the ability for people to walk to do errands or go to work, local parks/greenspace for recreation, and the ability for people to downsize their house while staying in the same neighborhood.

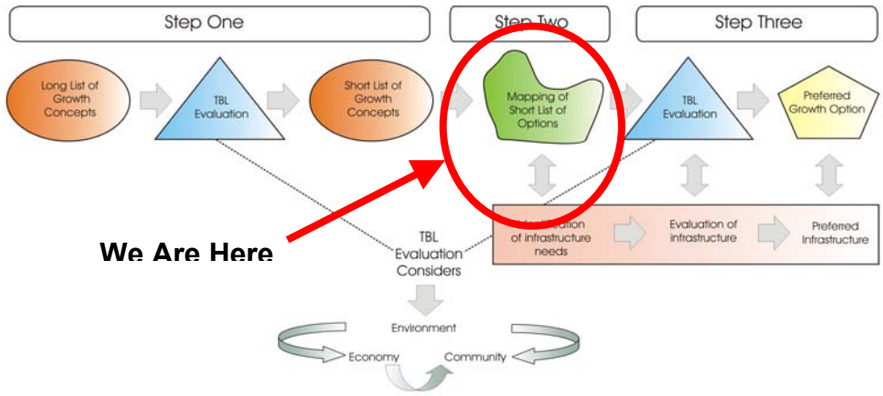
Other important aspects about neighborhoods that people have raised include aesthetics and character, need for access to affordable housing and services. These components are outside of the GRIDS process. However, the City agrees that they are important and will address them in future planning steps and/or through City policy.

Making Growth Management Decisions

The City of Hamilton "Growth Related Integrated Development Strategy" (GRIDS) is the planning process that is being used to determine where and how Hamilton should grow. GRIDS will integrate land use planning and infrastructure planning and consider environmental, community and economic issues when making decisions.

Data is being collected on the five growth options and will be used to evaluate the options and select a preferred option for Hamilton. The triple-bottom line evaluation will consider potential impacts (positive or negative) on the environment, economy and community. Throughout this planning process we will be looking for your input including your thoughts on the draft evaluation criteria which will be available for your review and comment at the Public Information Centres.

The 3 Step GRIDS Process



The Importance of Infrastructure

One of the fundamentals of integrated planning is ensuring that decisions on where to grow in the City of Hamilton are made with an understanding of the resulting need for transportation, water, wastewater and stormwater infrastructure needs and costs.

For each of the growth options, the infrastructure challenges and opportunities will be presented for public review and comment. Based on the work completed to date it has been determined that:

- If we enhance our transit system and work hard to attract employment to the Mountain, we can avoid a new Niagara Escarpment Road Crossing.
- Regardless of which growth option is selected, the City will have to upgrade its water treatment plant and wastewater treatment plants.
- All options will need a new water trunk main and gravity sewer main across the Escarpment.
- From a stormwater perspective, the options that include more growth within the already built up areas have less negative effects on natural stormwater patterns however, these options tend to cost more as the storm sewer may require upgrading and stormwater retrofitting of existing neighborhoods can be challenging due to space limitations.

Next Steps

After the Public Information Centres, the GRIDS team will identify the advantages and disadvantages of each of the growth options. How each growth option affects Community well-being, Economic well-being and Ecological well-being will be considered. Public comments received at the Information Centres and at other points in the project will be incorporated where appropriate.

A staff recommendation to pursue one of the five growth options is expected in February of 2006. Once a preferred growth option is selected, the Infrastructure Master Plan teams will assess specific infrastructure alternatives. This work is being carried out as a Master Plan under the Municipal Class Environmental Assessment Process. Additional public meetings will be held specific to transportation, water and wastewater and stormwater.

For more information visit:
www.myhamilton.ca/myhamilton/cityandgovernment/projectsinitiatives/grids

BUILDING A STRONG FOUNDATION HAMILTON

If you wish to be on the mailing list for this project please contact us to provide your name, address, postal code and email (if available)

Comments, Questions?
Call us at: 905-546-2424, ext. 7828
Email us at: grids@hamilton.ca
Fax or mail:

Steve Robichaud
GRIDS Project Manager
Office of the City Manager
71 Main Street W.,
City of Hamilton,
L8P 4Y5
Fax: 905-546-2573

OR

Christine Lee-Morrison
Integrated Master Plan Coordinator
Public Works Department
320-77 James Street,
City of Hamilton,
L8R 2K3
Fax: 905-546-4435

Hamilton

Dear Community Organization Representative:

The purpose of this letter is to invite you, or someone else from your organization, to attend a workshop for the City's Growth Related Integrated Development Strategy (GRIDS) on **December 1, 2005 from 9:30 am to 1:00 pm at the Hamilton Convention Centre (Albion Room).**

The City has now identified and mapped options for employment and population growth. The options include a mix of different housing types and locations for population growth including adding more people to the existing urban areas by building more townhouses and apartments, by building the new subdivisions that are already planned for in the currently vacant lands within the City of Hamilton boundary, and expanding our City boundary to accommodate new residential areas. All options are designed to accommodate anticipated growth in population and employment over the next 25 to 30 years.

At the December 1st workshop we will discuss the specific growth options, the infrastructure master plans, as well as the issues and challenges associated with residential intensification, and employment in the City.

Public Information Centres (PICs) are also being held to give the general public the opportunity to learn more and provide to input on how the City of Hamilton should grow. These PICs are the third in a series of public events for the City's Growth Related Integrated Development Strategy (GRIDS). Enclosed you will find an agenda for the workshop as well as a Building a Strong Foundation (BASF) Bulletin which provides an overview of upcoming events.

Following the workshop and public information centres, the City will select the preferred growth option based on the advantages and disadvantages of the options and input from City of Hamilton citizens.

We hope that your organization would be interested in participating in the afternoon workshop discussion. ***We would appreciate receiving a call or email to confirm your attendance by November 25th.***

GRIDS Phone Line – (905) 546-2424 ext. 6269
GRIDS email – grids@hamilton.ca

We look forward to working with you to plan Hamilton's future.

Sincerely,
S. E. Robichaud, M.C.I.P., R.P.P.
Manager, Growth Related Integrated Development Strategy, City Manager's Office

December 1, 2005
Workshop Invitation List

Community

- Flamborough Ward 7 Ratepayers
- Ministry of Community & Social Services Hamilton
- The Hamilton Spectator
- Hamilton Urban Core Community Health Centre
- Ancaster Community Council
- Mohawk College
- McMaster University
- Strathcona Community Council
- Citizens for Citizens
- CANEW Neighbourhood Association
- Crown Point Community Council (Ward 3)
- Hamilton Ratepayers Association (Flamborough)
- Friends of Battlefield House Museum
- Blakely Neighbourhood Association
- Ministry of Municipal Affairs,
- Arts Hamilton
- Huntington Park Community Council
- Ontario Healthy Communities Coalition
- Ratepayer's Association Creighton Neighbourhood
- Westdale Village BIA
- Access to Opportunity Project
- Hamilton District Health Council
- Gilkson Sports Park
- Buchanan Park Sports Council
- Durand Neighbourhood Association
- Ainslie Wood/Westdale Community Assoc. of Resident Homeowners Inc.
- Red Hill Valley Neighbourhood Association
- Highride South Community Association
- Gourley Community Association
- Labourers International Union of North America (Local 837)
- Pleasant View Neibourhood Ratepayers Association
- Hamilton and District Labour Council
- St. Clair Community Council
- Alternatives for Youth
- Eleanor Community Council
- Dundas Community Services
- Rosedale Community Council
- Ancaster Heights Community Association
- Berrisfield Community Council
- Transport 2000 Ontario

- Stinson Neighbourhood Association
- Hamilton Beach Preservation Committee (Ward 5)
- North Central Community Council
- Dundas Heritage Association
- Carlisle Ratepayers Association
- Community Information Service Hamilton Wentworth
- Delta West Community Association
- Kirkendall Neighbourhood Association
- Hamilton Association for Community Living
- Corktown Community Association
- Highride South Community Association
- Quinndale Community Council
- Hamilton Regional Indian Centre
- ACTION 2020
- Strathcona Neighbourhood Association
- Landsdale Neighbourhood Watch

Economy

- Stelco Inc.
- Ottawa Street B.I.A.
- James Street Merchants/ International Village BIA
- Stoney Creek Chambre of Commerce
- Barton Village B.I.A.
- Dofasco
- Hamilton Chamber of Commerce
- Downtown Hamilton BIA
- Hamilton-Wentworth Home Builders' Association
- Flamborough Chamber of Commerce
- King Street West B.I.A.
- "City Lites" Business Association
- Hamilton Associaton of Business Improvement Areas
- Main Street West BIA
- Waterdown BIA
- Hamilton Construction Association
- Kenilworth Avenue Merchants Association
- Stoney Creek BIA
- Hess Street Merchants Association
- Locke Street BIA
- Dundas Downtown BIA
- Concession Street B.I.A.

Environment

- Halton Region Conservation Authority
- Bay Area Restoration Council
- Stoney Creek Horticultural Society

- Canadian Organic Growers
- Royal Botanical Gardens
- Community Advisory Panel - Hamilton Industrial Environmental Association
- Hamilton Air Monitoring Network
- Agricultural Societies of Rockton, Ancaster, Binbrook
- CATCH
- Ancaster Township Historical Society
- Alternative Commuting and Transportation
- Architectural Conservancy of Ontario, Hamilton
- LACAC
- Hamilton Community Energy
- Environment Canada
- Green Venture
- Ministry of Natural Resources
- Ancaster Agricultural Society
- Green Hamilton Committee, HIEA
- Environment Hamilton
- GASP
- Hamilton Harbour Remedial Action Plan,
- ESAIEG
- Niagara Escarpment Commission
- Minister of Agriculture, Food & Rural Affairs
- Hamilton Agricultural and Rural Affairs
- Hamilton-Wentworth Federation Of Agriculture
- Friends of Red Hill
- Dundas Heritage Association
- Glanbrook Heritage Society
- Bruce Trail Association
- Niagara Peninsula Conservation Authority
- Hamilton Conservation Authority
- Hamilton-Wentworth Soil & Crop Improvement Association
- TD Canada Trust: Friends of the Environment Federation
- Grand River Conservation Authority
- Hamilton Waterfront Trust
- Earth Day Hamilton
- Ministry of the Environment
- Sustainable Scale Management
- Binbrook Agricultural Society
- Ancaster Horticultural Society
- Ontario Federation of Agriculture
- Conservers Society/Hamilton Naturalist Club

APPENDIX B
Workshop Report

GRIDS Workshop
Growth Options
December 1, 2005
Hamilton Convention Centre

On December 1, 2005 a workshop was held at the Hamilton Convention Centre to discuss the City of Hamilton GRIDS project with invited stakeholders. This event was part of a series of events in the City to obtain input on the five growth options being considered to accommodate growth to 2031.

Workshop invitations were mailed to approximately 130 stakeholder groups. A total of 26 people attended the workshop representing the following groups/affiliations:

JJ Barnicke Ltd.
Hamilton International Airport
Stoney Creek Chamber of Commerce
Ministry of the Environment
City of Hamilton Staff
City of Hamilton Council – Ward 1 and 2
Hamilton Walks
McMaster ACT Office
Green Venture
Conservation Halton
Niagara Escarpment Commission
Hamilton Chamber of Commerce
Bay Area Restoration Council
HR Matters
Hamilton Agricultural Advisory Committee

At the workshop presentations were made on 1) GRIDS and Growth Inside the Urban Boundary (i.e. intensification) and 2) the GRIDS Growth Options. Following each of the presentations, participants asked questions, discussed the topic among themselves at their table, and presented an overview of the table discussion to all workshop participants.

These workshop notes reflect the discussions that took place. They are organized under two major categories: Residential Intensification and Growth Options. Within each there is information on the questions asked and answers provided; the discussion from each of the three workshop tables; and documentation of what each of the three groups reported back to all workshop participants.

RESIDENTIAL INTENSIFICATION

QUESTIONS AND ANSWERS

Question: Concern that we are following Province's direction and not creating own directions, e.g. maximum intensification and reduce greenfields. Concern with where net growth forecasts came from (Province) why accept these forecasts?

Answer: Through the document "Places to Grow" the province has clearly articulated that they (i.e. MPIR) will determine the amount of growth to be assumed for each area within the Golden Horseshoe. It is not up to the discretion of the City of Hamilton or any other municipality. Hamilton however, may decide where growth will be located.

Question: Were forecasts of Hamilton and Province in alignment?
Answer: The forecasting methodology, process, results used by the Province are in alignment with what the City of Hamilton has considered. Staff from Hamilton as well as other municipalities participated in the forecasting process.

Question: Why is a set minimum density not a driver for planning new subdivision neighborhoods?
Answer: Achieving a minimum density is an important driver. Hamilton is already achieving Provincial targets related to density (50 people/jobs/ha). The challenge is that developments today require more non-housing related land than they did in the past for schools, parks, etc.. So while the housing is built at a higher density, the amount of land required is still significant to account for these other uses.

Question: What densities are currently being achieved in Hamilton?
Answer: Density varies by area of City. For the Setting Sail Planning Area and Downtown Hamilton, a net increase of 10,000 units is anticipated. The densities anticipated for the Setting Sail Planning Area are:

Low - 25-60 units per gross ha;
Med - I 60-150 units per gross ha (allows for townhouses); II 150-300 units per gross ha (allows for townhouses and apartments);
High - Density/existing on date of plan adoption

Question: What densities are needed to support transit?
Answer: 10 people/ha for regular transit (bus/15 min.)
37 people/ha for higher order transit (5-10 min.)
17 people/ha for moderate order transit (1/2 hour)
But density is not the only variable. Integrated the land use and transit system are also key so that you match the needs of people with the transit service provided to best encourage transit use.

Question: Is target density of 50 people/ha evenly distributed?
Answer: No, it will vary over the total Greenfield areas.

Question: Concern with social/economic impacts in core intensification area downtown.
Answer: Only portions of Setting Sail and downtown will be intensified, not all the area nor the stable neighbourhood areas will be intensified. Empty nesters and young childless couples are the key market for intensification. However, families may also be attracted to these areas. Through careful design to create complete neighbourhoods these intensification areas can blend in well with the existing uses and appeal to all.

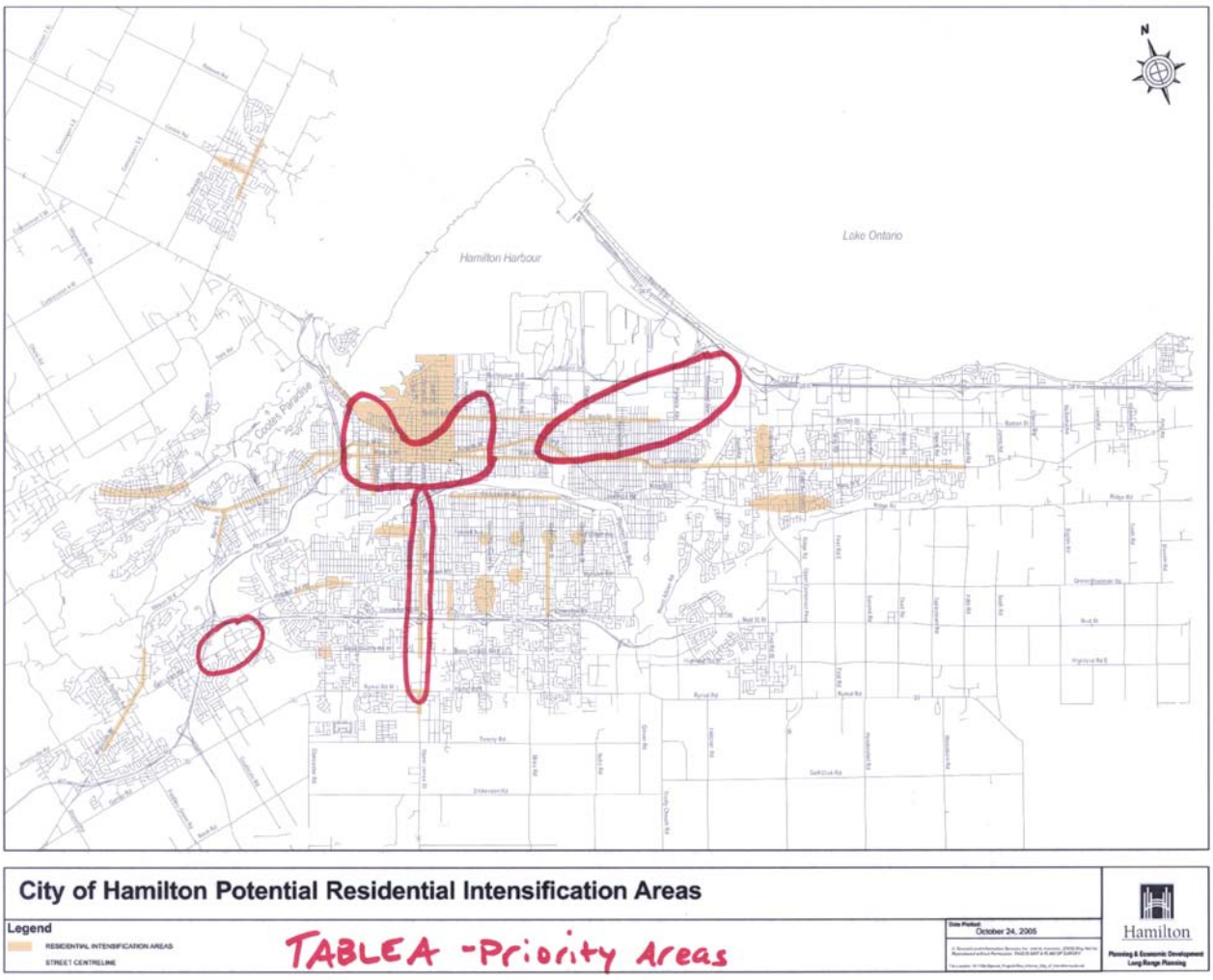
Question: Will there be principles for intensification as there are for Greenfield development (e.g. commitments to transit; only allowing boundaries to expand after 2015 if intensification levels are met)?
Answer: Yes principles will be established through the Official Plan, design guidelines, etc.

GROUP DISCUSSION

TABLE A Discussion

Are there any areas within the city you feel should be made a priority for intensification?
- Areas adjacent to major commercial and employment nodes.
- Upper James corridor.
- Proximity to major Employment nodes (Dofasco/Stelco)

Are there any areas within the city you feel should be avoided when talking about intensification?
- Areas of heavy goods movement may be incompatible with intensification areas.
- Displacement of low-cost housing should be avoided.



BUILDING A STRONG FOUNDATION HAMILTON

GRIDS Workshop
December 1, 2005

Workshop Notes

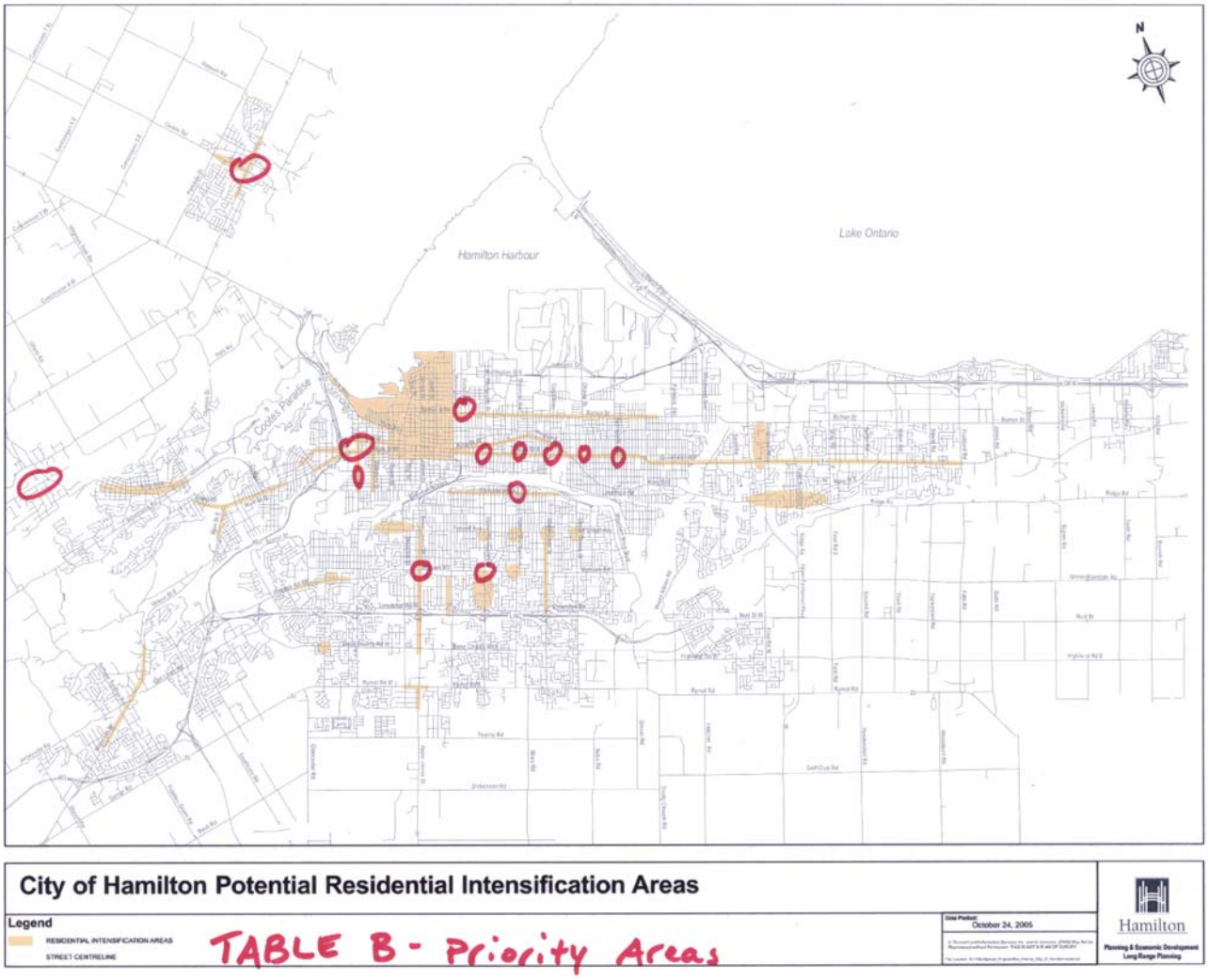
What do you see as the key issues and opportunities associated with intensification? Are there additional tools the City should use to implement residential intensification?

- Build sense of community.
- Need jobs to stimulate demand for housing.
- Mixed use areas.
- Incentive programs required through city that are currently available for the downtown.

TABLE B Discussion

Are there any areas within the city you feel should be made a priority for intensification?

- In existing nodes and along corridors
- In the vicinity of other developments e.g. Hospitals, Universities and colleges.
- 403/Main/Dundurn



What do you see as the key issues and opportunities associated with intensification? Are there additional tools the City should use to implement residential intensification?

- Incorporate trees – shady streetscapes.
- Sense of community.
- Must look at needs/wants of aging boomers / younger singles/smaller households (key candidates for intensification) to ensure they are met – otherwise they won't move into denser neighbourhoods.
- Must be transit efficiently/friendly.
- Quality of life, therefore balance.
- Pedestrian safety.

TABLE C Discussion

Are there any areas within the city you feel should be made a priority for intensification?

- Bayfront area, Barton Street, Queenston Road corridor.
- East of Centennial Parkway above escarpment – upper Stoney Creek.
- Downtown/waterfront.
- Waterfront/Cootes Paradise/Downtown
- Around university / colleges.
- Develop around Employment nodes.

Are there any areas within the city you feel should be avoided when talking about intensification?

- Good agricultural land – This does not include poor land towards Taplytown.

What do you see as the key issues and opportunities associated with intensification? Are there additional tools the City should use to implement residential intensification?

- Increase height allowances.
- Change zoning to encourage intensification in downtown and waterfront.

GROUP REPORTING

- Want more encouragement for intensification in waterfront area (e.g. through allowing higher buildings, more flexible zoning and regulations, incentives).
- Focus intensification and policy intervention/incentives current large employment areas and institutional areas, commercial nodes. Upper James corridor was specifically mentioned
- Quality of life and nodes of development are important.
- Health of community through design is important e.g. provide trees, services for elderly, build complete communities, etc.
- Many areas can benefit from intensification including some newer areas.

BUILDING A STRONG FOUNDATION HAMILTON

GRIDS Workshop
December 1, 2005

Workshop Notes

GROWTH OPTIONS

QUESTIONS AND ANSWERS

Question: Were certified organic farmers involved in the committee for the LEAR study?
Answer: Certified members of the organic farming association were not specifically on the committee however, it is possible that some members of the committee do organic farming.

Question: Concern that the parcel size for defining prime land did not consider opportunities for small organic farms. Need to recognize that 5. acre farm parcels are viable for farming.
Answer: Analysis did not scope out all small lots but considered a range of criteria. LEAR study is available on CD.

Question: Has there been any discussion about the capacity of "The Linc" to accommodate trucks in the future?
Answer: Red Hill Creek expressway is meant to facilitate truck movements which will feed onto "The Linc". It will become significantly more congested and thus options for solutions are needed including expanded transit and new roads/expansions to roads.

Question: Where will the people in the new areas work?
Answer: If we continue the existing trend then many people will commute out of Hamilton to work. Trend is towards more than 50% out-commuting within the 30-year planning time horizon. Thus, we need to get the "job machine" going to build jobs for people inside the Hamilton urban boundary to meet the 1 job per 2 people target. Phasing will be key to appropriately time the jobs/residential mix and to encourage employment lands coming on stream first. Also labour force trends and demographics will also influence phasing (e.g. retirement of people at Stelco/Dofasco).

Question: How will Mid-Pen affect the GRIDS outcome?
Answer: No clarity from province on the location or timing of the Mid-Pen. It is still identified as an economic corridor in most the most recent "Places to Grow" plan.

Question: Will GRIDS also facilitate people leaving Hamilton by transit to go to work?
Answer: The Transportation Master Plan will look at helping to get people to regional transit hubs. The 'nodes and corridors option' and the 'no expansion option' are best to facilitate this. The other options are all similar from a transit perspective.

Question: Why look at distributed options at all?
Answer: Needed to fully explore the differences between the options to respond to different constituency support for the distributed options. Even distributed options reflect a continuation of existing nodal form of development in Hamilton so it is a matter of degree of nodal/corridor development for all options.

Question: What intervention is being considered to implement these options?

Answer: The City recognizes that different options may require different levels of intervention. For all options, the City plans to use tools such as design guidelines, zoning, secondary plans, economic incentives, timing and phasing new growth areas over time, etc.

GROUP DISCUSSION

TABLE A Discussion

Are there any growth areas we missed? Did we miss any advantages or disadvantages of the five growth options?

- New growth area near airport for Option 4 should be high density so lower wage employees can live close to place of work.
- Option 3 is not good – don't build in Plesantview.
- Don't develop new Greenfield areas until employment lands/jobs are available.
- Nodes and Corridors option is good for commuters.
- Option 1 does not meet demands for future population growth and housing mix; it will displace some low-income housing which is a disadvantage.

Is there anything else you think should be considered when evaluating the growth options? Any proposed consideration that should be removed?

Community well-being

- commuters should live near GO train
- what do baby-boomers want in housing style (eg. single story, no stairs, elevators)
- Greenfield development should offer a new opportunity for better development
- will housing be in proximity to employment areas?
- will housing types reflect demand

Economic Well-Being

- expansion of business land east of Hwy 6 and 20 south of new node at Hwy 56 should be mixed use
- walkability
- goods movement strategy is paramount
- working opportunities within the community/reduction in highway congestion

Ecological Well-Being

- add Hamilton Harbour RAP and Vision 2020 as explicit criteria
- are 'takings' for environmental/open space lands efficient for overall use of land?

BUILDING A STRONG FOUNDATION HAMILTON

GRIDS Workshop
December 1, 2005

Workshop Notes

TABLE B Discussion

Are there growth areas we have missed? Did we miss any advantages or disadvantages of the five growth options?

- It is apparent that the Provincial legislation has very strongly dictated options.
- May as well "tighten" the residential and industrial land expansion along new Hwy 6 south of Garner (make it industrial).
- Integrated walkable communities into chosen option.
- Choose option to minimize expansion of urban area.
- May as well select an option that develops both sides of major corridors BEFORE other areas, i.e. east side of Hwy. 20 BEFORE south of highway corridor.
- Create policy to direct the nature of this development, i.e. Stoney Creek Mountain expansion may be most appropriate for senior housing.

Is there anything else you think should be considered when evaluating the growth options? Any proposed consideration that should be removed?

- Air quality considerations.
- Within 10 years the boomer bulge will be 60 yrs. Boomers want walkable communities (access to key service by foot); safe and pleasant (green) walkways and safe pedestrian crossings
- consider heat effects of cement in the City within High density areas – the poor do not have air conditioning

TABLE C Discussion

Are there growth areas we have missed? Did we miss any advantages or disadvantages of the five growth options?

- Push province to build east of Centennial Parkway – it is poor agricultural land and would be great to put into commercial, industrial or other use.
- Totally support nodule development.
- Option #1 is not realistic.
- Less but larger growth areas will allow more opportunity for more uses and greater intensity which is desirable.
- Develop between airport and city as this land is not useful for other purposes such as agriculture.
- Need to expand employment opportunities above the escarpment to keep people living and working together and reduce pressure on traffic.
- Change paradigm for new Greenfield development – encourage more uses, more social diversity. New Greenfield development should not be for traditional housing as in the past.

Is there anything else you think should be considered when evaluating the growth options? Any proposed consideration that should be removed?

- No specific comments on criteria documented.

GROUP REPORTING

- Ensure there are places to live near employment including airport and focus effort on nodes because of positive benefit.
- Support nodal development
- Options 1 not realistic (one group). Others liked option 1 because it optimizes what we have. Recognize that some compromise will likely be necessary requiring an expansion of some size.
- Less but larger growth areas is better.
- Land between airport and city should not be vacant – put employment here and tighten area to south.
- Need to expand employment opportunities above escarpment.
- Province actually is driving growth options because of greenbelt in particular.
- Consider the form/types of homes that will be the market for each area for each option (e.g. will elderly be more attracted to some areas). For example, the new large growth area is some distance from the GTA work market and thus be mindful of who will move to this area.
- Option 5 is an effort to bridge the two extremes (1 versus 2)
- Choose and option that minimizes land taking.
- Need new paradigm to produce a new form of development in Greenfield areas (higher density) and encourage/drive people to a new ideal (not the suburban home).
- To achieve this new form of development we need to build confidence and examples for people of good quality housing and communities at higher densities (e.g. Toronto and Vancouver have been successful in creating a new form of development).
- Look at balancing development to both sides of roadways and recognize the pressure that will come to bear to expand to outside of roads.
- Criteria should stress walkable communities.
- Criteria should consider air quality considerations in choice and follow-up planning.

OTHER COMMENTS

Fundamental principles should be: Jobs, safety and choice
We are replacing low cost housing with high cost housing – this must be considered. We need to incorporate low cost housing in Greenfield areas.

Growth-Related Integrated Development Strategy

(GRIDS)

Stakeholder Workshop
December 1, 2005

Workbook

BUILDING A STRONG FOUNDATION HAMILTON

Hamilton

BUILDING A STRONG FOUNDATION HAMILTON

Stakeholder Workshop
December 1, 2005
The Hamilton Convention Centre
1 Summers Lane, Hamilton
Albion Room
9:30 am to 1:00 pm

Draft Workshop Agenda

9:30-10:00	Registration and Opportunity to view Displays
10:00-10:10	Introductions
10:10-11:20	Presentation on GRIDS Background and Growth Inside the Urban Boundary • Question & Answer • Small Group Discussion – Residential Intensification
11:20-12:30	Presentation on GRIDS Growth Options • Question& Answer • Small Group Discussion - Growth Options; Evaluation Criteria
12:30-1:00	Plenary

Hamilton

Thank you for taking the time to help shape the future growth of Hamilton.

Please answer the questions in this workbook and leave it with us today or send to:

Please submit your comments by December 21, 2005

Steve Robichaud
GRIDS Project Manager
Office of the City Manager,
71 Main Street W., City of Hamilton, L8P 4Y5
Fax: 905-546-2573

OR

Christine Lee-Morrison
Integrated Master Plan Coordinator
Public Works Department
320-77 James Street, City of Hamilton, L8R 2K3
Fax: 905-546-4435

Or call our BASF phone line at (905-546-2424 ext. 7828)

We want to know what you think.

For more information, visit our web site
www.hamilton.ca/grids

or the Master Plan eConsultation web site
www.gridsmasterplans.com

Making Growth Decisions

- This is the third of a series of meetings that will give the public the opportunity to participate in the development of the *Growth-Related Integrated Development Strategy* (GRIDS) the City's process for making decisions on how Hamilton should grow over the next 25 years .
- GRIDS is the second phase of *Building a Strong Foundation* (BASF), the community based initiative that allows us to move from our vision for a sustainable future *(Vision 2020)* to the development of our Official Plan.

We are working through a 3-Step process to determine the best way to accommodate future population and employment growth:

- Evaluate a long list of growth concepts to identify those concepts appropriate for further consideration
- Mapping of the short list (presented at this PIC series)
- Evaluate short list of growth options and select a preferred growth option

For discussion and comment, the following pages summarize each of the growth options, the things the City proposes to consider when evaluating the options and information on residential intensification.

Space has been provided on the following pages to answer a number of questions. Maps are also provided at the tables. Please use these maps as reference and/or to record your comments. Feel free to add any additional comments at the back of this booklet.

Residential Intensification

One of the key components of all growth options is residential intensification. Intensification of the existing built areas of Hamilton will happen, it is just a question of where and how much.

Question 1: Are there any areas within the city you feel should be made a priority for intensification? (Please Use Map Provided at table)

Question 2: Are there any areas within the city you feel should be avoided when talking about intensification? (Please Use Map Provided at table)

Question 3: What do you see as the key issues and opportunities associated with intensification? Are there additional tools the City should use to implement residential intensification?

Five Growth Options

Five Growth Options have been identified for consideration. Option 1 – No Urban Boundary Expansion; Options 2, 3 and 4 – Distributed Development; and Option 5 – Nodes and Corridors

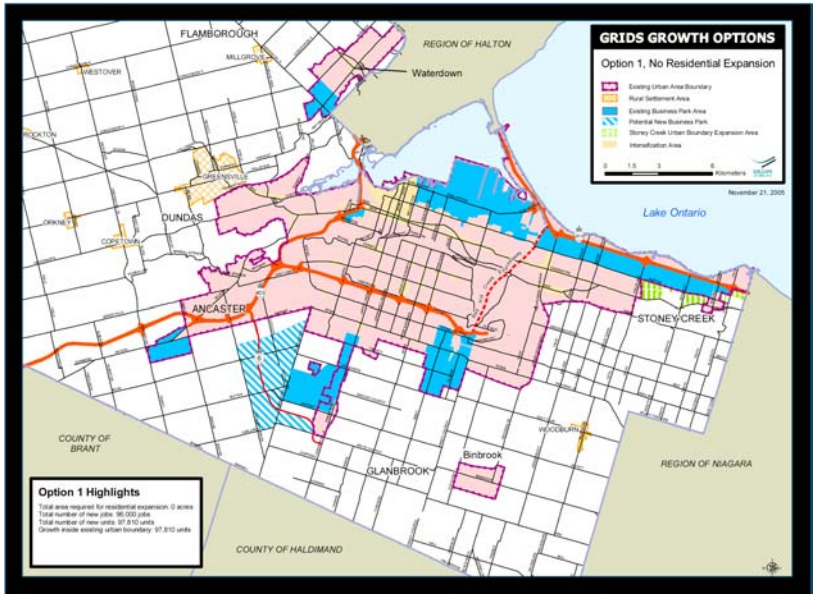
Question 4: Are there growth areas we have missed?

(Please use the map provided at the table to indicate any growth opportunities you feel we have not adequately considered)

Question 5: Did we miss any advantages or disadvantages of the five growth options?

Please indicate on following pages whether there are any advantages or disadvantages of the growth options that you feel we have not identified. (Maps are provided at the table for reference)

OPTION 1 – NO URBAN BOUNDARY EXPANSION



Option 1 – No Expansion			
DRAFT	**Key Advantages**	**Key Disadvantages**	**Key Challenges**
Community	• Facilitates live-work, community cohesion.	• Potential for increased traffic infiltration. • Significant disruption to neighborhoods from construction of infrastructure and housing in urban area. • May not provide mix of housing types needed over 30 year plan.	• High intensification requires high quality building design to attract residents and re-invigorate neighbourhoods. • High intensification raises challenges in provision of range of housing types at the right time.

Option 1 – No Expansion			
DRAFT	**Key Advantages**	**Key Disadvantages**	**Key Challenges**
Ecological	• Reduces trip lengths and auto use. • Minimizes new road corridors. • No impacts to rural/agricultural areas with no expansion of urban boundary.	• Significant potential for stormwater impact on erosion and water quality as a result of intensification (concentrated in Chedoke Creek, Red Hill Creek, and Stoney Creek).	• Location of specific infrastructure services to minimize impacts on environment and specific ecological features. • Implementing stormwater retrofit in dense urban areas.
Economic	• Reduces road expansion costs.	• Increases congestion. • Significant construction in urban area will have higher unit costs. • Less flexibility for servicing alternatives given that growth is within the already confined urban area. • Most expensive option for storm sewer system upgrades. • Lower population and jobs accommodated than other options.	• Higher level of economic risk due to reliance on success of policy intervention to attract intensification development and market
Anything we missed?			•

OPTION 2 – DISTRIBUTED DEVELOPMENT

Option 2 – Distributed Development			
DRAFT	**Key Advantages**	**Key Disadvantages**	**Key Challenges**
Community	• New communities will be designed for walking, cycling and transit. • Option 2 focuses greenfield growth in one area providing opportunity for building a distinctive, vibrant, mixed, high quality community that is pedestrian/transit oriented.	• Draws focus away from downtown which reduces support for downtown transit. • Potential for moderate disruption to neighourhoods from construction of infrastructure and housing.	• Intensification levels are considered reasonable with appropriate policy intervention.
Ecological	• Least expensive option for storm sewer retrofit and upgrades in existing urban areas.	• Dispersed development increases trip lengths. • Development has moderate potential for impact on downstream flood hazards, wetlands and geologic features in Twenty Mile Creek watershed. Some impacts on other watersheds also possible as a result of development. • Removes 2500 acres of agricultural area.	• Locating specific infrastructure services to minimize impacts on environment and specific ecological features.
Economic	• Reduces congestion on inner area roads. • Lower unit cost for servicing as greenfield unit costs are less than intensification unit costs. • Opportunity for integrating water and wastewater servicing needs for employment and residential. • Options 2, 3 and 4 accommodate maximum growth forecast.	• Potential for increased road costs. • Highest cost for drainage & stormwater works in Urban Boundary Expansion Areas.	• Feasibility relating to development in rural watersheds needs to be addressed.

OPTION 3 – DISTRIBUTED DEVELOPMENT

Option 3 – Distributed Development			
DRAFT	**Key Advantages**	**Key Disadvantages**	**Key Challenges**
Community	• New communities will be designed for walking, cycling and transit. • New growth is dispersed to minimize impacts to agricultural land.	• Draws focus away from downtown which reduces support for downtown transit. • Potential for moderate disruption to neighourhoods from construction of infrastructure and housing. • Options 3 and 4 are quite dispersed providing less opportunity to create a new urban area with distinctive character.	• Intensification levels are considered reasonable with appropriate policy intervention.
Ecological	• Least expensive option for storm sewer retrofit and upgrades in existing urban areas.	• Dispersed development increases trip lengths. • Moderate potential for some impact on water quality and quantity in downstream watersheds as a result of development. • Removes 1070 acres of agricultural area.	• Location of specific infrastructure services to minimize impacts on environment and specific ecological features.
Economic	• Reduces congestion on inner area roads. • Lower unit cost for servicing as greenfield unit costs are less than intensification unit costs. • Opportunity for integrating water and wastewater servicing needs for employment and residential. • Options 2, 3 and 4 accommodate maximum growth forecast.	• Potential for increased road costs. • Highest cost for drainage & stormwater works in Urban Boundary Expansion Areas. • Includes 200 acres of growth in Pleasantview which is difficult and costly to service • Additional capacity for water and wastewater trunk infrastructure required. These upgrades would be within existing developed areas.	• Feasibility relating to development in rural watersheds needs to be addressed.

OPTION 4 – DISTRIBUTED DEVELOPMENT

Option 4 – Distributed Development			
DRAFT	**Key Advantages**	**Key Disadvantages**	**Key Challenges**
Community	• New communities will be designed for walking, cycling and transit. • New growth is dispersed to minimize impacts to agricultural land	• Draws focus away from downtown which reduces support for downtown transit. • Potential for moderate disruption to neighourhoods from construction of infrastructure and housing. • Options 3 and 4 are quite dispersed providing less opportunity to create a new urban area with distinctive character.	• Intensification levels are considered reasonable with appropriate policy intervention.
Ecological	• Least expensive option for storm sewer retrofit and upgrades in existing urban areas.	• Dispersed development increases trip lengths. • Moderate potential for some impact on water quality and quantity in downstream watersheds as a result of development. • Removes 1240 acres of agricultural area.	• Location of specific infrastructure services to minimize impacts on environment and specific ecological features.
Economic	• Reduces congestion on inner area roads. • Lower unit cost for servicing as greenfield unit costs are less than intensification unit costs. • Opportunity for integrating water and wastewater servicing needs for employment and residential. • Options 2, 3 and 4 accommodate maximum growth forecast.	• Potential for increased road costs. • Highest cost for drainage & stormwater works in Urban Boundary Expansion Areas. • Additional capacity for water and wastewater trunk infrastructure required. These upgrades would be within existing developed areas.	• Feasibility relating to development in rural watersheds needs to be addressed.

OPTION 5 – NODES AND CORRIDORS

Option 5 – Nodes and Corridors			
DRAFT	**Key Advantages**	**Key Disadvantages**	**Key Challenges**
Community	• Communities are linked by multi-modal corridors. • Nodes and corridors support opportunity to build distinctive, vibrant, high quality, mixed neighbourhoods. • Intensification along corridors increases potential for new transit based linear neighbourhoods that are attractive to pedestrians.	• Potential for moderate disruption to neighourhoods from construction of infrastructure and housing.	• Intensification levels are above supply/demand but considered realistic with appropriate policy intervention.
Ecological	• Highest transit potential. • Infrastructure construction could be coordinated with corridor improvements to minimize disruption.	• Development has moderate potential for impact on downstream flood hazards, wetlands and geologic features in Twenty Mile Creek watershed. Some impacts on other watersheds also possible. • Removes 2080 acres of agricultural area.	• Location of specific infrastructure services to minimize impacts on environment and specific ecological features.
Economic	• Infrastructure construction could be coordinated with corridor improvements optimizing infrastructure investment. • Lower unit cost for servicing as greenfield unit costs are less than intensification unit costs. • Opportunity for integrating water and wastewater servicing needs for employment and residential. • Accommodates the maximum growth forecast.	• Requires significant investment in transit	• Infrastructure construction could be coordinated with corridor improvements further reducing unit costs.

The Evaluation

The following presents the things the city will consider when evaluating the growth options.

Question 6: Is there anything else you think should be considered? Is there anything that should be removed? (Please modify the following tables)

COMMUNITY WELL BEING	
Does the option accommodate the Province's unit and population forecasts?	• Deviation from targets • Potential to accommodate opportunities for a range of dwelling types and tenures for all household incomes
Does the options achieve a mix of building types and land uses?	• Description of land use mix • Number of traffic zones that have population decline/amount • Ease of retaining and providing new soft infrastructure (e.g. schools, social services) • Potential for disruption to communities resulting from infrastructure works
Does the options support closer live/work connections?	• Number of residences with 5 km of downtowns • Commercial service levels • Degree to which it fosters mixed use community opportunities • Number of residences within 1000 m of commercial areas of 5 acres or more
Will our cultural heritage be protected?	• Area of encroachment on Haldimand or Flamborough Plain • Acreage of areas within cultural heritage landscape levels A, B, C
Anything Missing?	

ECONOMIC WELL BEING	
Can this option be efficiently serviced?	• Ability to use existing infrastructure • Impact on accessibility for goods movement • Infrastructure requirements, flexibility in scheduling, technical ease of construction, level of service and relative approximate costs (transportation; water/wastewater; stormwater)
How many jobs are provided?	• Number of population-related jobs created
How does the option support existing commercial nodes?	• Population within 1 km of existing commercial nodes
How does the option attract and retain a skilled, innovative, diverse workforce?	• Population growth in Downtown and core areas
Anything Missing?	•

ECOLOGICAL WELL BEING	
How do we protect the functions of ecological systems?	• Number of hectares in growth areas that have local natural heritage features • Linear distance of impacted local natural heritage features
Does the Option Preserve our Agricultural Land/Rural Areas?	• Acreage of prime agricultural area (as defined by LEAR Analysis) • Number of active farm parcels
Does this option result in cleaner air and water?	• Estimated change in fuel consumption (as surrogate for reduction in air emissions) • Proximity of residents to transit/ transit opportunity • Mode split • Opportunity to reduce/exacerbate current flooding/erosion • Potential for impacts on water quality • Potential upgrades required at the water and wastewater treatment plants
Anything Missing?	•

Please feel free to make any other comments about the evaluation criteria.

Question 7: Are there any other thoughts you would like to share about the Growth Related Integrated Development Strategy?

BUILDING A STRONG FOUNDATION HAMILTON

Thank you!

PLEASE RETURN completed workbooks by December 21, 2005 to:

Steve Robichaud
GRIDS Project Manager
Office of the City Manager,
71 Main Street W., City of Hamilton, L8P 4Y5
Fax: 905-546-2573

OR

Christine Lee-Morrison
Integrated Master Plan Coordinator
Public Works Department
320-77 James Street, City of Hamilton, L8R 2K3
Fax: 905-546-4435

Please add me to the mailing list:

Name:
_____

Address:
_____

Phone:_____ Email: _____

APPENDIX C
Copies of Written Submissions

(Under separate cover)

Appendix F: Growth Option Detailed Evaluation Data

City of Hamilton
GRIDS Evaluation Toolkit for
Short List Growth Options
January 31, 2006

1. BACKGROUND AND EVALUATION PROCESS

1.0 BACKGROUND AND EVALUATION PROCESS

The City of Hamilton has undertaken the Growth-Related Integrated Development Strategy (GRIDS) to help determine where the future urban growth of the City will take place over the next thirty years. This unique approach integrates land use, transportation, water/wastewater and storm water planning into one project. GRIDS is intended to reflect the principles of sustainable growth, creating compact, affordable and liveable communities.

1.1 Summary of Findings from First Evaluation Session

On April 7th, 2005 a team of City of Hamilton staff who served as Triple Bottom Line evaluators for the GRIDS Growth Options gathered together to discuss their individual evaluations of each growth option. Prior to the workshop, the evaluators had one month to evaluate the nine growth options using the TBL Evaluation Toolkit. The evaluators were to complete the following steps:

> **Step 1**: Assess (in a written statement) the degree to which each growth option could achieve a series of "Desired Results" statements;
> **Step 2**: Assign a score (on a scale of –2 to +2) to gauge the degree to which each growth option could achieve each "Desired Result" statement;
> **Step 3:** Select the three highest-ranking growth options to be "short listed" and undergo more detailed examination as part of the master planning and environmental assessment processes.

Data from the preliminary results from the individual evaluators was compiled in a document and sent out to each evaluator prior to the workshop. On April 7th the evaluators were gathered together to discuss the results and decide as a group, which growth options should undergo further investigation. The key findings of from April 7th are summarized below:

- **Growth Option 5: Nodes & Corridors** should receive further consideration;
- **Growth Option 3: Distributed Development** should also receive further consideration, although it should be defined as "Appropriately Distributed Development" to reflect the constraints that will be enforced through *Places to Grow* and *Greenbelt;*
- **Growth Option 4b: Downtown Focus – Medium Density** should receive further consideration;
- A hybrid **of Growth Option 2: No Expansion of the Urban Boundary** and **Growth Option 6a/6b: Built to the Limit and Stop** should receive further consideration as a baseline scenario against which to compare the other scenarios.

The findings of the TBL evaluation were presented at a public open house and stakeholder workshop held May 30th, 2005. The majority of participants supported both TBL as a tool and the findings of the TBL. On July 20th City Staff and members of the GRIDS Master Plan teams met to discuss and shape growth options based on the direction provided by the TBL evaluation, public and stakeholder workshop. The above four directions were distilled into five growth options for the detailed short list evaluation:

- **Option 1: No Residential Expansion;**
- **Options 2-4: Appropriately Distributed Development** (three different options);
- **Option 5: Nodes and Corridors**.

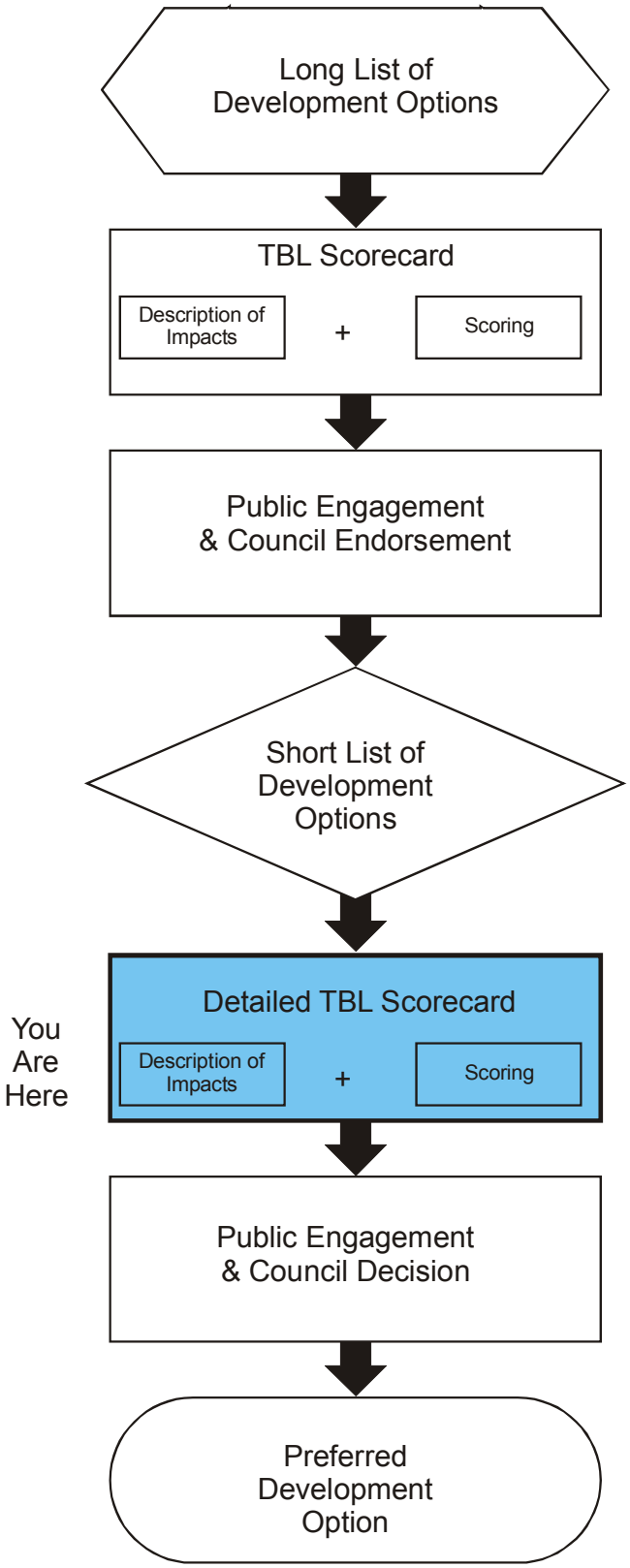
Each of the five options is described in detail in **Section 4**.

Following this, Hamilton City Council directed staff to move forward with the short list evaluation of the five growth options.

1.1 Overview of GRIDS Evaluation Process

Figure 1 on the following page shows the TBL evaluation process and where we are currently located.

Figure 1: TBL Evaluation Process



2. TBL FRAMEWORK AND CONSIDERATIONS

2. TBL FRAMEWORK AND CONSIDERATIONS

2.1 TBL Framework

Hamilton's Vision 2020 sets the vision for the City's future, a guide to the desired social, economic and environmental characteristics of the community. TBL is a means of implementing the goals put forth in Vision 2020. The "Desired Results" (see **Table 1**) are derived from Vision 2020, and the subsequent document "Nine Directions to Guide Development". The "Nine Directions to Guide Development" was created in a community process to implement Vision 2020 through GRIDS. At its narrowest, TBL is about measuring and reporting corporate performance against economic, social and environmental parameters. At its broadest, TBL is about values, issues and processes that agencies must address to create economic, social and environmental value. TBL provides a framework to ensure that environmental, social and economic impacts are taken into consideration in all aspects of local government service delivery and operation.

2.1 TBL Evaluation Considerations

Table 1 on the following page(s) shows how the three bottom lines of community, economy and ecology are linked to the set of Desired Results. The Desired Results are expressed through a collection of more detailed considerations. The fourth column, measures, is a series of quantifiable expression of these considerations.

Table 1: TBL Evaluation Table

Triple Bottom Line	Desired Results	Considerations	Measures
Community Well Being	1) This growth Option will support the delivery of public services in an equitable manner. 2) This growth option will enhance employment opportunities in Hamilton and ensure they are accessible to all Hamiltonians 3) Human health will be protected through this Growth Option	**Does the option accommodate the Province's unit and population forecasts?**	• *Deviation from the Provincial target mix for 2031 housing projections (65% low density, 20% medium density, 15% high density*).
			• *Opportunities to accommodate a range of dwelling types*
		Does the option achieve a mix of building types and land uses	• *Description of land use mix (description of land use mix is not a true measure, but provides the basis on which qualitative evaluation may take place in other measures.)*
			• *Number of traffic zones that have population decline*

Triple Bottom Line	Desired Results	Considerations	Measures
Community Well Being			• *Amount of decline in population by traffic zone*
			• *Ease of retaining and providing new soft infrastructure services (schools, social services, etc.)*
			• *Potential for disruption to communities resulting from stormwater infrastructure works*
			• *Potential for disruption to communities resulting from water and wastewater infrastructure works*
			• *Potential for disruption to communities resulting from transportation infrastructure works*
		Does the option support closer live/work connections?	• *# of residents within 5 km of CBD, other downtowns and IBP (Industrial Business Park) areas*
			• *Commercial Service Levels - degree to which the option reduces the disparity across the City to the overall average City commercial service level*
			• *Degree to which it fosters mixed use community opportunities*

Triple Bottom Line	Desired Results	Considerations	Measures
Community Well Being			• *# of residents within 1 km of commercial areas of 5 acres or more in size*
		Will our cultural heritage be protected?	• *Area of archeological potential*
			• *Area of cultural heritage landscape integrity (ha)*
Economic Well-Being	4) This Growth Option will help to attract and retain a skilled, innovative and diverse workforce	**Can this option be efficiently serviced?**	• *Ability to use existing transportation infrastructure*
			• *Ability to use existing water/waste water infrastructure*
			• *Ability to address existing water/wastewater system deficiencies and upgrade requirements*
			• *Ability to use existing stormwater infrastructure*

Triple Bottom Line	Desired Results	Considerations	Measures
Economic Well-Being	5) This Growth Option will position Hamilton as a leading centre of economic growth.		• *Impact on accessibility for goods movement*
			TRANSPORTATION • *Infrastructure requirements, technical ease of construction, level of service, flexibility in scheduling, proven effectiveness and relative approximate costs.*
			WATER & WASTEWATER • *Infrastructure requirements, technical ease of construction, level of service, flexibility in scheduling, proven effectiveness and relative approximate costs.*
			STORMWATER • *Infrastructure requirements, technical ease of construction, level of service, flexibility in scheduling, proven effectiveness and relative approximate costs, requirements for airport servicing*

Triple Bottom Line	Desired Results	Considerations	Measures
Economic Well-Being	6) This Growth Option will maintain and enhance Hamilton's high quality environmental amenities.	**How many jobs are provided?**	• *Number of population-related jobs created*
		How does the option attract and retain a skilled, innovative, diverse workforce?	• *Population growth in Downtown and core areas*
		How does the option support existing commercial nodes	• *Population within 1 km of existing commercial areas of 5 acres or more*
Ecological Well-Being	7) This Growth Option will ensure that Hamiltonians share equally in	**How do we protect the functions of ecological systems?**	• *Number of hectares in growth areas that are in the Natural Heritage System*

Triple Bottom Line	Desired Results	Considerations	Measures
Ecological Well-Being	the benefits of a healthy natural environment. 8) This Growth Option will enhance economic development in an eco-efficient manner 9) This Growth Option will protect ecosystem health.		• *Linear distance of impacted Natural Heritage System in new growth areas (km)*
			• *Potential impacts to terrestrial and aquatic habitat*
			• *Ecological impact of transportation infrastructure*
		Does the Option Preserve our Agricultural Land/Rural Areas?	• *Acreage of prime agricultural area (as defined by LEAR Analysis) in new growth areas*
			• *Number and area of active farms parcels in new growth areas*
			• *Number of Primary Farm Parcels (agricultural properties with farm outbuildings*
		Does this option result in cleaner air and water?	• *Projected change in Vehicle Kilometers traveled and estimated change in fuel consumption (as surrogate for reduction in air emissions)*
			• *Proximity of residents to transit/ transit opportunity (population*

Triple Bottom Line	Desired Results	Considerations	Measures
			located within 400 metres of existing transit system
Ecological Well-Being			• *Mode split*
			• *Potential impacts to flooding*
			• *Potential for impacts on water quality and erosion*
			• *Potential impacts to groundwater and geology*

3. Sustainability Appraisal (ICLEI)

3. SUSTAINABILITY APPRAISAL

At the next meeting where we share the results of the TBL evaluation you can expect to discuss the following:

- Your thoughts on the evaluation results
- Any changes to the growth options or additional options you think should be looked at. This may include thoughts on any growth options that should be combined, or suggestions for phasing the growth options over time.

Please keep these issues in mind when you go through the TBL tool to complete your sustainability appraisals.

Agenda Items For the Next Meeting

- Presentation of TBL Tool Results and discussion
- Comments from evaluators on Challenges, Issues
- Comments from evaluators on changes to the Growth Options
- Discussion on Growth Option phasing
- Next Steps

4. SHORT LIST GROWTH OPTIONS REPORT

4. SHORT LIST GROWTH OPTIONS REPORT

The following section provides a detailed description of each growth option, an explanation of how to read the data table and the data table itself.

4.1 Description of Options

Although each of the five growth options are intended to represent the three growth concepts from the long list evaluation, the options were each developed giving consideration to four common components. The common components are intensification, employment and growth constraints and where applicable, greenfield development. The approach taken to these common components is described below.

In addition, all of the options reflect population and employment requirements identified through projection work completed by the Province. The Province of Ontario contracted Hemson to prepare population growth projections for municipalities in Ontario as part of the "Places to Grow" program (Source: Hemson Consulting, Growth Outlook for the Greater Golden Horseshoe). The City of Hamilton has selected the "Compact" and "More Compact" projections for GRIDS. The Distributed Development and Nodes and Corridors Concepts use the "More Compact" scenario by Hemson Consulting, with an overall 30-year projected increase of 100,000 new housing units. This scenario best reflects Council's desire to accommodate significant growth in Hamilton and to explore the implications of accommodating such growth. The No Expansion to the Urban Boundary Concept uses the lower population "Compact Scenario" by Hemson because of the challenge involved in accommodating all growth without an urban boundary expansion. This Scenario projects an increase of 80,000 new housing units.

There are two main geographic locations which will accommodate this projected growth in Hamilton in the next 30 years – within the existing urban boundary and on urban area expansion lands. On lands within the existing urban boundary, new growth will be accommodated by residential intensification and the building-out of lands already designated for new growth.

Intensification
Generally speaking, intensification is the process by which areas within an existing built-up urban area become redeveloped. The result of intensification is an increase in density in the area. All five options contain a significant level of intensification for Hamilton's built-up area, with varying degrees for each. Although the levels of intensification vary, all options assume a fixed amount of intensification within Hamilton's downtown.

In order to determine the appropriate level of intensification for each option, City staff identified areas across the City that had the potential to accommodate residential intensification activity. Existing arterial and mainstreet corridors, community cores, existing commercial, greyfield and brownfield areas, areas that had been recently subject to secondary planning were identified. Other sites were also identified based on staff knowledge and a reconnaissance survey of the City. All areas identified were then analysed to estimate the number of intensification units that could reasonably be constructed in each area with a proactive intensification policy.

The five options all include a level of intensification that ranges from 28,000 to 62,000 units.

Employment
Employment consists of three types of job categories, which are, major office, employment lands and population-related employment. Employment land refers to employment in employment lands/industrial parks. Major office refers to employment in major offices, such as those located in Hamilton's downtown. Population-related employment describes the diverse jobs which primarily serve and normally occur in proximity to Hamilton's residential population. These include most retail, health, education and government jobs together with home-based businesses of all types.

The number of jobs for employment lands and major office is the same for all growth options. All options include new employment lands for the new Airport/Highway 6 Employment Area as well as for 16 other employment and office areas. The total number of jobs varies from option to option because the population-related employment is different for each option. Also, Option 1 uses Compact scenario numbers for employment land and major office jobs and Options 2-5 use the More Compact scenario for employment land and major office jobs. **Table 2** below shows the total number of jobs (new and existing) and the total number of employment lands (new and existing) by 2031.

Table 2: Employment Lands & Major Office Employment

	Compact	More Compact
Total number of jobs in employment lands:	148,000	152,000
Total area of all employment lands:	6200 acres	6200 acres
Total number of major office related jobs:	24,000	27,000

Growth Constraints and Greenfield Development
There are many portions of the City that are valued for their natural heritage and resource functions. These areas are not highly suitable for new growth and development. The Province provides guidance for the identification of areas to be protected from urban uses/growth through the Provincial Policy Statement (PPS). With the PPS guidelines in mind, the following areas were determined to be least suitable for future development:

- The Greenbelt Plan area
- The Niagara Escarpment Plan area;
- The Parkway Belt West Plan area;
- Aggregate resource areas;
- Provincially Significant Wetlands;
- Areas of Natural and Scientific Interest;
- Prime agricultural lands, as defined by the City of Hamilton's Land Evaluation and Area Review (LEAR) Study;
- Significant woodlands (significance defined by the City)
- Regionally and/or locally significant wetlands (significance defined by the City)

- Environmentally Significant Areas; and
- Airport noise contours (28 NEF/NEP in Year 1996)

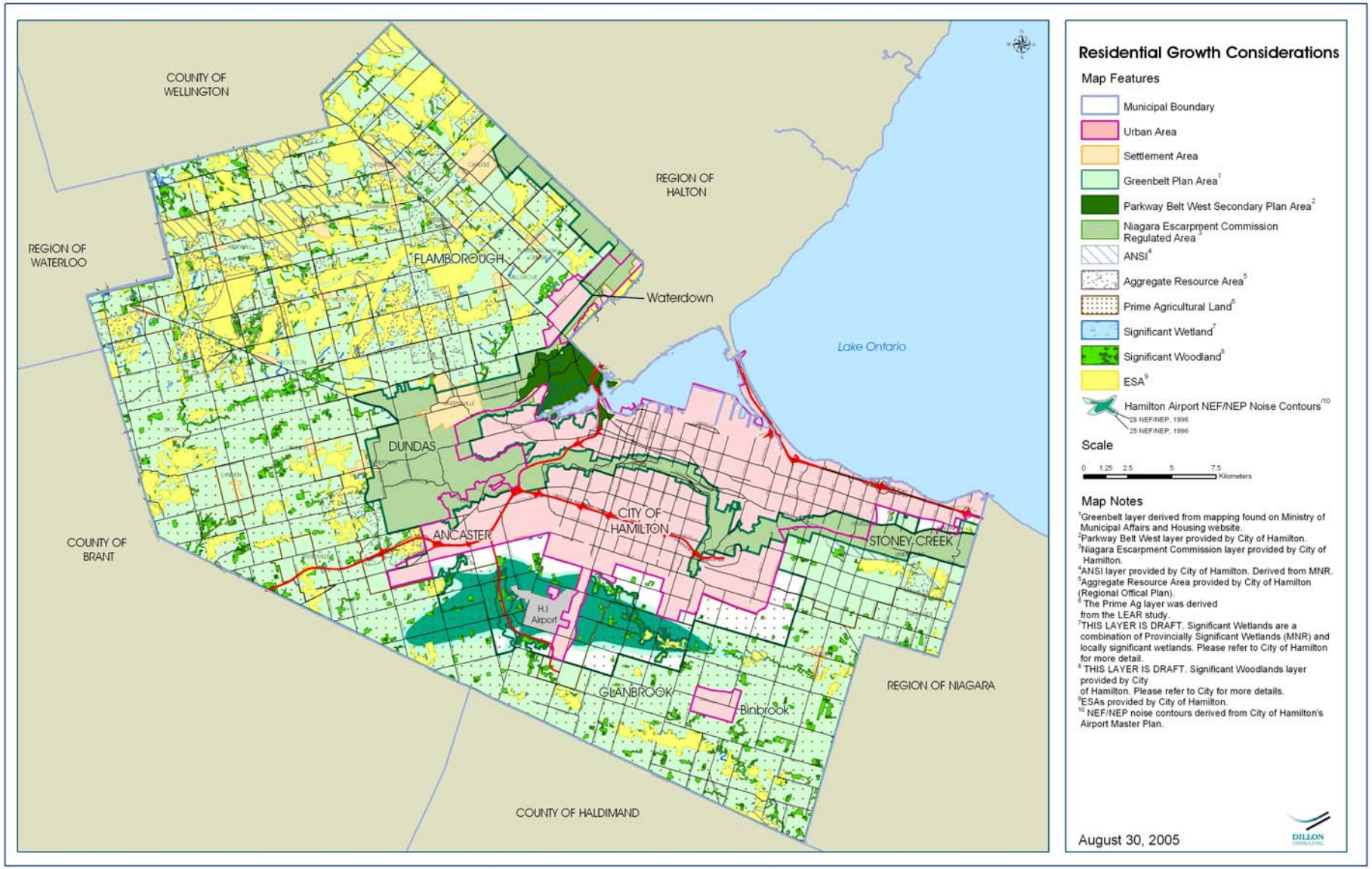
Through the process of identifying growth constraints it was determined that there is relatively little unconstrained land outside of the City's current urban boundary. **Figure 2** on the following page depicts a simplified version of the City's growth constraints. The white areas on **Figure 2** represent lands outside the urban boundary that are least constrained and could potentially be suitable for greenfield development.

Greenfield development is a term used to describe new urban development in areas that were formerly rural. The approach to greenfield development for all growth options was the same. Unconstrained lands were the focus of greenfield development. The areas needed for greenfield development were calculated by subtracting the population allocated to intensification within the current urban boundary from the desired 30 year projected population. The remaining population was then assigned to a range of greenfield lands that reflect the three strategic directions identified earlier in the GRIDS process. A mix of housing types were assigned to meet the projected needs identified by the Province and to build complete communities that accommodate a range of housing types, incomes and market needs. The land required for urban expansion also incorporated lands for parks, commercial and mixed uses, schools and other institutional uses. There are five growth options being considered for the short-list evaluation.

- Option 1: No Residential Expansion
- Option 2: Appropriately Distributed Development
- Option 3: Appropriately Distributed Development
- Option 4: Appropriately Distributed Development
- Option 5: Nodes and Corridors

Each is described in detail on the following section.

Figure 2: Residential Growth Considerations



Option 1 No Residential Expansion

All new residential growth is satisfied on lands within the existing urban area boundary and through intensification and build out of vacant residential lands. Option 1 does not include an urban boundary expansion for residential development.

- Growth forecast: 80,000 new units (*Hemson, "Compact" Projection*);
- Units provided: 97,810 to meet population forecast by Hemson;
- Residual demand for some unit types (medium and high) may be oversupplied for this option;
- Residential intensification: 62k units based on enhancing the Distributed Development Concept value of 28k for intensification to address a higher demand for certain housing units;
- Remaining forecasted housing units addressed through vacant land development;
- Forecasted growth in population: 150,000 persons; and
- New jobs for this option: 96,000 .

The following two pages contain a map and summary table for Option 1. The results from the summary table are based on the detailed data table found in **Section 4**.

Community

Focusing growth downtown helps promote increased transit and facilitate the development of a cohesive community where people can live and work. High intensification requires strong building design guidelines and may make it difficult to provide a full range of housing choice.

Transportation

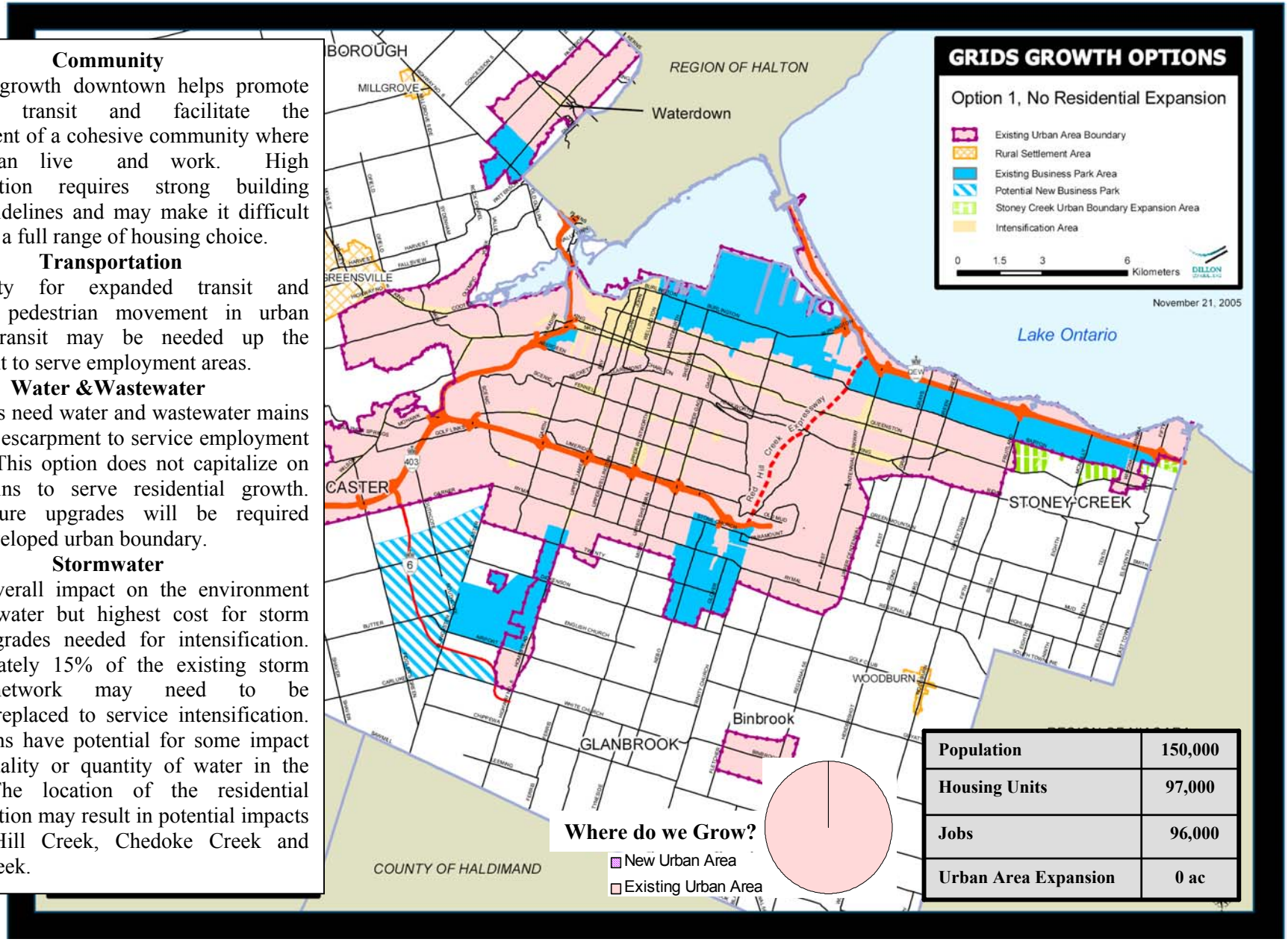
Opportunity for expanded transit and improved pedestrian movement in urban area. Transit may be needed up the escarpment to serve employment areas.

Water &Wastewater

All options need water and wastewater mains across the escarpment to service employment growth. This option does not capitalize on these mains to serve residential growth. Infrastructure upgrades will be required within developed urban boundary.

Stormwater

Lowest overall impact on the environment for stormwater but highest cost for storm sewer upgrades needed for intensification. Approximately 15% of the existing storm sewer network may need to be upgraded/replaced to service intensification. All Options have potential for some impact on the quality or quantity of water in the creeks. The location of the residential intensification may result in potential impacts to Red Hill Creek, Chedoke Creek and Stoney Creek.



Summary Results Option 1 – No Expansion	
CONSIDERATIONS	**RESULTS**
COMMUNITY	
Does the option accommodate the Province's unit and population forecasts?	• This option does not meet the target mix and has the largest deviation from Provincial forecast for housing mix
Does the option achieve a mix of building types and land uses	• Least potential to accommodate a range of dwelling types
Does the option support closer live/work connections?	• Best achieves live/work connections due to proximity of residents to downtowns and commercial areas and highest intensification. On the other hand, this option is relatively poorly served by retail and commercial services
Will our cultural heritage be protected?	• No urban expansion so best protects cultural heritage (outside of existing urban boundary)
Other	• Potential impacts due to infrastructure in the current urban area are highest for this option • Status quo for delivery of soft services (schools, social services etc.)
ECONOMIC WELL BEING	
Can this option be efficiently serviced?	• Option makes best use of existing transportation, water and wastewater infrastructure but requires highest upgrades to stormwater infrastructure for concentrated urban development. Higher unit costs for some piped infrastructure in the urban area and less flexibility for servicing future alternative areas. Level of transportation service and access to transit is second best for this option (next to nodes and corridors)
How many jobs are provided?	• Lowest number of population related jobs
How does the option attract and retain a skilled, innovative, diverse workforce?	• Highest intensification and thus rate of population growth in the downtowns
How does the option support existing commercial nodes	• Highest population within 1km of existing commercial areas
ECOLOGICAL WELL BEING	
How do we protect the functions of ecological systems?	• Least ecological impact because no greenfield growth
Does the Option Preserve our Agricultural Land/Rural Areas?	• Least impact to agricultural lands and rural areas because no urban expansion
Does this option result in cleaner air and water?	• Highly preferred because of high transit supportiveness, mode split and number of people near existing transit facilities. Least impacts

	to water due to concentrated development in existing urban areas.

Option 2 Appropriately Distributed Development

New residential growth is satisfied on lands within the existing urban area boundary through intensification and build out of vacant residential lands and also through greenfield development in a new urban expansion area.

- Growth is appropriately distributed to the southeast fringe of the existing urban area boundary to make efficient use of existing infrastructure including transit and social services;
- Some degree of urban boundary expansion is anticipated;
- Forecasted growth in population: 190,000 persons;
- Growth forecast: 100k new units (*Hemson, "More Compact" projection);* and
- Residential intensification: 28k units**;**
- 500 acres of new growth allocated to Stoney Creek Urban Boundary Expansion area (SCUBE) to recognize Council approved and appropriate urban boundary expansion. (*The allocation of growth to the SCUBE area is consistent for all of the Distributed and Nodes and Corridor Options*);
- 2,730 acres of new growth allocated to an urban expansion area south-east of the current urban boundary and bounded by Golf Club Road to south, Mud Street and Highland Ave to the north, Upper Centennial Parkway and Trinity Church Road to the west and Hendershot Road to the east;
- This option concentrates growth in essentially one new growth area to facilitate mixed use, higher density, transit friendly development that optimizes existing infrastructure. Some prime agricultural land is lost by this option. Although agriculture is highly valued in the City, it was found that it was impossible to identify a concentrated new growth area without impacting prime agricultural land because of the extent of such land in the City;
- Residential units in greenfield growth areas: 35,900;
- New jobs for this option : 104,000;
- Residential units of intensification inside the urban boundary: 28,310; and
- Units allocated to vacant designated land: 35, 810.

The following two pages contain a map and summary table for Option 2. The results from the summary table are based on the detailed data table found in **Section 4**.

Community

Focuses new urban area growth providing opportunity for building a distinctive, vibrant, mixed, high quality community that is pedestrian/transit oriented. Intensification levels are considered reasonable with appropriate policy intervention. Removes approximately 2500 acres of agricultural land.

Transportation

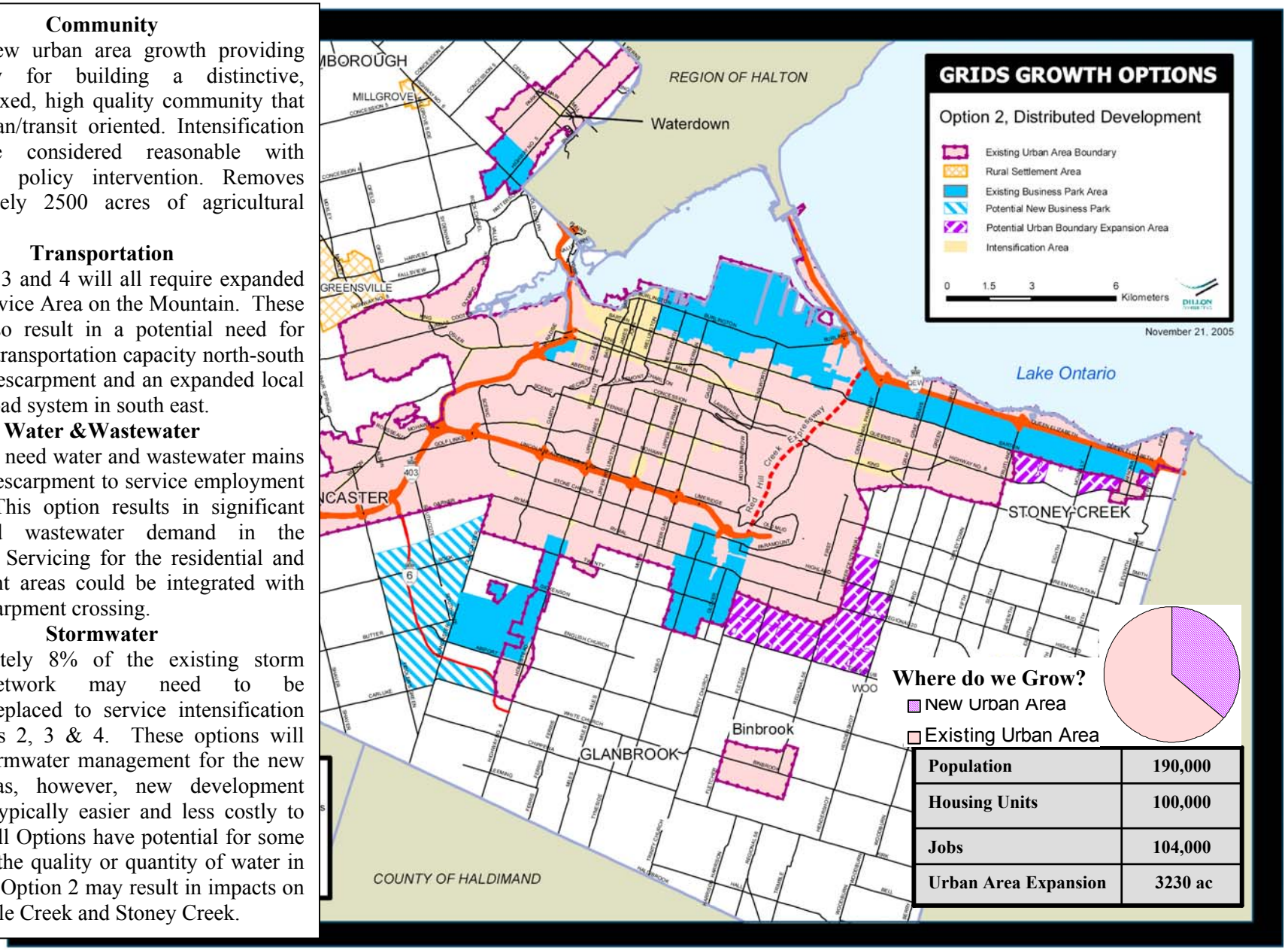
Options 2, 3 and 4 will all require expanded Transit Service Area on the Mountain. These options also result in a potential need for additional transportation capacity north-south across the escarpment and an expanded local collector road system in south east.

Water &Wastewater

All options need water and wastewater mains across the escarpment to service employment growth. This option results in significant water and wastewater demand in the southeast. Servicing for the residential and employment areas could be integrated with an east escarpment crossing.

Stormwater

Approximately 8% of the existing storm sewer network may need to be upgraded/replaced to service intensification for Options 2, 3 & 4. These options will require stormwater management for the new urban areas, however, new development areas are typically easier and less costly to service. All Options have potential for some impact on the quality or quantity of water in the creeks. Option 2 may result in impacts on Twenty Mile Creek and Stoney Creek.



Population	**190,000**
Housing Units	**100,000**
Jobs	**104,000**
Urban Area Expansion	**3230 ac**

Summary Results Option 2 – Appropriately Distributed Development	
CONSIDERATIONS	**RESULTS**
COMMUNITY	
Does the option accommodate the Province's unit and population forecasts?	• None of the growth options meet the target mix; this option comes the closest to accommodating the Province's unit and population forecasts for housing mix.
Does the option achieve a mix of building types and land uses	• None of the options would meet proposed low and medium housing units proposed by the province. Best potential to accommodate a range of dwellings (all distributed options are equal)
Does the option support closer live/work connections?	• Less likely to support closer live/work connections than no expansion and nodes and corridors options.
Will our cultural heritage be protected?	• Least likely to protect cultural heritage; Option 2 has the largest area of cultural heritage potential, representing the option with the greatest potential for conflict between future land use and cultural heritage resources.
Other	• Soft services for new urban areas can be accommodated by existing program delivery infrastructure/locations
ECONOMIC WELL BEING	
Can this option be efficiently serviced?	• Makes good use of existing stormwater infrastructure, concentrated form of urban development supports existing transportation and offers opportunities to improve existing water and wastewater infrastructure. However, may require a new escarpment crossing to service large amount of low-density development in new urban expansion area.
How many jobs are provided?	• Provides third most number of population related jobs.
How does the option attract and retain a skilled, innovative, diverse workforce?	• Based on intensification values, this option provides the least likelihood to attract and retain a skilled, innovative diverse workforce.
How does the option support existing commercial nodes	• Fourth most likely to support commercial nodes (Option 1, 3 and 5 are all considered better in terms of supporting existing commercial nodes).
ECOLOGICAL WELL BEING	
How do we protect the functions of ecological systems?	• Option with the highest area of urban expansion, also has the third highest amount of Natural Heritage System features within the proposed expansion area; considered to have potential for the third highest impact on ecological systems.
Does the Option Preserve our Agricultural Land/Rural Areas?	• Least likely to preserve prime agricultural/rural areas.

Does this option result in cleaner air and water?	• Concentrated urban expansion area limits impacts on air and water quality compared to two other distributed options; not as desirable as Option 1 and 5 because of high mode split, larger area of urban expansion and lower intensification levels.

Option 3 Appropriately Distributed Development

New residential growth is satisfied on lands within the existing urban area boundary through intensification and build out of vacant residential lands and also, through greenfield development in a new urban expansion area.

- Growth is appropriately distributed along the fringe of the existing urban area boundary to make efficient use of existing infrastructure including transit and social services;
- Some degree of urban boundary expansion is anticipated;
- Forecasted growth in population: 190,000 persons;
- Growth forecast: 100k new units (*Hemson, "More Compact" projection);* and
- Residential intensification: 28k units.
- 2,730 acres of land are identified for growth along the southern existing urban area boundary;
- An additional, 200 acres of land in the Pleasantview area are identified for growth (this area is within the Greenbelt lands but was under application for urban uses prior to the Greenbelt approval. In order to assess this application appropriately, this area is being considered for growth within the GRIDS context).

The following two pages contain a map and summary table for Option 3. The results from the summary table are based on the detailed data table found in **Section 4**.

Community

New growth is dispersed to minimize impacts to agricultural land. Removes 1070 acres of agricultural area. Intensification levels are considered reasonable with appropriate policy intervention.

Transportation

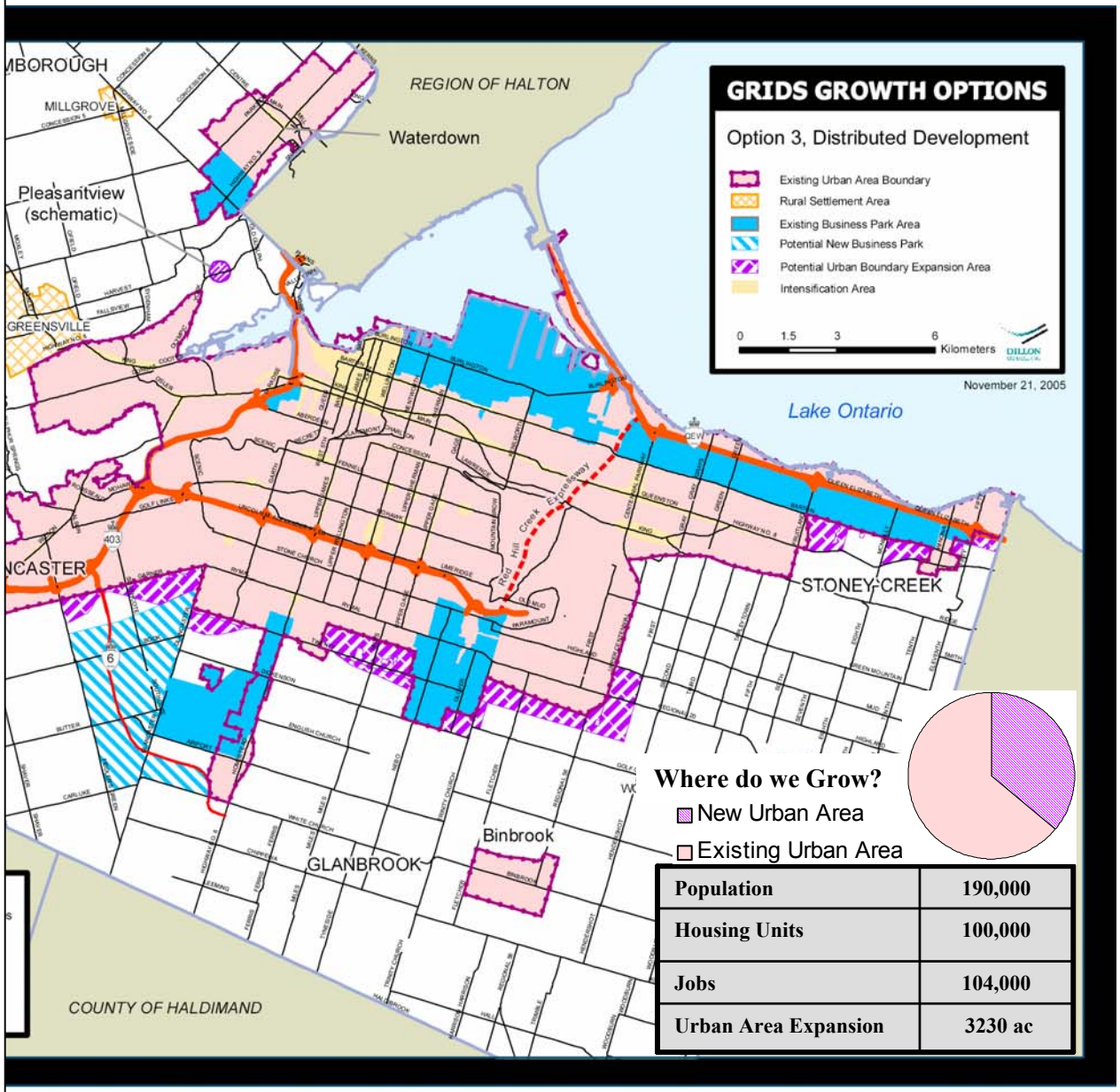
Options 2, 3 and 4 will all require expanded Transit Service Area on the Mountain. These options also result in a potential need for additional transportation capacity north-south across the escarpment and an expanded local collector road system in south east.

Stormwater

Approximately 8% of the existing storm sewer network may need to be upgraded/replaced to service intensification for Options 2, 3 & 4. These options will require stormwater management for the new urban areas, however, new development areas are typically easier and less costly to service. All Options have potential for some impact on the quality or quantity of water in the creeks. The location of Options 3 and 4 widely distribute new growth resulting in potential to effect Twenty Mile Creek, Stoney Creek, Borer's Creek, Spencer Creek, Sulphur Creek, and Red Hill Creek.

Water &Wastewater

All options need water and wastewater mains across the escarpment to service employment growth. This option results in significant water and wastewater demand in the southwest. Servicing for the residential and employment areas could trigger west trunk infrastructure upgrades and be integrated with a west escarpment crossing. This option includes servicing Pleasantview which is a very challenging area to service due primarily to topography.



Summary Results Option 3 – Appropriately Distributed Development	
CONSIDERATIONS	**RESULTS**
COMMUNITY	
Does the option accommodate the Province's unit and population forecasts?	• This option does not meet the forecast. Option 3 comes the closest to accommodating the Province's unit and population forecasts for housing mix.
Does the option achieve a mix of building types and land uses	• None of the options would meet proposed low and medium housing units proposed by the province. Best potential to accommodate a range of dwellings (all distributed options are equal).
Does the option support closer live/work connections?	• Least likely to support closer live/work connections than other options.
Will our cultural heritage be protected?	• Similar to Option 2, this option represents a marginally improved opportunity to protect cultural heritage resources; still a high potential for conflict between future land use and cultural heritage resources.
Other	• High estimated impacts from infrastructure construction on existing communities due to development in Pleasantview. • Soft services for new urban areas can be accommodated by existing program delivery infrastructure/locations
ECONOMIC WELL BEING	
Can this option be efficiently serviced?	• Lowest estimated cost for stormwater infrastructure, higher estimated costs for water/wastewater infrastructure costs due escarpment crossing and significant investment in transit and new road infrastructure to service new urban expansion areas.
How many jobs are provided?	• Provides second-most number of population related jobs.
How does the option attract and retain a skilled, innovative, diverse workforce?	• Based on intensification values, this option provides the least likelihood to attract and retain a skilled, innovative diverse workforce.
How does the option support existing commercial nodes	• Third most likely to support existing commercial nodes.
ECOLOGICAL WELL BEING	
How do we protect the functions of ecological systems?	• Option with the highest area of urban expansion, also has the highest amount of Natural Heritage System features within the proposed expansion area; considered to have potential for the highest impact on ecological systems.
Does the Option Preserve our Agricultural Land/Rural Areas?	• Of all urban expansion options, offers the best opportunity to preserve prime agricultural land.
Does this option result in cleaner air and water?	• Limited opportunity to provide for cleaner air and water.

Option 4 Appropriately Distributed Development

New residential growth is satisfied on lands within the existing urban area boundary through intensification and build out of vacant residential lands and also, through greenfield development in a new urban expansion area. Option 4 differs from 3 only in that the Pleasantview lands are not considered for appropriately distributed growth. 2,730 acres of land are identified for growth. The land need is accommodated by expanding the area at the southeast edge of the current urban boundary southward to increase the connection to the Glanbrook industrial park near Trinity Church Road and Golf Club Road. The objective is to increase opportunities for live/work and non-auto modes of travel.

- Growth is appropriately distributed along the fringe of the existing urban area boundary to make efficient use of existing infrastructure including transit and social services;
- Some degree of urban boundary expansion is anticipated;
- Forecasted growth in population: 190,000 persons;
- Growth forecast: 100k new units (*Hemson, "More Compact" projection);*
- Residential intensification: 28k units.

The following two pages contain a map and summary table for Option 4. The results from the summary table are based on the detailed data table found in **Section 4**.

Community

New growth is dispersed to minimize impacts to agricultural land. Removes 1240 acres of agricultural area. Intensification levels are considered reasonable with appropriate policy intervention.

Transportation

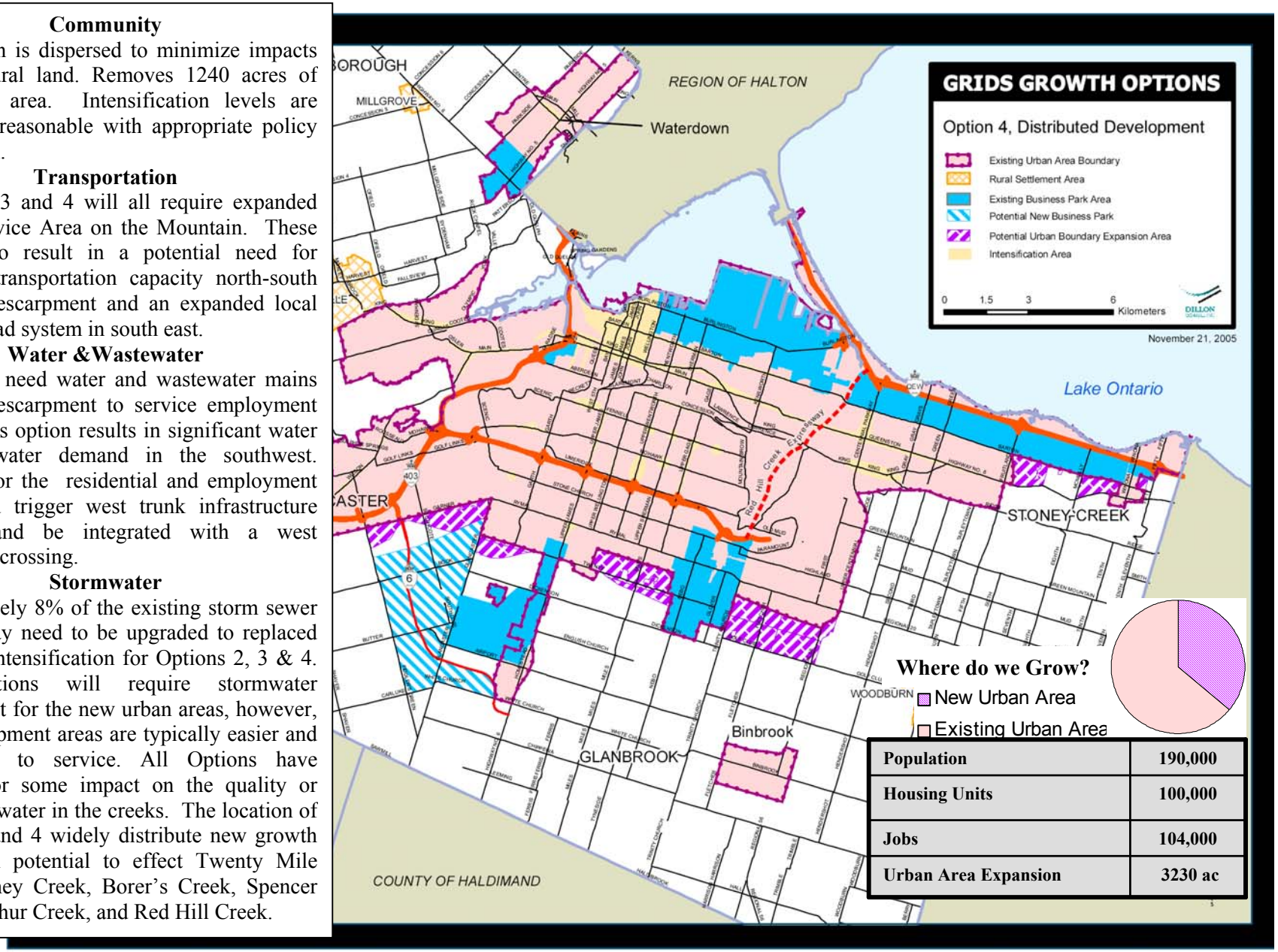
Options 2, 3 and 4 will all require expanded Transit Service Area on the Mountain. These options also result in a potential need for additional transportation capacity north-south across the escarpment and an expanded local collector road system in south east.

Water &Wastewater

All options need water and wastewater mains across the escarpment to service employment growth. This option results in significant water and wastewater demand in the southwest. Servicing for the residential and employment areas could trigger west trunk infrastructure upgrades and be integrated with a west escarpment crossing.

Stormwater

Approximately 8% of the existing storm sewer network may need to be upgraded to replaced to service intensification for Options 2, 3 & 4. These options will require stormwater management for the new urban areas, however, new development areas are typically easier and less costly to service. All Options have potential for some impact on the quality or quantity of water in the creeks. The location of Options 3 and 4 widely distribute new growth resulting in potential to effect Twenty Mile Creek, Stoney Creek, Borer's Creek, Spencer Creek, Sulphur Creek, and Red Hill Creek.



Summary Results Option 4 – Appropriately Distributed Development	
CONSIDERATIONS	**RESULTS**
COMMUNITY	
Does the option accommodate the Province's unit and population forecasts?	• None of the growth options meet the target mix; this option comes the closest to accommodating the Province's unit and population forecasts for housing mix
Does the option achieve a mix of building types and land uses	• None of the options would meet proposed low and medium housing units proposed by the province. Best potential to accommodate a range of dwellings (distributed options are equal).
Does the option support closer live/work connections?	• Least likely to support closer live/work connections than other options.
Will our cultural heritage be protected?	• Similar to Option 2, this option represents a marginally improved opportunity to protect cultural heritage resources; still a high potential for conflict between future land use and cultural heritage resources.
Other	• Soft services for new urban areas can be accommodated by existing program delivery infrastructure/locations
ECONOMIC WELL BEING	
Can this option be efficiently serviced?	• Significant investment in transit and new road infrastructure to service new urban expansion areas, offers the lowest cost for new stormwater infrastructure and opportunities to improve existing stormwater infrastructure and service delivery throughout the City,
How many jobs are provided?	• Provides fourth-most number of population related jobs.
How does the option attract and retain a skilled, innovative, diverse workforce?	• Based on intensification values, this option provides the least likelihood to attract and retain a skilled, innovative diverse workforce.
How does the option support existing commercial nodes	• Least likely to support existing commercial nodes.
ECOLOGICAL WELL BEING	
How do we protect the functions of ecological systems?	• Option with the highest area of urban expansion, also has the second highest amount of Natural Heritage System features within the proposed expansion area; considered to have potential for the second highest impact on ecological systems.
Does the Option Preserve our Agricultural Land/Rural Areas?	• Of all urban expansion options, offers the second best opportunity to preserve prime agricultural land.
Does this option result in cleaner air and water?	• Limited opportunity to provide for cleaner air and water.

Option 5 Nodes and Corridors

This option allocates growth in downtowns, community cores, suburban nodes and corridors, with the remainder in greenfield development.

- 42k units are allocated to intensification areas with an emphasis on eight key neighbourhood nodes and support for intensification along selected corridors within the existing urban area;
- Similar to Option 2, 2080 acres of new growth is also targeted to a single greenfield node adjacent to the south-east boundary of the existing urban boundary with the objective of creating dense, mixed use, transit supportive neighbourhoods. The area of the node is smaller than for Option 2 because of the greater intensification for Option 5. The land area is reduced southward to avoid a watershed divide and westward to avoid impacts on prime agricultural land;
- Like the Distributed Options, the SCUBE lands were also identified for growth;
- Growth forecast: 100k new units (*Hemson, "More Compact" projection*);
- Residential units in greenfield growth areas: 21,320;
- Residential units of intensification inside the urban boundary: 42,870;
- New jobs for this option: 104,000;
- Forecasted growth in population: 190,000 persons; and
- Units allocated to vacant designated land: 35, 810.

The following two pages contain a map and summary table for Option 5. The results from the summary table are based on the detailed data table found in **Section 4**.

Community

Nodes and corridors support opportunity to build distinctive, vibrant, high quality, mixed neighbourhoods. Intensification along corridors increases potential for new transit based linear neighbourhoods that are attractive to pedestrians. Intensification levels are above supply/demand but considered realistic with appropriate policy intervention. Removes 2080 acres of agricultural area.

Transportation

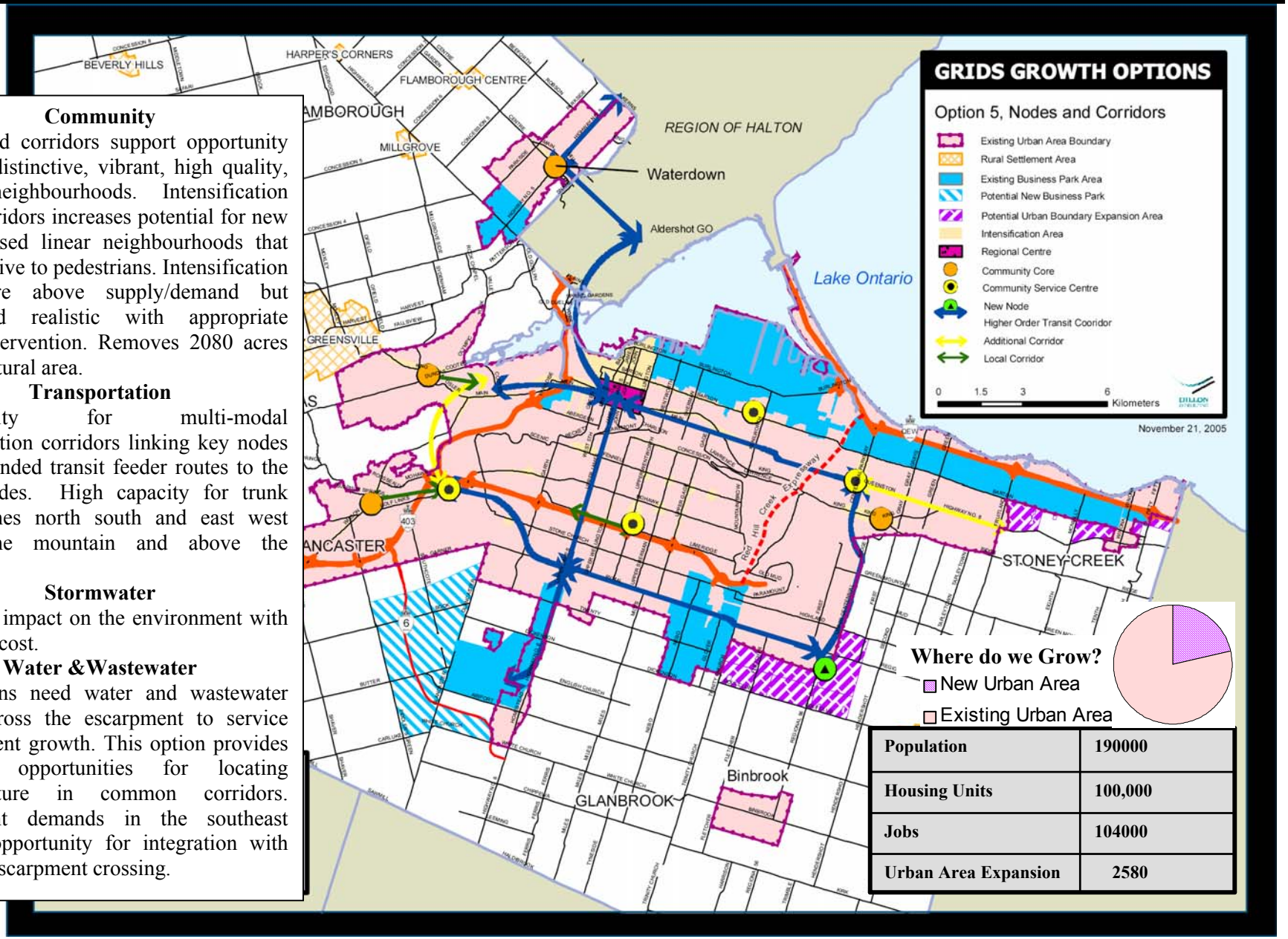
Opportunity for multi-modal transportation corridors linking key nodes with expanded transit feeder routes to the major nodes. High capacity for trunk transit lines north south and east west below the mountain and above the mountain.

Stormwater

Moderate impact on the environment with moderate cost.

Water &Wastewater

All options need water and wastewater mains across the escarpment to service employment growth. This option provides potential opportunities for locating infrastructure in common corridors. Significant demands in the southeast provide opportunity for integration with east end escarpment crossing.



Population	**190000**
Housing Units	**100,000**
Jobs	**104000**
Urban Area Expansion	**2580**

Summary Results Option 5 – Nodes and Corridors	
CONSIDERATIONS	**RESULTS**
COMMUNITY	
Does the option accommodate the Province's unit and population forecasts?	• None of the growth options meet the target mix; this option is closer to accommodating the Province's housing mix than Option 1, but not as close as the distributed development options.
Does the option achieve a mix of building types and land uses	• None of the options would meet proposed low and medium housing units proposed by the province. Provides a better potential to accommodate a range of dwellings than Option 1, but not as positive as the distributed development options due to the larger short fall for low-density housing for this option.
Does the option support closer live/work connections?	• Provides an excellent opportunity to support closer live/work connections through greater mixing of uses in nodes/corridors.
Will our cultural heritage be protected?	• More likely to protect cultural heritage resources than the distributed development options, but there is still a potential for conflict between future land use and cultural heritage resources.
Other	• Ease of provision of social services is best for this option due to greater compaction of the build form to achieve greater economies of scale.
ECONOMIC WELL BEING	
Can this option be efficiently serviced?	• Highest level of transportation service and access to transit and makes good use of existing transportation, water and wastewater infrastructure but requires upgrades to stormwater infrastructure for concentrated urban development and a more sophisticated design for stormwater infrastructure to service new development.
How many jobs are provided?	• Provides the most number of population related jobs.
How does the option attract and retain a skilled, innovative, diverse workforce?	• Based on intensification values, this option provides the second best likelihood to attract and retain a skilled, innovative diverse workforce.
How does the option support existing commercial nodes	• Second best at supporting existing commercial nodes.
ECOLOGICAL WELL BEING	
How do we protect the functions of ecological systems?	• Likely to have some impact on ecological systems due to urban expansion; of all options with urban expansion, Option 5 is considered to have the lowest potential for impact on ecological systems.
Does the Option Preserve our Agricultural Land/Rural Areas?	• Of all urban expansion options, offers the fourth best opportunity to preserve

	prime agricultural land.
Does this option result in cleaner air and water?	• Highly preferred because of high transit supportiveness, mode split and number of people near existing transit facilities. Smaller impacts to water than distributed development options due to concentrated, compact development.

4.2 How to Read the Data Table

Section 4.3 contains a detailed data table that is meant to help evaluators interpret how each growth option affects all three bottom lines (social, economic and ecological). Each TBL contains a series of desired results, which in turn are linked to considerations. For an example, under the TBL of Community Well Being one of the desired results might be "This growth option will support the delivery of public services in an equitable manner". A consideration for this desired result might be "does the option accommodate the Province's unit and population forecasts?" and a measure for this consideration would be "deviation from Provincial target mix". Each option is ranked according to how it performed on the basis of the measure. Options were ranked from 1 to 5. 1 being most preferred and 5 being least preferred. Ties were permitted, indicating that two or more options are ranked equally.

4.3 Data Table

GRIDS Short List of Growth Options
Evaluation Table
January 2006

Triple Bottom Line	Desired Results	Considerations	Measures	Option 1: No Expansion	Option 2: Appropriately Distributed Development	Option 3: Appropriately Distributed Development	Option 4: Appropriately Distributed Development	Option 5: Nodes and Corridors
Community Well Being	1) This growth Option will support the delivery of public services in an equitable manner. 2) This growth option will enhance employment opportunities in Hamilton and ensure they are accessible to all Hamiltonians 3) Human health will be protected through this Growth Option	**Does the option accommodate the Province's unit and population forecasts?**	• *Deviation from the Provincial target mix for 2031 housing projections (65% low density, 20% medium density, 15% high density*).	**Rank: 5** Option 1 represents the largest deviation from the Provincial forecasts for estimated housing mix (-13% low, -8% med, +21% high) and receives a ranking of 5.	**Rank: 1** The housing mix is the same for options 2, 3 and 4. These options represent the lowest deviation from the Province's projected housing mix (-6% low, -7% med, +13% high) and receive a ranking of 1.			**Rank: 3** Option 5 second smallest deviation from the Province's estimated target mix (-9% low, -7% med, +16% high) and receives a ranking of 3.
			• *Opportunities to accommodate a range of dwelling types*	**Rank: 5** Municipalities must provide for an appropriate range of housing types and densities to meet projected requirement of current and future residents. Option 1 represents the least potential to accommodate a range dwelling types and receives a rank of 5.	**Rank: 1** Option 2, 3 and 4 represent the best opportunity to accommodate the Provincial Policy Statement's direction to accommodate a range of dwelling types and receive a rank of 1.			**Rank: 3** Option 5 represents the second best opportunity to accommodate the Provincial Policy Statement's direction to accommodate a range of dwelling types and receives a rank of 3.

Ranking Key: 1 = Most Desirable, 5 = Least Desirable (rankings are relative)

Triple Bottom Line	Desired Results	Considerations	Measures	Option 1: No Expansion	Option 2: Appropriately Distributed Development	Option 3: Appropriately Distributed Development	Option 4: Appropriately Distributed Development	Option 5: Nodes and Corridors
		Does the option achieve a mix of building types and land uses	• *Description of land use mix (description of land use mix is not a true measure, but provides the basis on which qualitative evaluation may take place in other measures.)*	**No Ranking** The land use mix for Option 1 changes to an enhanced mixed-use form overtime, as core areas accommodate additional residential units of intensification. Residential densities in these mixed-use areas would be higher than in the other options, yet the interior fabric of existing neighbourhoods would likely remain at current densities. New single detached housing forms would be severely constrained, with an emphasis placed on medium and high-density housing forms. Additional commercial and institutional land uses must be met through either expansion of existing facilities or redevelopment of new facilities through land use changes.	**No Ranking** The land use mix for Options 2, 3 and 4 are the same. The existing mix of building types would be enhanced as residential intensification proceeds in existing downtowns, community cores, mainstreets and commercial areas. Changes in land uses for institutional and commercial uses to serve the existing urban area would be met through either expansion of existing facilities or redevelopments to include new facilities. Expansion areas are envisioned to contain a mix of uses. New growth areas will be planned to meet the minimum densities required by the Province's Places to Grow legislation.			**No Ranking** Land use change would be most significant in nodes as residential development is integrated into existing commercial core areas and existing retail centres are transformed with the addition of higher density residential uses. On the edges of proposed nodes, some redevelopment of low density into medium density area may be required in order to achieve an appropriate transition for density changes. Outside the nodes, corridors will become the main areas of change through residential intensification, creating additional mixed-use areas. Also, provision of new/upgraded institutional, commercial and recreational uses must be accommodated within each node, therefore land use is mixed to a much higher degree within the nodes in Option 5. Within the expansion area, a new node is proposed that would be developed at higher densities than recent suburban development, planned as a fully integrated live/work/play areas connected to the City by transit and corridor enhancements.

Triple Bottom Line	Desired Results	Considerations	Measures	Option 1: No Expansion	Option 2: Appropriately Distributed Development	Option 3: Appropriately Distributed Development	Option 4: Appropriately Distributed Development	Option 5: Nodes and Corridors
			• *Number of traffic zones that have population decline*	**Rank: 1** Population forecasts generated by the City for each option were divided by traffic zones (urban areas and fringe rural areas only). Option 1 is ranked first, as it has the fewest number of traffic zones with a declining population (61 zones)	**Rank: 3** Option 2 is ranked third, as it has 67 traffic zones with a declining population.	**Rank: 2** Option 3 is ranked second, as it has the 65 traffic zones with a declining population.	**Rank: 2** Option 4 is ranked second, as it has the 65 traffic zones with a declining population.	**Rank: 4** Option 5 is ranked fourth , as it has the most traffic zones that have a population declining (69).
			• *Amount of decline in population by traffic zone*	**Not Ranked:** The variation in the total population decline amongst the traffic zones with a declining population is less than a thousand and is not considered large enough to produce a ranking. Option 1 had a total population decline of 8,840.	**Not Ranked** Option 2 had a total population decline for the 67 traffic zones with a declining population of 9,450.	**Not Ranked** Option 3 had a total population decline for the 65 traffic zones with declining population of 9,300.	**Not Ranked** Option 4 had a total population decline for the 65 traffic zones with declining population of 9,300.	**Not Ranked** Option 5 had a total population decline for the 69 traffic zones with declining population of 9,850.
			• *Ease of retaining and providing new soft infrastructure services (schools, social services, etc.)*	**Rank: 2** Option 1 is seen to maintain the status quo, delivery efficiencies are already established.	**Rank: 2** Option 2,3 and 4 are considered to have similar implication for the delivery of soft services. Soft services for these new urban areas can be accommodated by existing program delivery infrastructure/locations.	**Rank: 2** Option 2,3 and 4 are considered to have similar implication for the delivery of soft services. Soft services for these new urban areas can be accommodated by existing program delivery infrastructure/locations.	**Rank: 2** Option 2,3 and 4 are considered to have similar implication for the delivery of soft services. Soft services for these new urban areas can be accommodated by existing program delivery infrastructure/locations.	**Rank: 1** Due to greater compaction of the built form, a greater economy of scale can be achieved for delivery of various social service programs.

Ranking Key: 1 = Most Desirable, 5 = Least Desirable (rankings are relative)

Triple Bottom Line	Desired Results	Considerations	Measures	Option 1: No Expansion	Option 2: Appropriately Distributed Development	Option 3: Appropriately Distributed Development	Option 4: Appropriately Distributed Development	Option 5: Nodes and Corridors
			• *Potential for disruption to communities resulting from stormwater infrastructure works*	**Rank: 4** Option is ranked fourth as it has the highest level of intensification and requires the highest amount of stormwater upgrades to existing infrastructure within the existing urban boundary. Disruptions will occur in existing neighbourhoods and so Option 1 is expected to provide the greatest potential for disruption amongst all of the options.	**Rank: 1** Option 2 is ranked first. This option requires the least amount of upgrades to existing infrastructure within the City's urban boundary and the most amount of new infrastructure outside of the existing built up area, and is, along with Option 4, the least disruptive of the options.	**Rank: 2** Option 2 is ranked second. This option is similar to Option 2 and 4, except that it also includes new urban development in the community of Pleasantview. The need for storm sewer upgrades within this community makes Option 3 slightly less desirable than Options 2 and 4.	**Rank: 1** Option 4 is ranked first. This option requires the least amount of upgrades to existing infrastructure within the City's urban boundary and the most amount of new infrastructure outside of the existing built up area, and is, along with Option 2, the least disruptive of the options.	**Rank: 2** Option 5 is ranked second and has a level of intensification that is less than Option 1 and is considered to have less potential for disruption. Option 5 also has more intensification than Options 2, 3 and 4 and so it considered to a have a higher potential for disruption than these three options.
			• *Potential for disruption to communities resulting from water and wastewater infrastructure works*	**Rank: 4** All options have common set of disruptions associated with upgrades to existing water and wastewater facilities. Given that all new growth will occur within the urban boundary, Option 1 will require a greater amount of local system improvements than most options and so disruption in existing communities is likely to be very high. Option 1 is ranked fourth.	**Rank: 2** Option 2 provides an opportunity to integrate escarpment-crossing capacity at the east limit, resulting in disruption of communities in this area. Option 2 is ranked second.	**Rank: 4** There is opportunity to integrate escarpment crossing capacity at both the east and west limit, resulting in greater disruption. Servicing strategy for Pleasantview would result in significant construction of horizontal infrastructure and pumping stations, likely causing a high potential for disruption to existing communities. Option 3 is ranked third.	**Rank: 3** There is opportunity to integrate escarpment crossing capacity at both the east and west limit, resulting in greater disruption of communities in these areas. Option 4 is ranked third.	**Rank: 1** Option 5 is considered to be most desirable option, as there is opportunity to integrate escarpment crossing capacity at the eastern limit to coordinate infrastructure with corridor improvements. Option 5 is ranked first.

Triple Bottom Line	Desired Results	Considerations	Measures	Option 1: No Expansion	Option 2: Appropriately Distributed Development	Option 3: Appropriately Distributed Development	Option 4: Appropriately Distributed Development	Option 5: Nodes and Corridors
			• *Potential for disruption to communities resulting from transportation infrastructure works*	**Rank 4:** Due to the high level of intensification, Option 1 is considered to have the greatest potential for disruption of existing communities resulting from both construction and the long term impacts of increased traffic flows. Option 1 is ranked fourth.	**Rank: 1** Option 2 is considered to have the least potential for disruption in existing communities. This option directs new development to one contiguous area outside of the existing urban area boundary. Option 2 is ranked first.	**Rank: 2** Option 3 is considered to have a slightly higher potential for disruption to existing communities than Option 2. This option also directs growth to areas outside of the existing urban boundary; however, development is spread across several different areas. Option 3 is ranked second.	**Rank: 2** Option 4 is considered to have a slightly higher potential for disruption to existing communities than Option 2. This option also directs new growth to areas outside of the existing urban boundary; however, development is spread across several different areas. Option 4 is ranked fourth.	**Rank: 3** Option 5 is considered to have a higher potential for disruption than Options 2,3 and 4 as Option 5 contains a higher level of intensification, resulting in a greater number of construction activities and increased levels of traffic within existing communities. Option 5 is ranked third.
		Does the option support closer live/work connections?	• *Number of residents within 5 km of CBD (Central Business District), other downtowns and IBP (Industrial Business Park) areas*	**Rank: 1** Option 1 has the highest number of residents living within 5km of the CBD, other downtowns and IBPs (541,800).	**Rank: 4** Option 2 has the fourth highest number of residents living within 5km of the CBD, other downtowns and IBPs (492,100).	**Rank: 3** Option 3 has the third highest number of residents living within 5km of the CBD, other downtowns and IBPs (507,200).	**Rank: 3** Option 4 is similar to Option 3, as it has 504,300 people living within 5km of the CBD, other downtowns and IBPs and so it receives the same rank.	**Rank: 2** Option 5 has the second highest number of people living within 5km of the CBD, other downtowns and IBPs (512,999).
			• *Commercial Service Levels - degree to which the option reduces the disparity across the City to the overall average City commercial service level*	**Rank: 3** Service level is a measure of how well each geographic area is served by retail and commercial services. Ideally, each area should be close to the City average. Option 1 has the highest level of deviation from the City average (32.3) and is ranked last.	**Rank: 1** Option 2,3 and 4 all have the lowest level of level of deviation from the City average (20.9)			**Rank: 2** Option 5 has a service level (26.4) which is better than Option 1, but not as good as Options 2,3 and 4.

Ranking Key: 1 = Most Desirable, 5 = Least Desirable (rankings are relative)

Triple Bottom Line	Desired Results	Considerations	Measures	Option 1: No Expansion	Option 2: Appropriately Distributed Development	Option 3: Appropriately Distributed Development	Option 4: Appropriately Distributed Development	Option 5: Nodes and Corridors
			• *Degree to which it fosters mixed use community opportunities*	**Rank: 1** Option 1 offers the greatest opportunity for mixing of uses throughout the City because it has the highest level of intensification.	**Rank: 3** Option 2, 3 and 4 all have the lowest level of intensification. Option 2 is considered to be better than Option 3 and 4 because of the concentration of the urban expansion area.	**Rank: 4** Option 2, 3 and 4 all have the lowest level of intensification. The urban expansion area for Option 3 is considerably more dispersed than Option 2 and offers the lesser opportunity for developing mixed uses in the growth area.	**Rank: 4** Option 2, 3 and 4 all have the lowest level of intensification. The urban expansion area for Option 4 is considerably more dispersed than Option 2 and offers the lesser opportunity for developing mixed uses in the growth area.	**Rank: 2** Option 5 offers substantial mixing in nodes and corridors but has a lower level of overall level of intensification than Option 1, offering a slightly less opportunity to foster mixed use opportunities.
			• *Number of residents within 1 km of commercial areas of 5 acres or more in size*	**Rank: 1** Projections for Option 1 reveal that is has the highest number of residents living within 1 km of commercial areas of 5 acres or more in size (575,600).	**Rank: 4** Projections for Option 2 reveal that is has fourth highest number of residents living within 1 km of commercial areas of 5 acres or more in size (555,100).	**Rank: 3** Projections for Option 3 show that is has the third highest number of residents living within 1 km of commercial areas of 5 acres or more in size (556,900).	**Rank: 5** Projections for Option 4 show that is has the least amount of people living within 1 km of commercial areas of 5 acres or more in size (549,000).	**Rank: 2** Projections for Option 5 show that is has the second highest number of people living within 1 km of commercial areas of 5 acres or more in size (566,600).
		Will our cultural heritage be protected?	• *Area of archaeological potential (ha)*	**Rank: 1** Archaeological potential is determined by proximity to water and deals with only those areas outside the existing urban boundary. Preferred sites for future development have a lesser amount of archaeological potential. Option 1 has no urban expansion areas and therefore has 0 hectares of archaeological potential and receives a rank of 1.	**Rank: 3** Option 2 has 1,000 hectares of archaeological potential and is ranked third.	**Rank: 5** Option 3 has 1,200 hectares of archaeological potential and is ranked fifth.	**Rank: 4** Option 4 has 1,100 hectares of archeological potential and is ranked fourth.	**Rank: 2** Option 5 has 900 hectares of archeological potential and is ranked second.

Ranking Key: 1 = Most Desirable, 5 = Least Desirable (rankings are relative)

Triple Bottom Line	Desired Results	Considerations	Measures	Option 1: No Expansion	Option 2: Appropriately Distributed Development	Option 3: Appropriately Distributed Development	Option 4: Appropriately Distributed Development	Option 5: Nodes and Corridors
			• *Area of cultural heritage landscape integrity (ha)*	**Rank: 1** Cultural heritage landscapes were measured only within the urban boundary expansion areas. A higher amount of cultural heritage landscape indicates a potential for land use conflict with future development. Option 1 has no cultural heritage landscapes and is ranked first.	**Rank: 5** Option 2 has approximately 1,090 hectares of cultural heritage landscape and is ranked fifth.	**Rank: 3** Option 3 has approximately 1,060 hectares of cultural landscape and ranked third.	**Rank: 4** Option 4 has approximately 1,060 hectares of cultural heritage landscape and is ranked fourth.	**Rank: 2** Option 5 has approximately 800 hectares of cultural heritage landscape and is ranked second.
Economic Well-Being	4) This Growth Option will help to attract and retain a skilled, innovative and diverse workforce	**Can this option be efficiently serviced?**	• *Ability to use existing transportation infrastructure*	**Rank: 1** Option 1 makes the best use of existing transportation infrastructure as all new growth is located within the existing urban area, allowing for a greater number of people to live in closer proximity to downtown employment. Also, those living in the central areas and working in outer areas will be traveling in the reverse direction of higher traffic flows. Option 1 is ranked first.	**Rank: 3** Option 2 is ranked third, as new growth will be located in one contiguous area outside the existing urban boundary. However, this option also has the lowest level of intensification and is the less likely to capitalize on the infrastructure benefits associated with intensification.	**Rank: 4** Option 3 is ranked fourth as it has limited opportunities to use existing transportation infrastructure. This option is the less likely to capitalize on the benefits associated with intensification. New roads and upgraded transit lines will be required to service the new growth area, which is spread across the fringes of the urban area representing an inefficient investment in infrastructure.	**Rank: 4** Option 4 is ranked fourth as it has limited opportunities to use existing transportation infrastructure. This option is the less likely to capitalize on the benefits associated with intensification. New roads and upgraded transit lines will be required to service the new growth area, which is spread across the fringes of the urban area representing an inefficient investment in infrastructure.	**Rank: 2** Option 2 is ranked second as it has the second highest amount of intensification and although significant new road and transit investment will be required to service a new urban expansion area, all of the new development will occur in one contiguous area.

Triple Bottom Line	Desired Results	Considerations	Measures	Option 1: No Expansion	Option 2: Appropriately Distributed Development	Option 3: Appropriately Distributed Development	Option 4: Appropriately Distributed Development	Option 5: Nodes and Corridors
			• *Ability to use existing water/waste water infrastructure*	**Rank: 1** This option requires maximizing existing infrastructure given that all growth is within the urban boundary. Location of existing infrastructure, with required capacity upgrades, should support servicing the growth.	**Rank: 2** This option will require extension of the water and wastewater systems along with new infrastructure. It is anticipated that most trunk infrastructure will be utilized for servicing.	**Rank: 3** This option will require extension of the water and wastewater systems along with new infrastructure. It is anticipated that most trunk infrastructure will be utilized for servicing. Pleasantview servicing will require additional new infrastructure and will have greater impact on Dundas and Waterdown trunk infrastructure.	**Rank: 2** This option will require extension of the water and wastewater systems along with new infrastructure. It is anticipated that most trunk infrastructure will be utilized for servicing.	**Rank: 2** This option will require extension of the water and wastewater systems along with new infrastructure. It is anticipated that most trunk infrastructure will be utilized for servicing.
			• *Ability to address existing water/wastewater system deficiencies and upgrade requirements*	**Rank: 1** Option 1 has the highest potential to address existing water /wastewater system deficiencies and upgrade requirements because all growth will occur within the existing urban area.	**Rank: 4** Due to the concentration of development on the eastern half of the City and a lower level of intensification, Option 2 offers the fewest opportunities for addressing existing water/wastewater system deficiencies and system upgrades required throughout the City.	**Rank: 2** Due to the spread out nature of the urban expansion areas, this option offers opportunity to for system improvements on both the eastern and western parts of the City. However, a lower level of intensification does reduce the opportunity to address system deficiencies and upgrades within certain pockets of the built up area. Option 3 would provide improved servicing and level of service to Pleasantview and so it is considered slightly better than Option 4.	**Rank: 3** Due to the spread out nature of the urban expansion areas, Option 4 offers opportunity for system improvements on both the eastern and western parts of the City. However, a lower level of intensification reduces the opportunity to address system deficiencies and upgrades within certain pockets of the existing built up area.	**Rank: 2** Option 5 has a concentration of development on southeast portion of the City and therefore new systems will be located on the eastern half of the City. This option also has lower level of intensification than Option 1 and therefore represents a lower opportunity to address system deficiencies and needed upgrades. However, synchronizing new infrastructure needs along with proposed corridors could support addressing needed upgrades within the urban boundary.

Triple Bottom Line	Desired Results	Considerations	Measures	Option 1: No Expansion	Option 2: Appropriately Distributed Development	Option 3: Appropriately Distributed Development	Option 4: Appropriately Distributed Development	Option 5: Nodes and Corridors
			• *Ability to use existing stormwater infrastructure*	**Rank: 4** This option requires the highest amount of upgrades to the storm sewer network. Higher intensification levels result in higher runoff volumes, requiring larger investments in existing infrastructure. 15% of existing storm sewer network requires upgrades.	**Rank: 1** Options 2, 3 and 4 all require the least amount of upgrades to the existing storm sewer network. The combination of lower intensification levels and new urban expansion means that 8% of the existing network needs to be upgraded.			**Rank: 2** This option requires a slightly higher amount of upgrades to the existing storm sewer network than options 2,3 and 4. The combination of intensification and urban expansion means that 10% of the existing network needs to be upgraded.
	5) This Growth Option will position Hamilton as a leading centre of economic growth		• *Impact on accessibility for goods movement*	**Rank: 3** Major employment areas are the same for all growth options and so differences in goods movement between each option are marginal. Option 1 could result in increased traffic congestion in the City but there is also some potential for a reduction of longer distance trips (due to compact nature of development) thereby freeing up capacity on the major routes.	**Rank: 2** Major employment areas are the same for all growth options and differences between each option are marginal. Distributed development pattern of this option will not result in the levels of congestion associated for Option 1. However, the service commercial development within the growth areas will be more dispersed and less efficient for local deliveries etc.	**Rank: 2** Major employment areas are the same for all growth options and differences between each option are marginal. Distributed development pattern of this option will not result in the levels of congestion associated for Option 1. However, the service commercial development within the growth areas will be more dispersed and less efficient for local deliveries etc.	**Rank: 2** Major employment areas are the same for all growth options and differences between each option are marginal. Distributed development pattern of this option will not result in the congestion associated for Option 1. However, the service commercial development within the growth areas will be more dispersed and less efficient for local deliveries etc.	**Rank: 1** Major employment areas are the same for all growth options and differences between each option are marginal. Option 5 may yield the largest reductions in congestion, given sufficient transit investment. Service commercial businesses located outside of the defined business parks will be concentrated in nodes and along main corridors, facilitating efficient goods movement.

Triple Bottom Line	Desired Results	Considerations	Measures	Option 1: No Expansion	Option 2: Appropriately Distributed Development	Option 3: Appropriately Distributed Development	Option 4: Appropriately Distributed Development	Option 5: Nodes and Corridors
	6) This Growth Option will maintain and enhance Hamilton's high quality environmental amenities.		*TRANSPORTATION* • *Infrastructure requirements, technical ease of construction, level of service, flexibility in scheduling, proven effectiveness and relative approximate costs*[1]*.*	**Rank: 1** Option 1 requires the least amount of investment in transportation infrastructure. Due to the high levels of intensification, this option has the potential to achieve a high transit mode split but there is potential for increased congestion in the urban area.	**Rank: 2** New growth projected in Option 2 is located in one contiguous area on the fringe of the existing urban area and has the potential perform slightly better than the other distributed development options. Option 2 may require a new escarpment crossing to account for the lower levels in the transit mode split.	**Rank: 3** Option 3 will require new roads and upgraded transit lines are required to service the new growth areas spread across the fringes of the City. This option will also result in longer average trip length and lower transit mode splits.	**Rank: 3** Option 4 will require new roads and upgraded transit lines are required to service the new growth areas spread across the fringes of the City. This option will also result in longer average trip length and lower transit mode splits.	**Rank: 2** Option 5 requires the most amount of transportation infrastructure, given its emphasis on higher order transit corridors. Urban expansion is contained to one contiguous growth area and has the potential to result in a high mode split, without concentrating excessive traffic in the central area.
			WATER & WASTEWATER • *Infrastructure requirements.*	**Rank: 1** This option requires maximizing existing infrastructure given that all growth is within the urban boundary. However, local system improvements may be greater given that all growth is within the urban boundary.	**Rank: 2** This option will require extension of the water and wastewater systems along with new infrastructure. There is opportunity to integrate escarpment crossing capacity at the east limit.	**Rank: 3** This option will require extension of the water and wastewater systems along with new infrastructure. There is opportunity to integrate escarpment crossing capacity at both the east and west limit. Servicing strategy for Pleasantview would result in significant construction of horizontal infrastructure and pumping stations.	**Rank: 2** This option will require extension of the water and wastewater systems along with new infrastructure. There is opportunity to integrate escarpment crossing capacity at both the east and west limit.	**Rank: 2** This option will require extension of the water and wastewater systems along with new infrastructure. There is opportunity to integrate escarpment crossing capacity at the east limit.

[1] Ranking for this measure reflects a 50% weighting applied to both infrastructure requirements and level of service.

Ranking Key: 1 = Most Desirable, 5 = Least Desirable (rankings are relative)

Triple Bottom Line	Desired Results	Considerations	Measures	Option 1: No Expansion	Option 2: Appropriately Distributed Development	Option 3: Appropriately Distributed Development	Option 4: Appropriately Distributed Development	Option 5: Nodes and Corridors
			• Technical ease of construction	**Rank: 4** Will require greater amount of local system improvements and disruption in existing communities given that all growth is within the urban boundary. Brownfield construction can have constructability issues.	**Rank: 2** There is opportunity to integrate escarpment crossing capacity at the east limit. Greenfield extension of services is located in one primary geographic area.	**Rank: 4** There is opportunity to integrate escarpment crossing capacity at both the east and west limit. Greenfield construction has greater geographic area. Servicing strategy for Pleasantview would result in significant construction of horizontal infrastructure and pumping stations. Topography in Pleasantview will require greater technical challenges	**Rank: 3** There is opportunity to integrate escarpment crossing capacity at both the east and west limit. Greenfield construction has greater geographic area.	**Rank: 1** There is opportunity to integrate escarpment crossing capacity at the east limit. There is also opportunity to coordinate infrastructure with corridor improvements. Greenfield extension of services is located in one primary geographic area.
				Level of service is the same for all	Level of service is the same for all	Level of service is the same for all	Level of service is the same for all	Level of service is the same for all

Triple Bottom Line	Desired Results	Considerations	Measures	Option 1: No Expansion	Option 2: Appropriately Distributed Development	Option 3: Appropriately Distributed Development	Option 4: Appropriately Distributed Development	Option 5: Nodes and Corridors
			• Level of service • *Flexibility in scheduling,*	**Rank: 2** Will require greater amount of local system improvements and upgrades within the existing urban boundary. Infrastructure timing could be coordinated with development timing.	**Rank: 2** There is opportunity to integrate escarpment crossing capacity at the east limit. This major infrastructure upgrade will be triggered with growth timing. With greenfield extension of services is located in one primary geographic area, timing of infrastructure is not as critical.	**Rank: 4** There is opportunity to integrate escarpment crossing capacity at both the east and west limit. However, given that the urban boundary expansion has a greater geographic area, it could create timing difficulties for the escarpment crossings (ie: east crossing proceeds first, then west growth pressure is experienced). Pleasantview will require significant infrastructure upgrades immediately regardless of level of initial development. Subsequent upgrades could be phased as development proceeds.	**Rank: 3** There is opportunity to integrate escarpment crossing capacity at both the east and west limit. However, given that the urban boundary expansion has a greater geographic area, it could create timing difficulties for the escarpment crossings (ie: east crossing proceeds first, then west growth pressure is experienced).	**Rank: 2** There is opportunity to integrate escarpment crossing capacity at the east limit. This major infrastructure upgrade will be triggered with growth timing. With greenfield extension of services is located in one primary geographic area, timing of infrastructure is not as critical. There is also opportunity to coordinate infrastructure with corridor improvements.

Triple Bottom Line	Desired Results	Considerations	Measures	Option 1: No Expansion	Option 2: Appropriately Distributed Development	Option 3: Appropriately Distributed Development	Option 4: Appropriately Distributed Development	Option 5: Nodes and Corridors
			• *Proven effectiveness and relative approximate costs*	**Rank: 4** Will require greater amount of local system improvements and disruption in existing communities given that all growth is within the urban boundary. Brownfield construction can have constructability issues and higher costs.	**Rank: 2** There is opportunity to integrate escarpment crossing capacity at the east limit. Greenfield extension of services is located in one primary geographic area and could have lower costs than brownfield construction.	**Rank: 4** There is opportunity to integrate escarpment crossing capacity at both the east and west limit. Multiple escarpment crossings will have greater costs. Greenfield construction has greater geographic area. Servicing strategy for Pleasantview would result in significant construction of horizontal infrastructure and pumping stations which will increase the servicing capital and operational costs. Topography in Pleasantview will require greater technical challenges.	**Rank: 3** There is opportunity to integrate escarpment crossing capacity at both the east and west limit. Multiple escarpment crossings will have greater costs. Greenfield construction has greater geographic area.	**Rank: 1** There is opportunity to integrate escarpment crossing capacity at the east limit. There is also opportunity to coordinate infrastructure with corridor improvements. Synchronizing this work could reduce costs attributed to construction of the infrastructure alone. Greenfield extension of services is located in one primary geographic area and could have lower costs than

Triple Bottom Line	Desired Results	Considerations	Measures	Option 1: No Expansion	Option 2: Appropriately Distributed Development	Option 3: Appropriately Distributed Development	Option 4: Appropriately Distributed Development	Option 5: Nodes and Corridors
			STORMWATER • *Infrastructure requirements, technical ease of construction, level of service, flexibility in scheduling, proven effectiveness and relative approximate costs, requirements for airport servicing*[2]	**Rank: 4** Option 1 represents the most expensive and technically difficult option to construct. High levels of intensification translate into a high potential for conflict with other existing municipal services, limited space for stormwater facilities and greater risks for public health and safety. Stormwater infrastructure costs for airport servicing and level of service are the same for all options.	**Rank: 2** Option 2 has the lowest level of intensification and has the lowest cost (along with 3 and 4). Ease of construction is considered to more complex than options 3 and 4 due to urban expansion in the Twenty Mile Creek subwatershed. Stormwater infrastructure costs for airport servicing and level of service are the same for all options.	**Rank: 1** Option 3 has the lowest level of intensification and therefore has the lowest cost (along with 2 and 4). Stormwater infrastructure costs for airport servicing and level of service are the same for all options.	**Rank: 1** Option 4 has the lowest level of intensification and therefore has the lowest cost (along with 2 and 3). Stormwater infrastructure costs for airport servicing and level of service are the same for all options.	**Rank: 3** Ease of construction is considered to more complex than options 3 and 4 due to a urban expansion in the Twenty Mile Creek subwatershed. Stormwater infrastructure costs for airport servicing and level of service are the same for all options.
		How many jobs are provided?	• *Number of population-related jobs created (see page 14 for definition)*	**Rank: 5** Option 1 creates the lowest projected number of population-related jobs (20,600).	**Rank: 3** Option 2 creates the third highest projected number of population-related jobs (24,800).	**Rank: 2** Option 3 creates the second highest projected number of population-related jobs (25,000).	**Rank: 4** Option 4 creates the fourth highest projected number of population-related jobs (24, 600).	**Rank: 1** Option 5 creates the highest projected number of population-related jobs (25,100).

[2] Ranking for this measure reflects the following weighting: Cost (25%), space limitations (25%), potential conflict with existing municipal services (25%) and need for unique groundwater geologic measures (25%).

Triple Bottom Line	Desired Results	Considerations	Measures	Option 1: No Expansion	Option 2: Appropriately Distributed Development	Option 3: Appropriately Distributed Development	Option 4: Appropriately Distributed Development	Option 5: Nodes and Corridors
		How does the option attract and retain a skilled, innovative, diverse workforce?	• *Population growth in Downtown and core areas*	**Rank: 1** All options focus a portion of growth in the downtown and core areas. Option 1 has the highest level of intensification and therefore has the highest rate of population growth in the downtowns and core areas, with an overall estimated increase of 31% by 2031.	**Rank: 3** Options 2, 3 and 4 all have the lowest levels of intensification and have the lowest estimated rate of population growth in the downtowns and core areas, with an increase of 21% by 2031.			**Rank: 2** Option 2 has the second highest level of intensification and therefore has the second highest rate of population growth in the downtowns and core areas, with an overall estimated increase of 25% by 2031.
		How does the option support existing commercial nodes	• *Population within 1 km of existing commercial areas of 5 acres or more*	**Rank: 1** Option 1 has the highest number of people living within 1km of existing commercial areas of 5 acres or more (575,600).	**Rank: 4** Option 2 has the fourth highest number of people living within 1km of existing commercial areas of 5 acres or more (555, 100).	**Rank: 3** Option 3 has the third highest number of people living within 1 km of existing commercial areas of 5 acres or more (556,900).	**Rank: 5** Option 4 has the lowest number of people living within 1 km of existing commercial areas of 5 acres or more (549,000).	**Rank: 2** Option 5 has the second highest number of people living within 1 km of existing commercial areas of 5 acres or more (566,600).
Ecological Well-Being	7) This Growth Option will ensure that Hamiltonians share equally in the benefits of a healthy natural environment. 8) This Growth Option will enhance economic development in an eco-efficient manner 9) This Growth Option will protect ecosystem health.	**How do we protect the functions of ecological systems?**	• *Number of hectares in growth areas that are in the Natural Heritage System*	**Rank: 1** Option 1 has 0 hectares within the Natural Heritage System, as this option does not have an urban expansion area. Option 1 is ranked highest.	**Rank: 3** Option 2 has the third highest amount of land within the Natural Heritage System (300 hectares).	**Rank: 5** Option 3 has the highest amount of land within the Natural Heritage System (390 hectares).	**Rank: 4** Option 4 has second highest amount of land within the Natural Heritage System (310 hectares).	**Rank: 2** Option 5 has second lowest amount of land within the Natural Heritage System (220 hectares).

Triple Bottom Line	Desired Results	Considerations	Measures	Option 1: No Expansion	Option 2: Appropriately Distributed Development	Option 3: Appropriately Distributed Development	Option 4: Appropriately Distributed Development	Option 5: Nodes and Corridors
			• *Linear distance of impacted Natural Heritage System in new growth areas (km)*	**Rank: 1** Option 1 has 0 km of impacted features within the Natural Heritage System, as this option does have an urban expansion area. Option 1 has the highest ranking.	**Rank: 3** Option 2 has 428 km of impacted features within the Natural Heritage System. Option 2 has the third longest distance.	**Rank: 5** Option 3 has 428 km of impacted features within the Natural Heritage System. Option 3 has the longest distance.	**Rank: 4** Option 4 has 496 km of impacted features within the Natural Heritage System. Option 4 has the second longest distance.	**Rank: 2** Option 2 has 136 km of impacted features within the Natural Heritage System. Option 2 has the fourth longest distance.
			• *Potential impacts to terrestrial and aquatic habitat*[3]	**Rank: 1** Option 1 is considered to have the fewest impacts because this option would not have any effect on Environmentally Sensitive Areas (ESAs), Provincially Significant Wetlands (PSWs), coldwater fisheries and creeks.	**Rank: 3** Option 2 has the second lowest impact potential to terrestrial and aquatic habitat. Future development in the urban expansion areas has the potential to impact to downstream PSWs in Tweny Mile Creek. Due to the concentration of development in one contiguous area impacts for impact to downstream PSWs in Tweny Mile Creek are less than those found in Options 3 and 4.	**Rank: 4** Option 3 represents highest potential for impact to ESAs, PSWs, coldwater fisheries in Borer's, Spencer, Sulphur and Red Hill Creek watersheds. Although development would not occur specifically in these features, they could still be negatively impacted by future adjacent development.	**Rank: 4** Option 4 represents highest potential for impact to ESAs, PSWs, coldwater fisheries in Borer's, Spencer, Sulphur and Red Hill Creek watersheds. Although development would not occur specifically in these features, they could still be negatively impacted by future adjacent development.	**Rank: 3** Option 5 represents the second lowest potential for impact to ESAs, PSWs, coldwater fisheries in Borer's, Spencer, Sulphur and Red Hill Creek watersheds. Due to the concentration of development in one contigous area impacts for impact to downstream PSWs in Tweny Mile Creek are less than those found in Options 3 and 4.

[3] This measure used the following weighting: Impacts on Borer's, Sulphur, Red Hill Creeks (50%), Twenty Mile Creek (50%).

Ranking Key: 1 = Most Desirable, 5 = Least Desirable (rankings are relative)

Triple Bottom Line	Desired Results	Considerations	Measures	Option 1: No Expansion	Option 2: Appropriately Distributed Development	Option 3: Appropriately Distributed Development	Option 4: Appropriately Distributed Development	Option 5: Nodes and Corridors
			• *Ecological impact of transportation infrastructure*	**Rank: 1** Option 1 is considered to have the least amount of ecological impact related to transportation infrastructure, as this option does not include any urban expansion.	**Rank: 3** Option 2 is has the highest probability for a new escarpment crossing as it concentrates development in one area south of the escarpment without any significant offsetting intensifications. It is considered to have the second highest potential impact on ecology.	**Rank: 4** Option 3 includes new development in Pleasantview and will require improvements to areas that cross Environmentally Sensitive Areas and/or designated Greenlands. For this reason, Option 3 is considered to have the highest impact on ecology.	**Rank: 2** The urban expansion areas for Option 4 is located in close proximity to ESAs and therefore any road widenings to support growth in these areas could have ecological impacts. Option 4 is considered to have the third highest impact on ecology.	**Rank 2:** Option 5 is considered to have minimal impacts on ecological features, however, this option does include an urban expansion area in the southern portion of City and any new road widenings associated with the growth area could have ecological impacts. Option 5 is considered to have the third highest impact on ecology.
		Does the Option Preserve our Agricultural Land/Rural Areas?	• *Acreage of prime agricultural area (as defined by LEAR Analysis) in new growth areas*	**Rank: 1** Option 1 does not have a new growth area and so it has 0 acres of prime agricultural land displaced by new development.	**Rank: 5** Option 2 has the highest number of prime agricultural land displaced by new development in the growth area (1000 acres).	**Rank: 2** Option 3 has the second lowest number of prime agricultural land displaced by new development in the growth area (430 acres).	**Rank: 3** Option 4 the third lowest number of prime agricultural land displaced by new development in the growth area (500 acres).	**Rank: 4** Option 5 has the fourth highest lowest number of prime agricultural land displaced by new development in the growth area (830 acres).
			• *Number and area of active farm parcels in new growth areas*	**Rank: 1** Option 1 does not have a new growth area and so it has 0 active farm parcels and 0 hectares of active farm parcels impacted.	**Rank: 4** Option 2 has the second highest number active farm parcels impacted, as it 56 farm parcels totaling 580 hectares within new growth areas.	**Rank: 3** Option 3 has the third highest number active farm parcel impacted, as it 56 farm parcels totaling 560 hectares within new growth areas.	**Rank: 5** Option 4 has the highest number active farm parcel impacted, as it 55 farm parcels totaling 610 hectares within new growth areas.	**Rank: 2** Option 5 has the fourth highest number active farm parcel impacted, as it 47 farm parcels totaling 497 hectares within new growth areas.
			• *Number of Primary Farm Parcels (agricultural properties with farm outbuildings*	**Rank: 1** Option 1 does not have a new growth area and so Has 0 primary farm parcels impacted.	**Rank: 4** Option 2 has the second highest number of primary farm parcels impacted by new growth areas (25).	**Rank: 3** Option 3 has the third highest number of primary farm parcels impacted by new growth areas (23).	**Rank: 5** Option 4 has the highest number of primary farm parcels impacted by new growth areas (28).	**Rank: 2** Option 5 has the fourth highest number of primary farm parcels impacted by new growth areas (17).
		Does this option result in cleaner air and water?	• *Projected change in Vehicle Kilometers traveled and estimated change*	**Rank: 1** Option 1 is considered to be the most preferred, as it results in the lowest	**Rank: 4** Option 2 is considered to be the least preferred, as it results in the highest overall fuel use,	**Rank: 3** Option 3 is only marginally more fuel-efficient than Option 2.	**Rank: 3** Option 4 is only marginally more fuel-efficient than Option 2.	**Rank: 3** Option 5 is only marginally more fuel-efficient than Option 2.

Ranking Key: 1 = Most Desirable, 5 = Least Desirable (rankings are relative)

Triple Bottom Line	Desired Results	Considerations	Measures	Option 1: No Expansion	Option 2: Appropriately Distributed Development	Option 3: Appropriately Distributed Development	Option 4: Appropriately Distributed Development	Option 5: Nodes and Corridors
			in fuel consumption (as surrogate for reduction in air emissions)	overall fuel use (in part due to the lower overall population for this option).	approximately 10,000 more litres than Option 1.			
			• *Proximity of residents to transit/ transit opportunity (population located within 400 metres of existing transit system)*	**Rank: 1** Option 1 has the highest proportion of people living in close proximity to the existing transit system and is considered to be the best option for this measure.	**Rank: 3** Option 2 is considered to have the lowest portion of residents living in close proximity to the existing transit system. This option does offer potential for better access to transit in future (than Options 3 and 4) should the transit system be extended to the new growth areas	**Rank: 3** Option 3 is considered to have the lowest portion of residents living in close proximity to the existing transit system. Future upgrades to the existing transit system to accommodate new growth areas would result in lower access levels than those found in the growth areas of Option 2 and 5.	**Rank: 3** Option 4 is considered to have the lowest portion of residents living in close proximity to the existing transit system. Future upgrades to the existing transit system to accommodate new growth areas would result in lower access levels than those found in the growth areas of Option 2 and 5.	**Rank: 2** With lower levels of intensification and an urban boundary expansion, Option 2 has a fewer number of people living in close proximity to the existing transit system. This option does offer potential for better access to transit in future (than Options 3 and 4) should the transit system be extended to the new growth areas.
			• *Mode split*	**Rank: 2** Option 1 is considered to be more desirable that Options 2, 3 and 4, because it offers higher concentration of population within the existing urban area, creating a better opportunity to support transit.	**Rank: 3** Option 2 is considered to have the lowest potential mode split.	**Rank: 3** Option 3 is considered to have the lowest potential mode split.	**Rank: 3** Option 4 is considered to have the lowest potential mode split.	**Rank: 1** Option 5 is considered to have the highest potential mode split because it concentrates growth along major corridors and into compact nodes where transit could be designed to operate more efficiently and cost-effectively.

Triple Bottom Line	Desired Results	Considerations	Measures	Option 1: No Expansion	Option 2: Appropriately Distributed Development	Option 3: Appropriately Distributed Development	Option 4: Appropriately Distributed Development	Option 5: Nodes and Corridors
			• *Potential impacts to flooding*[4]	**Rank: 1** Option 1 is considered to have the lowest potential for impact on flooding since it does not contain an urban boundary expansion.	**Rank: 3** Due the presence of flood susceptible areas downstream of the urban expansion areas, Option 2 is considered to have more potential for flooding impacts than Option 1, but less than Option3. Options 2,4 and 5 are considered to have similar potential impacts.	**Rank: 4** Option has the highest amount of urban expansion concentrated in areas that would impact downstream flood susceptible areas and therefore represents the least desirable of all options.	**Rank: 3** Due the presence of flood susceptible areas downstream of the urban expansion area, Option 4 is considered to have more potential for flooding impacts than Option 1, but less than Option3. Options 2,4 and 5 are considered to have similar potential impacts.	**Rank: 3** Due the presence of flood susceptible areas downstream of the urban expansion area, Option 5 is considered to have more potential for flooding impacts than Option 1, but less than Option3. Options 2,4 and 5 are considered to have similar potential impacts.
			• *Potential for impacts on water quality and erosion*[5]	**Rank: 1** Option 1 is considered to have the least potential for impacts on water quality and erosion. Option 1 and 2 are considered to have same relative impacts.	**Rank: 1** Option 2 is considered to the have the least potential for impacts on water quality and erosion. Option 1 and 2 are considered to have same relative impacts.	**Rank: 3** Option 3 is considered to have the greatest potential for impact on water quality and erosion due to presence of both intensification and development in urban expansion in both Stoney Creek and Borer's, Sulphur and Red Hill Creek watershed.	**Rank: 2** Option 4 is considered to have a potential impact on water quality and erosion that is greater than Option 1 and 2, but less than that of Option3. Option 4 is considered to have the same relative impacts as Option 5.	**Rank: 2** Option 4 is considered to have a potential impact on water quality and erosion that is greater than Option 1 and 2, but less than that of Option3. Option 4 is considered to have the same relative impacts as Option 4.
			• *Potential impacts to groundwater and geology*[6]	**Rank: 1** Option 1 is considered to have the lowest potential for impacts on groundwater and geology with no urban expansion into the Stoney Creek, Twenty Mile and	**Rank: 3** Option 2 and 5 have the highest level of potential impact to the groundwater and geologic features in Twenty Mile Creek due to the concentration of future urban boundary expansion within this	**Rank: 4** Overall, Option 3 and 4 are considered to have the greatest potential impact on groundwater and geologic features due to urban boundary expansion in the Twenty Mile Creek watershed and in the	**Rank: 4** Overall, Option 4 and 3 are considered to have the greatest potential impact on groundwater and geologic features due to urban boundary expansion in the Twenty Mile Creek watershed and in the	**Rank: 3** Option 5 and 2 have the highest level of potential impact to the groundwater and geologic features in Twenty Mile Creek due to the concentration of future urban boundary expansion within this

[4] This measure used the following weighting: Impacts on Stoney Creek (25%), Borer's, Sulphur (25%) and Twenty Mile Creeks (25%) and Grindstone (25%).
[5] This measure used the following weighting: Impacts from intensification on Chedoke, Red Hill and Stoney Creek watersheds (25%), impacts from urban boundary expansion and development of vacant lands in Stoney Creek watershed (25%), Borer's, Sulphur and Red Hill Creek watersheds (25%) and Gridstone Creek watershed (25%).
[6] This measure used the following weighting: Impacts on Twenty Mile Creek (50%), Borer's Sulphur, Red Hill Creeks (50%).

Triple Bottom Line	Desired Results	Considerations	Measures	Option 1: No Expansion	Option 2: Appropriately Distributed Development	Option 3: Appropriately Distributed Development	Option 4: Appropriately Distributed Development	Option 5: Nodes and Corridors
				Grindstone Creek subwatersheds.	watershed, However, overall, Option 2 is considered to have less impact on sensitive groundwater features than Option 3 and 4 because it contains less future development in the Borer's, Red Hill and Sulphur Creek subwatersheds.	Borer's, Red Hill and Sulphur Creek subwatersheds.	Borer's, Red Hill and Sulphur Creek subwatersheds.	watershed, However, overall, Option 5 is considered to have less impact on sensitive groundwater features than Option 3 and 4 because it contains less future development in the Borer's, Red Hill and Sulphur Creek subwatersheds.

5. REFERENCE DOCUMENTS

GOALS

LOCAL ECONOMY

- To improve the ability of local businesses and organizations to compete both locally and globally and thus provide all citizens with an opportunity to have an income to meet, as a minimum, the necessities of life.
- To increase the number of businesses and organizations that are non-polluting and those that actually produce quality of life products and services that control, reduce and prevent pollution.
- To make Hamilton's labour force the best trained and adaptable in the world to ensure local business and organizations are competitive and innovative.
- To eliminate all types of barriers to employment.
- To promote Hamilton's environment as a desirable place to live and work.

AGRICULTURE AND THE RURAL ECONOMY

- To ensure Hamilton Region has healthy soil and water from which to produce food for our community.
- To ensure sufficient land is available to grow food for future generations.
- To increase the availability of appropriate farm labour.
- To make agriculture a viable economic activity in Hamilton.
- To improve understanding of agriculture concerns by urban dwellers, new comers to rural areas and local governments.
- To ensure Hamilton is a community of people educated with regards to agriculture and healthy, sustainable food production and consumption patterns.

NATURAL AREAS AND CORRIDORS

- To develop and protect a system of interconnected natural areas which provides for the growth and development of native plants and wildlife and, where appropriate provides access for all citizens of Hamilton.

IMPROVING THE QUALITY OF WATER RESOURCES

- To ensure the water quality in streams, Cootes Paradise, Hamilton Harbour, Lake Ontario and other surface bodies is generally good, that the water is clean and clear and that swimming is a safe activity.
- To identify and virtually eliminate sources of potential chemical contamination.
- To reduce the municipal water use of households and businesses.
- To restore adequate habitat for fish and birds so that populations are healthy and productive.
- To ensure the quality of groundwater throughout the Region is suitable for drinking and is a source of pure recharge for surface waters.
- To ensure that water quality is not affected by run-off and sedimentation due to changes in the landscape.
- To make the Lake Ontario and Hamilton Harbour waterfronts accessible, safe and attractive for recreation.

REDUCING AND MANAGING WASTE

- To reduce the amount of waste generated by residents, businesses and government in the Region.
- To virtually eliminate hazardous waste in Hamilton.
- To safely and responsibly manage waste.

CONSUMING LESS ENERGY

- To reduce the consumption of non-renewable energy and eliminate the excessive and wasteful use of energy.

IMPROVING AIR QUALITY

- To ensure the Region has the best air quality of any major urban area in Ontario.
- To reduce greenhouse gas emissions 20% from 1990 levels.

MANAGING CLIMATE CHANGE

- ❒ To reduce greenhouse gas emissions from municipal operations by 20% from 1994 levels and city-wide sources by 6% of 1994 levels.
- ❒ To have effective plans that identify, reduce and manage risks.

CHANGING OUR MODE OF TRANSPORTATION

- ❒ To develop an integrated sustainable transportation system for people, goods and services which is environmentally friendly, affordable, efficient, convenient, safe and accessible.
- ❒ To encourage a shift in personal lifestyle and behaviour towards transportation choices that enhance personal health and fitness, save money, and have the lowest environmental cost.

LAND USE IN THE URBAN AREA

- ❒ To curb urban sprawl and suburban encroachment onto rural and agricultural lands.
- ❒ To encourage development which makes efficient and economical use of infrastructure and services.
- ❒ To minimize the environmental, social, and financial costs of new development to the residents of Hamilton.
- ❒ To preserve our natural and historical heritage.
- ❒ To redevelop Hamilton's central core as the regional centre.
- ❒ To reduce commuting distances.
- ❒ To use alternative modes of movement, such as, walking, bicycling, and public transit everyday.

ARTS AND HERITAGE

- ❒ To achieve community-wide awareness and participation in the arts and our natural and cultural heritage.
- ❒ To ensure artists in all disciplines have opportunities to develop and share their art with the community.
- ❒ To ensure arts and heritage organizations are financially vital and effective in serving the community.
- ❒ To celebrate and preserve the diversity of our natural and cultural heritage and recognize the contribution of first nations people.

PERSONAL HEALTH AND WELL-BEING

- ❒ To provide adequate and appropriate health care services for all citizens.
- ❒ To increase the number of years of good health for all citizens by reducing illness, disability and premature deaths.
- ❒ To promote health and prevent disease and injury.
- ❒ To improve personal health status.
- ❒ To develop a caring community which gives support and opportunity to all its members.
- ❒ To reduce the number of families living in poverty.
- ❒ To develop the social and physical environments to create a barrier-free community that allows all citizens to participate fully in community life.

SAFETY AND SECURITY

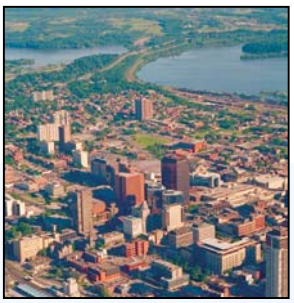
- ❒ To develop the social and physical environments that allow all citizens to participate fully and safely in our community, schools and workplaces.
- ❒ To have effective plans that identify, reduce and manage risks.
- ❒ To prevent violence and abuse in our community.

EDUCATION

- ❒ To raise and sustain necessary levels of literacy and education and foster a climate that supports lifelong learning.

COMMUNITY WELL-BEING AND CAPACITY BUILDING

- ❒ To enable participation by all citizens and communities in government decisions and in the development of cultural, educational and health and social services.
- ❒ To ensure public activities and decisions at all levels of government are coordinated, efficient, effective and easily accessible to all citizens.
- ❒ To develop our economic, social and physical environments so as to enable the participation of all citizens and communities in local and regional community life.
- ❒ To develop cultural institutions, public facilities and parks and open space which inspire community pride and sense of place.
- ❒ To build and develop the capacity of individuals, community organizations, the private and non-profit sectors to be self-reliant.



GRIDS Study Design, September 2003

Nine Directions to Guide Development

The "Building a Strong Foundation" consultation process identified Nine Directions to guide development decisions. The Directions were adopted by City Council on September 24, 2003. These will inform the requirements for the background studies and will be used as the basis for creating development options in the GRIDS process.

Direction #1 – Encourage a compatible mix of uses in neighbourhoods that provide opportunities to live, work and play.

Direction #2 – Concentrate new development within existing built-up areas and within a firm urban boundary.

Direction #3 – Protect rural areas for a viable rural economy, agricultural resources, environmentally sensitive recreation and enjoyment of the rural landscape.

Direction #4 – Design neighbourhoods to improve access to community life.

Direction #5 – Retain and attract jobs in Hamilton's strength areas and in targeted new sectors.

Direction #6 – Expand transportation options that encourage travel by foot, bike and transit and enhance efficient inter-regional transportation connections.

Direction #7 – Maximize the use of existing buildings, infrastructure and vacant or abandoned land.

Direction #8 – Protect ecological systems and improve air, land and water quality.

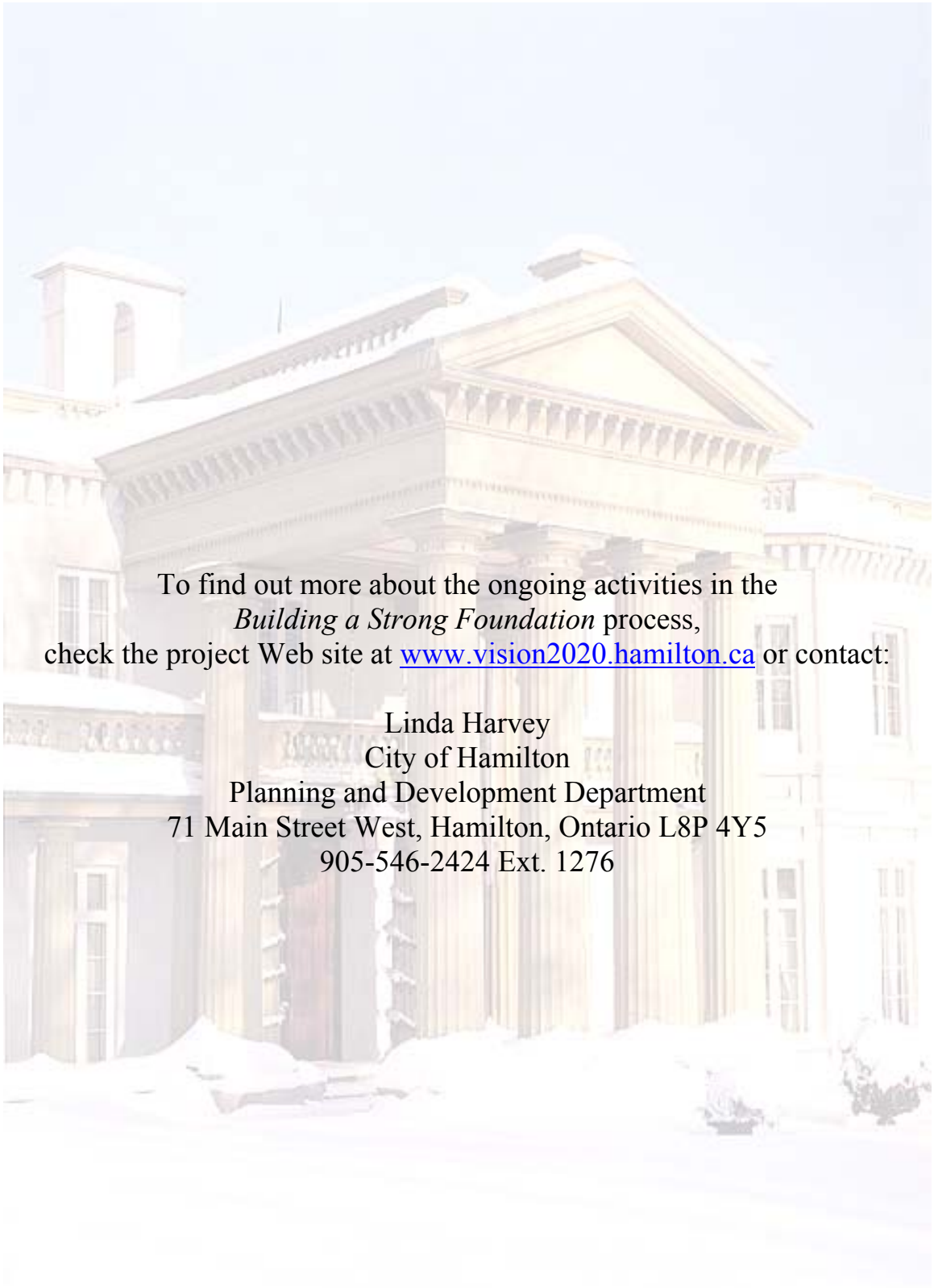
Direction #9 – Maintain and create attractive public and private spaces and respect the unique character of existing buildings, neighbourhoods and settlements.

The sustainability principles in VISION 2020 and the nine Directions address elements of the Ontario Disabilities Act at a strategic planning level.

VISION 2020 HAMILTON

Hamilton

BUILDING A STRONG FOUNDATION HAMILTON



To find out more about the ongoing activities in the
Building a Strong Foundation process,
check the project Web site at www.vision2020.hamilton.ca or contact:

Linda Harvey
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WELCOME

City of Hamilton

Growth Related Integrated Development Strategy (GRIDS)

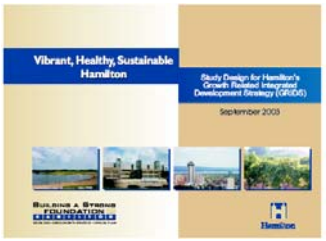
Public Information Sessions

What you will see here today

The Displays are Organized Around These Themes

- The Growth Options
- Creating Neighbourhoods
- The Employment Picture
- Infrastructure Issues and Opportunities

We would like your input on the information presented



GRIDS Background

Why GRIDS??

- In Ontario, the provincial government sets broad guidelines for urban growth and development through policies like the Provincial Policy Statement, Greenbelt Plan and Places to Grow Plan.
- GRIDS addresses the Provincial direction coming from recent initiatives like *Places to Grow*. Basically, it's the City's strategy to plan for the changing demographic and economic landscape in the Province.
  - It is based on the Provincial forecasts of the number of people and jobs that will come to Hamilton
  - It clearly defines the physical constraints to growth in the City
  - It ensures that Council will understand the financial, social and infrastructure implications when deciding where to grow

GRIDS Background - Provincial Policy

The Provincial Policy Statement states that:

"1.4.2 Where planning is conducted by an upper-tier municipality:

a) the land and unit supply maintained … shall be based on and reflect the allocation of population and units by the upper-tier municipality; and

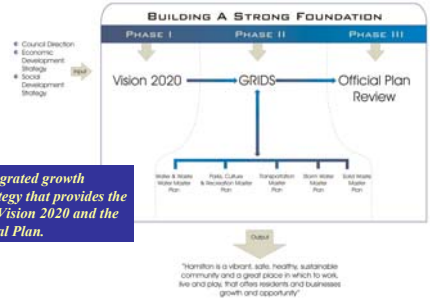
b) the allocation of population and units … shall be based on and reflect *provincial plans* where these exist."

The draft Places to Grow Plan (P2G) states:

"2.2.2 Policies for growth forecasts and regional distribution

1. Population, household and employment forecasts contained in ..(P2G).. will be used as the basis for this Growth Plan for the Greater Golden Horseshoe. .
2. The preparation and updating of municipal official plans and any related municipal growth studies will be based on the population, household and employment forecasts contained in..(P2G)…"

GRIDS Background



GRIDS is the integrated growth management strategy that provides the key link between Vision 2020 and the City's New Official Plan.

GRIDS Background

- Citizens of Hamilton helped to establish an interrelated set of directions for accommodating new people and jobs in a way that supports the City's Vision.
- These Directions are the starting point for Hamilton's 30-year growth strategy, GRIDS.
- The GRIDS process and ultimately the final growth management plan reflect these directions.

GRIDS Background - Process

What's Happened So Far?

- Study design for GRIDS prepared in Fall 2003
- Long List of Growth Concepts presented in May 2005

  Status quo; No Expansion; Appropriately Distributed Development; Downtown Focus; Nodes and Corridors; Build to the Limit and Stop
- Information on Infrastructure Master Plans presented in June 2005

  Existing Conditions, Infrastructure Policies

GRIDS – Important Considerations

- Growth Options do not mean immediate urban boundary expansion. Details on the timing and phasing of both growth and infrastructure will be looked at in the next step.
- All growth options include intensification of the existing built up area. Community involvement and quality of design is important.
- The City is committed to livable neighbourhoods both within the existing built area as well as new areas.
- Employment growth must reinforce role of downtowns and mainstreets.
- With the new airport-Hwy 6 employment area, Hamilton has sufficient employment lands for its forecasted employment growth.
- With effort to implement our transportation policies and bring employment to the Mountain we can avoid a new road crossing of the Niagara Escarpment for any of the options.
- The City must upgrade its water and wastewater treatment plant capacity for all options.
- New trunk main capacity for water and wastewater is needed across the escarpment for all options.
- Stormwater management, can be effectively managed for all options but there is no one-size fits all solution – solutions must reflect local circumstances/constraints.

Growth Options

How Much Growth to 2030?

- The Province developed 2 forecasts for Hamilton showing a population growth ranging from 150,000 people (compact scenario) to 190,000 people (more compact scenario)
- This means a need for 80,000 to 100,000 new homes (called housing units) and 90,000 to 100,000 new jobs
- To be attractive to all residents, Hamilton must provide a variety of housing types including detached and semi-detached single family homes (low density housing), townhouses (medium density housing), and apartments and condos (high density housing)
- There is room for some of the growth in existing lands within the urban boundary that are not yet built on (called vacant land inventory or VLI) and by intensifying or adding people to the existing built areas (residential intensification or RI)

Housing Unit Type	Number of Housing Units Needed		Number of Units we already have room for (VLI & RI)
	Compact	More Compact	
Low	40,000	41,000	26,000
Med.	17,000	23,000	18,600
High	23,000	36,000	19,600
Total	**80,000**	**100,000**	**64,200**

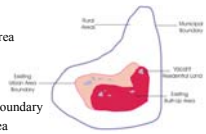
We need to find room for 20,000 to 40,000 more housing units

Growth Options

Where Should We Where Should We Grow?

An important consideration in determining how the City grows is the potential for positive and negative impacts of growth on existing neighbourhoods and communities

New growth can take place:
- –Within the existing built up area (intensification and infill development)
- –On vacant residential land within the designated urban boundary
- –Outside the existing urban area boundary



Creating the Growth Options

To create the growth options we:
- Developed concepts (presented in May 2005)
- Identified constraints to avoid
- Mapped options considering remaining unconstrained areas

Growth Options - Common Elements

All options:

- Exclude key provincially significant natural features;
- Maintain City's committed employment areas;
- New Airport-Hwy 6 Employment Area consistent for all options;
- Intensification component consistent with draft provincial policy (Places to Grow);
- Assume minimal growth in rural areas;
- Growth Areas are complete communities
  - accommodate lands for parks, open space & institutional uses;
  - mixed use, transit supportive communities;
- Assume that development density will increase over time; and,
- Reflect the provincial growth forecasts for Hamilton.

Growth Options - Common Elements

All Options Include:

Transportation:
- Enhanced Transit Service
- Committed/planned road improvements
  - Waterdown, North Glanbrook
- Improved Goods Movement Access to Port and Airport
- Improved Walking and Cycling Networks
- Travel Demand Management Alternatives including Smart Commute

Water and Wastewater:
- Upgrades to the City's water and wastewater treatment capacity
- Integration of stormwater issues with sewer and Combine Sewer Overflow (CSO) capacity. Continued implementation of CSO and real time control programs
- New water and wastewater trunk infrastructure across the escarpment to increase capacity for the southern service areas including the new Highway 6 Employment Area

Stormwater:
- Analysis of potential water quality impacts (glycol, metals, solids) associated with Airport development
- The potential for impact on geologic features and existing erosion/flood hazards in Grindstone Creek due to development of vacant residential lands
- Potential impact to headwater agricultural streams in Big Creek from future residential and business/ employment development

Option 1 - No Urban Boundary Expansion

Community

Focusing growth downtown helps promote increased transit and facilitate the development of a cohesive community where people can live and work. High intensification requires strong building design guidelines and may make it difficult to provide a full range of housing choice.

Transportation

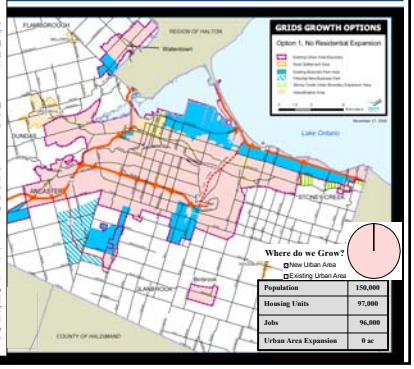
Opportunity for expanded transit and improved pedestrian movement in urban area. Transit may be needed up the escarpment to serve employment areas.

Water &Wastewater

All options need water and wastewater mains across the escarpment to service employment growth. This option does not capitalize on these mains to serve residential growth. Infrastructure upgrades will be required within developed urban boundary.

Stormwater

Lowest overall impact on the environment for stormwater but highest cost for storm sewer upgrades needed for intensification. Approximately 15% of the existing storm sewer network may need to be upgraded/replaced to service intensification. All Options have potential for some impact on the quality or quantity of water in the creeks. The location of the residential intensification may result in potential impacts to Red Hill Creek, Chedoke Creek and Stoney Creek.



Population	150,000
Housing Units	97,000
Jobs	96,000
Urban Area Expansion	0 ac

Option 1 - No Urban Boundary Expansion

DRAFT	Key Advantages	Key Disadvantages	Key Challenges
Community	• Facilitates live-work, community cohesion.	• Potential for increased traffic infiltration. • Significant disruption to neighborhoods from construction of infrastructure and housing in urban area. • May not provide mix of housing types needed over 30 year plan.	• High intensification requires high quality building design to attract residents and reinvigorate neighborhoods. • High intensification raises challenges in provision of range of housing types at the right time.
Ecological	• Reduces trip lengths and auto use. • Minimizes new road corridors. • No impacts to rural/agricultural areas with no expansion of urban boundary.	• Significant potential for stormwater impact on erosion and water quality as a result of intensification (concentrated in Chedoke Creek, Red Hill Creek, and Stoney Creek).	• Location of specific infrastructure services to minimize impacts on environment and specific ecological features. • Implementing stormwater retrofit in dense urban areas.
Economic	• Reduces road expansion costs.	• Increases congestion. • Significant construction in urban area will have higher unit costs. • Less flexibility for servicing alternatives given that growth is within the already confined urban area. • Most expensive option for storm sewer system upgrades. • Lower population and jobs accommodated than other options.	• Higher level of economic risk due to reliance on success of policy intervention to attract intensification development and market.

Option 2 - Distributed Development

Community

Focuses new urban area growth providing opportunity for building a distinctive, vibrant, mixed, high quality community that is pedestrian/transit oriented. Intensification levels are considered reasonable with appropriate policy intervention. Removes approximately 2500 acres of agricultural land.

Transportation

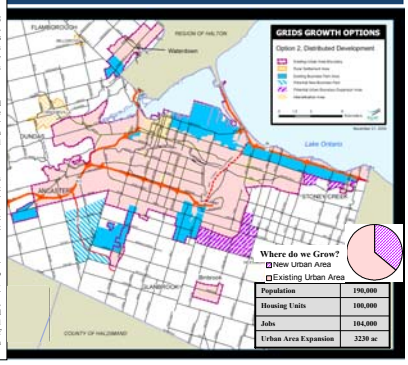
Options 2, 3 and 4 will all require expanded Transit Service Area on the Mountain. These options also result in a potential need for additional transportation capacity north-south across the escarpment and an expanded local collector road system in south east.

Water &Wastewater

All options need water and wastewater mains across the escarpment to service employment growth. This option results in significant water and wastewater demand in the southeast. Servicing for the residential and employment areas could be integrated with an east escarpment crossing.

Stormwater

Approximately 8% of the existing storm sewer network may need to be upgraded/replaced to service intensification for Options 2, 3 & 4. These options will require stormwater management for the new urban areas, however, new development areas are typically easier and less costly to service. All Options have potential for some impact on the quality or quantity of water in the creeks. Option 2 may result in impacts on Twenty Mile Creek and Stoney Creek.



Population	190,000
Housing Units	100,000
Jobs	104,000
Urban Area Expansion	3230 ac

Option 2 - Distributed Development

DRAFT	Key Advantages	Key Disadvantages	Key Challenges
Community	• New communities will be designed for walking, cycling and transit. • Option 2 focuses greenfield growth in one area providing opportunity for building a distinctive, vibrant, mixed, high quality community that is pedestrian/transit oriented.	• Draws focus away from downtown which reduces support for downtown transit. • Potential for moderate disruption to neighourhoods from construction of infrastructure and housing.	• Intensification levels are considered reasonable with appropriate policy intervention.
Ecological	• Least expensive option for storm sewer retrofit and upgrades in existing urban areas.	• Dispersed development increases trip lengths. • Development has moderate potential for impact on downstream flood hazards, wetlands and geologic features in Twenty Mile Creek watershed. Some impacts on other watersheds also possible as a result of development. • Removes 2500 acres of agricultural area.	• Locating specific infrastructure services to minimize impacts on environment and specific ecological features.
Economic	• Reduces congestion on inner area roads. • Lower unit cost for servicing as greenfield unit costs are less than intensification unit costs. • Opportunity for integrating water and wastewater servicing needs for employment and residential. • Options 2, 3 and 4 accommodate maximum growth forecast.	• Potential for increased road costs. • Highest cost for drainage & stormwater works in Urban Boundary Expansion Areas.	• Feasibility relating to development in rural watersheds needs to be addressed.

Option 3 - Distributed Development

Community

New growth is dispersed to minimize impacts to agricultural land. Removes 1070 acres of agricultural area. Intensification levels are considered reasonable with appropriate policy intervention.

Transportation

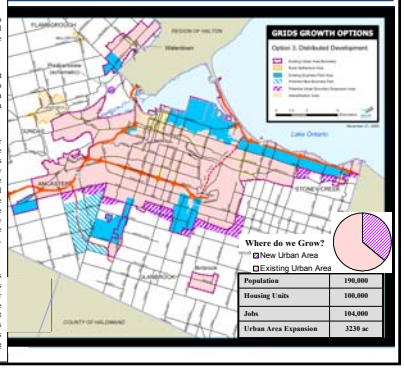
Options 2, 3 and 4 will all require expanded Transit Service Area on the Mountain. These options also result in a potential need for additional transportation capacity north-south across the escarpment and an expanded local collector road system in south east.

Stormwater

Approximately 8% of the existing storm sewer network may need to be upgraded/replaced to service intensification for Options 2, 3 & 4. These options will require stormwater management for the new urban areas, however, new development areas are typically easier and less costly to service. All Options have potential for some impact on the quality or quantity of water in the creeks. The location of Options 3 and 4 widely distribute new growth resulting in potential to effect Twenty Mile Creek, Stoney Creek, Borer's Creek, Spencer Creek, Sulphur Creek, and Red Hill Creek.

Water &Wastewater

All options need water and wastewater mains across the escarpment to service employment growth. This option results in significant water and wastewater demand in the southwest. Servicing for the residential and employment areas could trigger west trunk infrastructure upgrades and be integrated with a west escarpment crossing. This option includes servicing Pleasantview which is a very challenging area to service due primarily to topography.



Population	190,000
Housing Units	100,000
Jobs	104,000
Urban Area Expansion	3230 ac

Option 3 - Distributed Development

DRAFT	Key Advantages	Key Disadvantages	Key Challenges
Community	• New communities will be designed for walking, cycling and transit. • New growth is dispersed to minimize impacts to agricultural land.	• Draws focus away from downtown which reduces support for downtown transit. • Potential for moderate disruption to neighourhoods from construction of infrastructure and housing. • Options 3 and 4 are quite dispersed providing less opportunity to create a new urban area with distinctive character.	• Intensification levels are considered reasonable with appropriate policy intervention.
Ecological	• Least expensive option for storm sewer retrofit and upgrades in existing urban areas.	• Dispersed development increases trip lengths. • Moderate potential for some impact on water quality and quantity in downstream watersheds as a result of development. • Removes 1070 acres of agricultural area.	• Location of specific infrastructure services to minimize impacts on environment and specific ecological features.
Economic	• Reduces congestion on inner area roads. • Lower unit cost for servicing as greenfield unit costs are less than intensification unit costs. • Opportunity for integrating water and wastewater servicing needs for employment and residential. • Options 2, 3 and 4 accommodate maximum growth forecast.	• Potential for increased road costs. • Highest cost for drainage & stormwater works in Urban Boundary Expansion Areas. • Includes 200 acres of growth in Pleasantview which is difficult and costly to service • Additional capacity for water and wastewater trunk infrastructure required. These upgrades would be within existing developed areas.	• Feasibility relating to development in rural watersheds needs to be addressed.

Option 4 - Distributed Development

Community

New growth is dispersed to minimize impacts to agricultural land. Removes 1240 acres of agricultural area. Intensification levels are considered reasonable with appropriate policy intervention.

Transportation

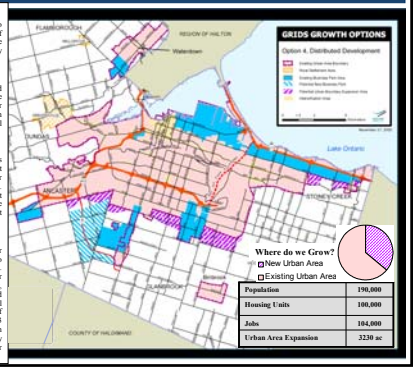
Options 2, 3 and 4 will all require expanded Transit Service Area on the Mountain. These options also result in a potential need for additional transportation capacity north-south across the escarpment and an expanded local collector road system in south east.

Water &Wastewater

All options need water and wastewater mains across the escarpment to service employment growth. This option results in significant water and wastewater demand in the southwest. Servicing for the residential and employment areas could trigger west trunk infrastructure upgrades and be integrated with a west escarpment crossing.

Stormwater

Approximately 8% of the existing storm sewer network may need to be upgraded to replaced to service intensification for Options 2, 3 & 4. These options will require stormwater management for the new urban areas, however, new development areas are typically easier and less costly to service. All Options have potential for some impact on the quality or quantity of water in the creeks. The location of Options 3 and 4 widely distribute new growth resulting in potential to effect Twenty Mile Creek, Stoney Creek, Borer's Creek, Spencer Creek, Sulphur Creek, and Red Hill Creek.



Population	190,000
Housing Units	100,000
Jobs	104,000
Urban Area Expansion	3230 ac

Option 4 - Distributed Development

DRAFT	Key Advantages	Key Disadvantages	Key Challenges
Community	• New communities will be designed for walking, cycling and transit. • New growth is dispersed to minimize impacts to agricultural land	• Draws focus away from downtown which reduces support for downtown transit. • Potential for moderate disruption to neighourhoods from construction of infrastructure and housing. • Options 3 and 4 are quite dispersed providing less opportunity to create a new urban area with distinctive character.	• Intensification levels are considered reasonable with appropriate policy intervention.
Ecological	• Least expensive option for storm sewer retrofit and upgrades in existing urban areas.	• Dispersed development increases trip lengths. • Moderate potential for some impact on water quality and quantity in downstream watersheds as a result of development. • Removes 1240 acres of agricultural area.	• Location of specific infrastructure services to minimize impacts on environment and specific ecological features.
Economic	• Reduces congestion on inner area roads. • Lower unit cost for servicing as greenfield unit costs are less than intensification unit costs. • Opportunity for integrating water and wastewater servicing needs for employment and residential. • Options 2, 3 and 4 accommodate maximum growth forecast.	• Potential for increased road costs. • Highest cost for drainage & stormwater works in Urban Boundary Expansion Areas. • Additional capacity for water and wastewater trunk infrastructure required. These upgrades would be within existing developed areas.	• Feasibility relating to development in rural watersheds needs to be addressed.

Option 5 - Nodes and Corridors

Community

Nodes and corridors support opportunity to build distinctive, vibrant, high quality, mixed neighbourhoods. Intensification along corridors increases potential for new transit based linear neighbourhoods that are attractive to pedestrians. Intensification levels are above supply/demand but considered realistic with appropriate policy intervention. Removes 2080 acres of agricultural area.

Transportation

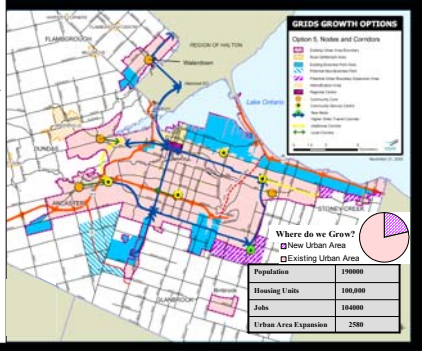
Opportunity for multi-modal transportation corridors linking key nodes with expanded transit feeder routes to the major nodes. High capacity for trunk transit lines north south and east west below the mountain and above the mountain.

Stormwater

Moderate impact on the environment with moderate cost.

Water &Wastewater

All options need water and wastewater mains across the escarpment to service employment growth. This option provides potential opportunities for locating infrastructure in common corridors. Significant demands in the southeast provide opportunity for integration with east end escarpment crossing.



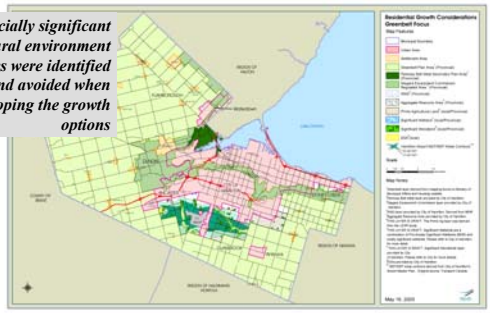
Population	190000
Housing Units	100,000
Jobs	104000
Urban Area Expansion	2580

Option 5 - Nodes and Corridors

DRAFT	Key Advantages	Key Disadvantages	Key Challenges
Community	• Communities are linked by multi-modal corridors. • Nodes and corridors support opportunity to build distinctive, vibrant, high quality, mixed neighbourhoods. • Intensification along corridors increases potential for new transit based linear neighbourhoods that are attractive to pedestrians.	• Potential for moderate disruption to neighourhoods from construction of infrastructure and housing.	• Intensification levels are above supply/demand but considered realistic with appropriate policy intervention.
Ecological	• Highest transit potential. • Infrastructure construction could be coordinated with corridor improvements to minimize disruption.	• Development has moderate potential for impact on downstream flood hazards, wetlands and geologic features in Twenty Mile Creek watershed. Some impacts on other watersheds also possible. • Removes 2080 acres of agricultural area.	• Location of specific infrastructure services to minimize impacts on environment and specific ecological features.
Economic	• Infrastructure construction could be coordinated with corridor improvements optimizing infrastructure investment. • Lower unit cost for servicing as greenfield unit costs are less than intensification unit costs. • Opportunity for integrating water and wastewater servicing needs for employment and residential. • Accommodates the maximum growth forecast.	•Requires significant investment in transit	•Infrastructure construction could be coordinated with corridor improvements further reducing unit costs.

Growth Options

Provincially significant natural environment features were identified and avoided when developing the growth options



Growth Options - Next Steps

Evaluation of Options:

- The five growth options will be evaluated considering the potential impacts and benefits to Hamilton's community, economy and ecology
- The growth options will be assessed based on public input, agency input and GRIDS project team evaluation
- A preferred growth option will be presented to Council and the public in Feb/Mar 2006

As we move forward, ***the City of Hamilton is committed to continue to coordinate the planning and infrastructure work*** such that the timing and phasing of development is matched to the timing and phasing of key transportation, water and wastewater improvements.

Master Plans:

- The infrastructure Master Plans are following the Municipal Class EA process.
- Information on infrastructure alternatives for the preferred growth option will be presented at future consultation events.

Growth Options - Evaluation

*The growth options will be evaluated based on the following draft criteria to address **Community Well-Being***

Does the option accommodate the Province's unit and population forecasts?	• Deviation from targets • Potential to accommodate opportunities for a range of dwelling types and tenures for all household incomes
Does the options achieve a mix of building types and land uses?	• Description of land use mix • Number of traffic zones that have population decline/amount • Ease of retaining and providing new soft infrastructure (e.g. schools, social services) • Potential for disruption to communities resulting from infrastructure works
Does the options support closer live/work connections?	• Number of residences with 5 km of downtowns • Commercial service levels • Degree to which it fosters mixed use community opportunities • Number of residences within 1000 m of commercial areas of 5 acres or more
Will our cultural heritage be protected?	•Area of encroachment on Haldimand or Flamborough Plain •Acreage of areas within cultural heritage landscape levels A, B, C

Growth Options - Evaluation

*The growth options will be evaluated based on the following draft criteria to address **Economic Well-Being***

Can this option be efficiently serviced?	• Ability to use existing infrastructure • Impact on accessibility for goods movement • Infrastructure requirements, flexibility in scheduling, technical ease of construction, level of service and relative approximate costs – transportation – water/wastewater – stormwater
How many jobs are provided?	•Number of population-related jobs created
How does the option support existing commercial nodes?	•Population within 1 km of existing commercial nodes
How does the option attract and retain a skilled, innovative, diverse workforce?	•Population growth in Downtown and core areas

Growth Options - Evaluation

*The growth options will be evaluated based on the following draft criteria to address **Ecological Well-Being***

How do we protect the functions of ecological systems?	• Number of hectares in growth areas that have local natural heritage features • Linear distance of impacted local natural heritage features
Does the Option Preserve our Agricultural Land/Rural Areas?	•Acreage of prime agricultural area (as defined by LEAR Analysis) •Number of active farm parcels
Does this option result in cleaner air and water?	•Estimated change in fuel consumption (as surrogate for reduction in air emissions) •Proximity of residents to transit/ transit opportunity •Mode split •Opportunity to reduce/exacerbate current flooding/erosion •Potential for impacts on water quality •Potential upgrades required at the water and wastewater treatment plants

Creating Neighbourhoods

Residential intensification will happen. The question is: Where and how much?

- With changes in demographics, Hamilton faces the potential that people will move out of existing neighbourhoods resulting in less people to support local businesses, services, institutions
- A key way to prevent the 'erosion' of people, shops, and services from our neighbourhoods is intensification
- *Draft Places to Grow* requires that municipalities accommodate at least 40% of their forecast population growth through residential intensification.
- In Hamilton that means between 28,000 and 62,000 new housing units will be added to Hamilton's current built-up area between now and 2030.
- Through community involvement, quality of design and commitment to making it happen, intensification will be a good news story

What is *intensification*?

"Development of a property, site or area at a higher density than currently exists through:

a) redevelopment, including the reuse of brownfield sites;

b) development of vacant and/or underutilized lots within previously developed areas;

c) expansion or conversion of existing buildings"

Provincial Policy Statement, 2005

Creating Neighbourhoods

The City is working on a residential intensification study to provide guidance on where intensification should occur. The study has identified that:

- There is a demand for a choice of different types of housing close to the amenities of the urban area such as shops and transit within walking distance
- There are areas within the City where mixed use already occurs that could accommodate further intensification
- Intensification would be located so as to minimize impacts on our existing established neighbourhoods

Creating Neighbourhoods

How Do We Make Intensification Work?

Involvement of the local community

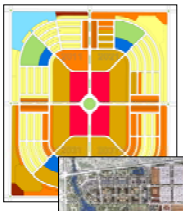
Implementing Social Vision Core Values
- •Democracy
- •Active citizenship
- •Social justice
- •inclusion

Comprehensive secondary planning processes at the neighbourhood level

Basket of Tools

Strong urban design guidelines that consider issues like:
- •Compatible Built Form
- •Quality Public Space
- •Privacy
- •Shading
- •Noise

Creating Neighbourhoods



Planning New Subdivisions

Neighbourhood design is also changing for new areas. No longer are we planning for sprawling subdivisions where there is little choice but to drive to all destinations. New subdivisions are built to create neighbourhoods just like we have in existing urban areas.

Principles and Guidelines

- Build around central focal point
- Mixed uses and variety of housing type
- Live – work opportunity
- Transit integration
- Cycle and pedestrian friendly
- Environmental linkages
- Attention to design of streetscape and built form

Creating Neighbourhoods

Hamilton's Social Vision

Hamilton's Social Vision is a coordinating framework for public health and community service program planning and delivery.

Implementing the Social Vision is an important component of maintaining a healthy community.

The Social Vision sees Hamilton as a community that is:

- Safe, healthy and caring
- Culturally rich and diverse
- Vibrant

Core Values of the Social Vision

- Democracy
- Active citizenship
- Social justice
- inclusion

Creating Neighbourhoods

Social Vision: Flagship Initiatives

The City is working on <u>three flagship initiatives</u>:

- Children and families
- Skills development
- Affordable Housing

These initiatives are geared at concrete and practical ways to achieve the Social Vision.

Flagships Offer Focus

The Employment Picture

Direction #1: Encourage a compatible mix of uses in neighbourhoods that provide opportunities to live, work and play.

From: GRIDS Nine Directions

Hamilton's Employment Vision

"Employment opportunities are distributed among home-based businesses, central urban cores and neighbourhood gathering places, as well as industrial business parks that are accessible by public transit and a city-wide system of trails. Containing a range of activities and amenities, these areas serve the needs of workers, businesses and customers. Agriculture provides many employment opportunities in the rural area"

(Vision 2020)

Hamilton has sufficient employment lands with the addition of the new Airport-Highway 6 employment area

The Employment Picture

Forecasts for Hamilton anticipate a growth of about 100,000 Jobs by 2035

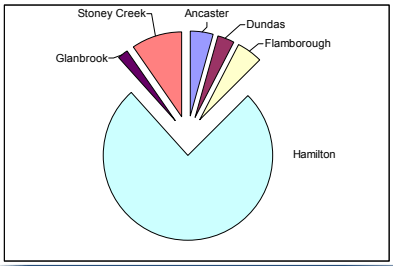
The anticipated employment is divided into three key types:

- **Population based employment**
  - This type of employment includes retail and service jobs
  - Typically 40% of job growth
  - Land needed for population based employment is accounted for in the growth options
- **Office**
  - Minimal demand in Hamilton. Downtown Hamilton is the prime focus for new large scale office development
- **Employment lands**
  - Manufacturing, industrial, and commercial facilities tend to locate in the employment areas of the City
  - A Commercial Study is underway to address future commercial needs and locations
  - The City has identified the Highway 6 business park as a new employment land area

Hamilton is well positioned within the Golden Horseshoe to take advantage of Employment Land Opportunities

The Employment Picture

The Majority of Jobs are in Hamilton – *We Need to Match The Location of Employment with Where People Live*



- Our employment lands are concentrated below the escarpment - but the population is concentrated above the escarpment. This results in a job-population imbalance.
- Industrial employment growth must be/will be on the mountain.

The Employment Picture

- Manufacturing is an important part of the Provincial and local economy.
- Employment lands are the single largest location of jobs in the GTA and Hamilton.
- Office, commercial and industrial uses are also located on employment lands.
- The City's ERASE program, is redeveloping Brownfields for residential uses and populated-based employment.
- Job growth, especially in the Tourism & Arts, Film and Biotech Clusters will support residential intensification initiatives.

Hamilton Employment Growth Forecast (2001-2031)

Employment Type	Compact Growth Scenario	More Compact Growth Scenario
Office	11,000	14,000
Population Related	31,000	37,000
Employment Land	49,000	52,000
Total	91,000	103,000

Job Growth in Hamilton will primarily be on employment lands. For Hamilton, this will:

- provide for a better balance between where people work and where they live; and,
- reduce the pressures on the escarpment crossings

TBL Evaluation Toolkit

Acronyms

AEIDS	Agricultural Economic Impact & Development Study
BARC/STB	Bay Area Restoration Council State of the Bay
CAH	Clean Air Hamilton 2002 Progress Report and Public Health Assessment Study
CSRP	Corporate Smog Response Plan
EDS	Economic Development Strategy
GBP	Greenbelt Plan (Draft)
HAQI	Hamilton Air Quality Initiative
HCAS	Hamilton Conservations Authority Conservation Strategy
HCCSP	Hamilton City Council Strategic Plan
HDHC	Hamilton District Health Council
HR Matters	HR Matters Study
HWOP	Hamilton-Wentworth Official Plan
KTH	Keys to the Home: A Housing Strategy for Hamilton
NEP	Niagara Escarpment Plan
PCRMP	City of Hamilton Parks, Culture and Recreation Master Plan
POS	Vibrant, Healthy, Sustainable Hamilton Discussion Paper Parks and Open Space Official Plan Policies and Zoning By-law Regulations
PPF	Hamilton Planning and Development Department “Putting People First: The New Land Use Plan for Downtown Hamilton"
PPS	Provincial Policy Statement
PRH	Progress Report on Homelessness by Social Planning and Research Council of Hamilton
PTG	Places to Grow Discussion Paper
RSILUP	Responding to Social Issues in Land Use Planning
SDP	City of Hamilton Storm Drainage Policy
SFFR	Ontario Smart Growth “Shape the Future Final Report”

SHIR	City of Hamilton Social and Health Issues Report 2001
SVNCH	A Social Vision for the New City of Hamilton
SWMMP	Solid Waste Management Master Plan
TGHG	Towards a Greater Golden Horsehoe Greenbelt Discussion Paper
TMPPP	Transportation Master Plan Policy Papers
VHSH	Vibrant, Healthy, Sustainable Hamilton Consultation Report for Phase 1 of the City of Hamilton's Building a Strong Foundation Process
VISION 2020	

TBL Evaluation Toolkit

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6. GLOSSARY

TBL Evaluation Toolkit
Glossary of Terms

Affordable housing:

In the case of ownership of housing, the least expensive of:

i) Housing for which the purchase price results in annual accommodation cost which do not exceed 30% of the gross annual household income for low and moderate income households; or
ii) Housing for which the purchase price is at least 10% below the average purchase price of a resale unit in the regional market area

In the case of renting, the least expensive of:

i) A unit for which the rental cost does not exceed 30% of gross annual household income for low and moderate income households; or
ii) A unit for which the rent is at or below the average market rent of a unit in the regional market area.

From the *Provincial Policy Statement*

Agricultural Land

Defined 'Prime agricultural area' in PPS: means areas where prime agricultural land predominates. Prime agricultural areas may also be identified through an alternative agricultural land evaluation system approved by the Province.
Source: *Provincial Policy Statement*

Alternative Energy Systems

Generation sources that produce electrical power from renewable resources such as solar or wind energy.
Source: Provincial Policy Statement

Brownfield

Lands that may include vacant, underused or abandoned industrial buildings, gas stations, or old mining and forestry sites in rural settings. These lands are ideal for intensification for industrial, commercial or residential uses.
Source: *Places to Grow Discussion Paper*

Compact Development

Compact development is a land-use pattern of medium- and high-density urban development that encourages efficient use of land, walkable neighbourhoods, mixed land uses (residential, retail, workplace and institutional all within one neighbourhood), proximity to transit and reduced need for infrastructure. "Compact" is a relative term and

will mean different effective densities in small towns as compared to big cities. Compact development does not necessarily mean high-rise development.
Source: Places To Grow Discussion Paper

Connections/Connectivity

The degree to which key natural heritage or key hydrologic features are connected to one another by links such as plant and animal movement corridors, hydrologic and nutrient cycling, genetic transfer, and energy flow through food webs.
Source: Draft Greenbelt Plan

Eco-efficient

Eco-efficiency is a management strategy that links financial and environmental performance to create more value with less ecological impact. Eco-efficiency can be achieved through:

* Optimized processes - moving from costly end-of-pipe solutions to approaches that prevent pollution in the first place.

* Waste recycling - using the by-products and wastes of one industry as raw materials and resources for another, thus creating zero waste

* Eco-innovation - manufacturing "smarter" by using new knowledge to make old products more resource-efficient to produce and use.

* New services - for instance, leasing products rather than selling them, which changes companies' perceptions, spurring a shift to product durability and recycling.

* Networks and virtual organizations - shared resources increase the effective use of physical assets.

Source: World Business Council for Sustainable Development

Environmental amenities

Are environmental resources (e.g., agriculture, natural areas, waterfront) that contribute to a high quality of life, making Hamilton a desirable place to live and do business.

Equity/Equitable

Does not mean that all residents should receive the same public services, but rather asserts that those residents with the greatest needs should benefit from a greater share of public services.

Full-Cost Pricing

Considers all of the operating and capital costs of an asset (usually hard infrastructure) over its useful life.
Source: *Places to Grow Discussion Paper*

Greenfield Development

Term used to describe new urban development in areas that were formerly rural.

Greyfields

Former and underused retail developments. Greyfields are good candidates for intensification as they are often located along key transportation routes.
Source: Places to Grow Discussion Paper

Hazard Lands

All lands having inherent environmental hazards, such as flood susceptibility, erosion susceptibility, or any other physical condition which is severe enough to cause property damage and/or potential loss of life if those lands were to be developed.
Source: Hamilton-Wentworth Official Plan (2003 consolidated)

High Order Transit/Rapid Transit

Transit that operates in its own right-of-way, outside of mixed traffic, and therefore can achieve a frequency of service greater than mixed-traffic transit. High order transit can include heavy rail (subway), light rail (street car), and buses in separate rights-of-way.
Source: Shape the Future (Central Ontario Smart Growth Panel)

Infill

The term generally refers to small-scale development or redevelopment on vacant or underused land within built-up areas of existing communities, where infrastructure is already in place.
Source: Places To Grow Discussion Paper

Infrastructure

The basic systems and services that a region or organization requires in order to operate effectively. Infrastructure is typically described in two categories: hard and soft. Hard infrastructure is traditionally defined as physical structures, such as roads and highways, transit, airports, ports, water and sewage treatment facilities, schools, hospitals and telecommunications hardware. Soft infrastructure is traditionally defined as the programs and services provided in a community, such as skills training, health care and education.

Source: Places to Grow Discussion Paper

Intensification

The term generally refers to larger scale development or redevelopment within existing urbanized areas that has the effect of increasing the density within an area.
Source: Places To Grow Discussion Paper

Natural Heritage Features

Natural Heritage features located within the natural heritage system include the following and are subjected to [section 3.2.4 of the *Greenbelt Draft Plan*]:

- Significant Habitat if endangered threatened and provincially rare species
- Fish Habitat
- Wetlands
- Life Science Areas of Natural and Scientific Interest (ANSIs)
- Significant valleylands
- Significant woodlands
- Significant wildlife habitat
- Sand barrens, savannahs and tall grass prairies, and
- Alvars

Source: Draft Greenbelt Plan

Life-Cycle Pricing

Considers the full spectrum of costs, benefits, and impacts on the community over the long term, including maintenance, environmental and social impacts, and financing methods.
Source: Places to Grow Discussion Paper

Multi-Modal Transportation System

A transportation system which may include several forms of transportation such as automobiles, walking, truck, cycling, bus, rapid transit, and rail, air, marine and pipelines
Source: Provincial Policy Statement

Natural areas

Natural heritage features and areas: means features and areas, such as significant wetlands, fish habitat, significant woodlands south and east of the Canadian Shield, significant valleylands south and east of the Canadian Shield, significant habitat of endangered and threatened species, significant wildlife habitat, and significant areas of natural and scientific interest, which are important for their environmental and social values as a legacy of the natural landscapes of an area
Source: Provincial Policy Statement

Natural Heritage System

A system of natural core areas and key natural corridors or linkages, such as rivers and valleys, with significant ecological value. They collectively perform important ecological functions, such as providing habitat and improving air and
water quality.
Source: Places To Grow Discussion Paper

Precautionary Principle:

Where there are threats of serious or irreversible damage, scientific uncertainty shall not be used to postpone cost-effective measures to prevent environmental degradation.
Source: *Rio Declaration of 1992*

Public services

Programs and services provided or subsidized by a government or other public body. Examples include social assistance, recreation, police and fire protection, health and education programs, and cultural services.
Source: *Provincial Policy Statement*

Redevelopment

The creation of new residential or non-residential units on previously developed land in existing communities, including brownfields and greyfields.
Source: Provincial Policy Statement

Regional nodes

Regional nodes are discrete areas within urban centers that have compact, mixed-use (residential, commercial, and institutional) development and service the surrounding areas. They are located within urban centers, are accessible by high order transit, and a good road network, and exhibit high quality urban design.
Source: Shape the Future (Central Ontario Smart Growth Panel)

Rural Land/Area

Means lands in the rural area which are located outside settlement areas and which are outside prime agricultural areas.
Source: *Provincial Policy Statement*

Settlement Areas

Lands designated through the municipal planning process for building or development—urban, suburban, or rural. This includes all development, ranging from dense urban to hamlets and other small residential development.

Source: *Places to Grow Discussion Paper*

Source Water Protection

Source water protection is the first barrier in a multi-barrier approach to protecting the water in Ontario's lakes, rivers and underground aquifers. Source water protection complements water treatment by reducing the risk that water gets contaminated in the first place. Watershed-based planning takes the natural boundaries of surface and groundwater into consideration, rather than man-made lines drawn on a map.
Source: Places to Grow Discussion Paper

Vegetation Protection Zone

A vegetated buffer surrounding a key natural feature within which only those land uses within the feature itself are permitted. The width of the vegetative protection zone in to be determined when new development or site alteration occurs within 120 meters of a key natural feature and is to be of sufficient size to protect the feature and its functions from the impacts of the proposed change and associated activities that will occur before, during and after construction, and where possible, restore or enhance the feature and/or its function.
Source: Draft Greenbelt Plan

Appendix G: Results of the Evaluation of the Short List of GRIDS Growth Options Using Triple Bottom Line Toolkit

Results of the Evaluation of the Short List of GRIDS Growth Options Using the Triple Bottom Line Toolkit

For use at the
TBL Evaluator Meeting

February 14, 2006

Updated February 22, 2006

Table of Contents

1 Introduction

This report provides an overview of the results of the evaluation of the Short List of GRIDS Growth Options using the "Triple Bottom Line" Toolkit designed for the City of Hamilton by ICLEI-Local Governments for Sustainability.

The report is structured into 4 sections:

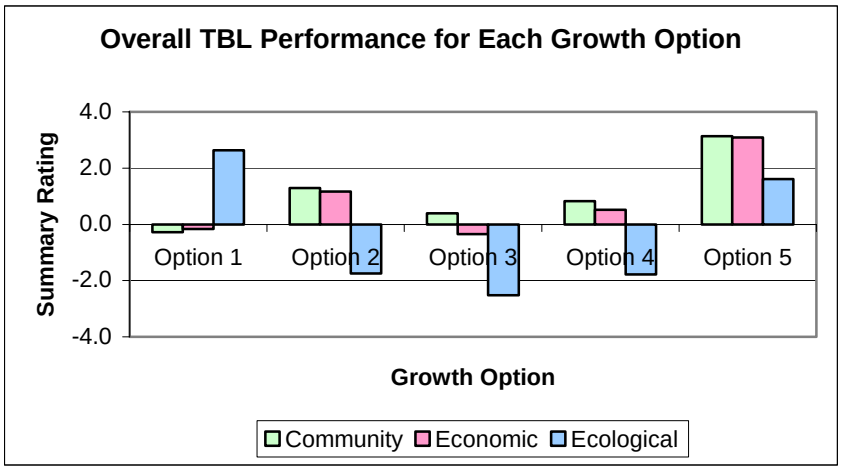
1 – Introduction – brief introduction to report and structure of report
2 – Overall TBL Performance & Selection – illustrates the comparative performance of the three bottom lines considered for each growth option and illustrates the combined growth option selection of the evaluators.
3 – Summary of Desired Results for Each Growth Option – illustrates the average ratings for each desired result and summarizes the written feedback given in the sustainability appraisals.
4 – Summary of Average Ratings from each Growth Option for each Desired Result – illustrates the average ratings for each desired results from each Growth Option

2 Overall TBL Performance & Selection

2.1 Overall TBL Performance

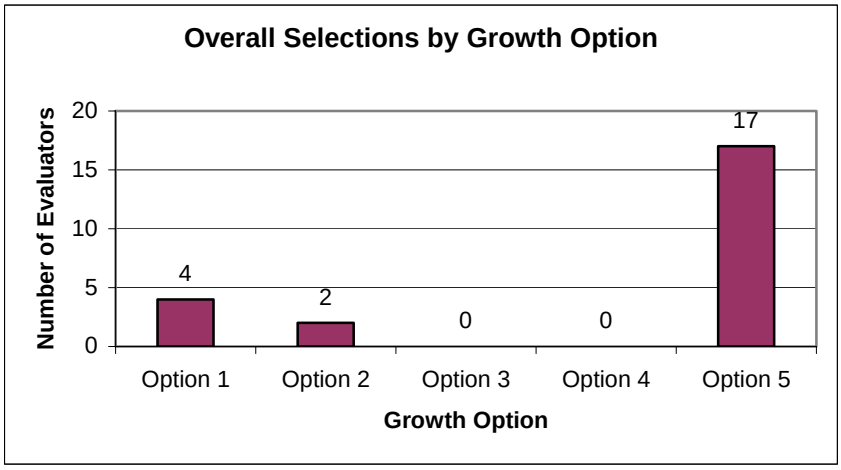
The chart below illustrates the comparative performance of each of the three bottom lines considered for each growth option. The TBL scores for each growth option represent the average of each separate bottom line score that evaluators assigned in the toolkit.

The chart illustrates that Growth Option 5 performed well in terms of delivering positive values across all three bottom lines, whiles Growth Options 1, 2, 3, and 4 showed mixed results.



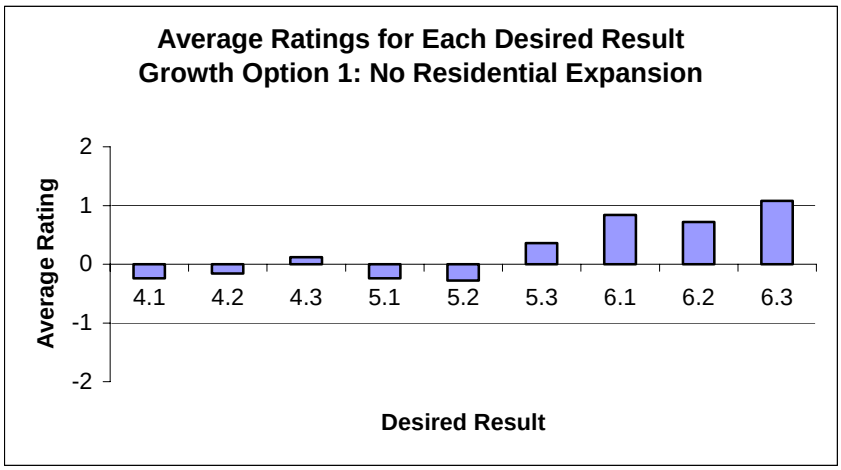
2.2 Overall Selections

In total, 23 complete TBL evaluations were performed, while there were 2 incomplete evaluations. Seventeen out of the 23 evaluators rated Option 5 the highest, while 4 evaluators rated Option 1 the highest and 2 evaluators rated Option 2 the highest. Option 3 and 4 were not rated the highest by any evaluators.



3 Summary of Desired Results for Each Growth Option

3.1 Growth Option 1: No Residential Expansion



Number of evaluators rated Growth Option 1 the highest:
4 out of 23

3.1.1 Community Well Being

Desired Result	Considerations
4.1 This growth Option will support the delivery of public services in an equitable manner.	▪ Does the option accommodate the Province's unit and population forecasts? ▪ Does the option achieve a mix of building types and land uses? ▪ Does the option support closer live/work connections? Will our cultural heritage be protected?

Most evaluators felt this option will focus population within the existing urban area and create greater live-work-play connections.

Most evaluators indicated that this option does not meet the targeted housing mix.

Many evaluators indicated that public services and infrastructure could be enhanced and efficiently expanded in this growth option given the high population concentration.

A few evaluators indicated that public services and infrastructure would be more difficult to deliver due to the high population concentration under this growth option.

A few evaluators indicated this growth option would offer transit-supportive densities.

A few evaluators felt that this growth option would negatively affect parkland because of the high population concentration and the lack of green space to expand existing parkland.

A few evaluators indicated this growth option would protect cultural heritage.

Desired Result	Considerations
4.2 This growth option will enhance employment opportunities in Hamilton and ensure they are accessible to all Hamiltonians	▪ Does the option accommodate the Province's unit and population forecasts? ▪ Does the option achieve a mix of building types and land uses? ▪ Does the option support closer live/work connections? ▪ Will our cultural heritage be protected?

Many evaluators indicated that this growth option would not supply the necessary mix in housing units to attract a wide range of employment types, particularly the high paying jobs.

Many evaluators indicated this option would support greater live-work connections.

A few evaluators felt that the new opportunities for employment would be limited to the downtown area and therefore of limited employment types.

Desired Result	Considerations
4.3 Human health will be protected through this Growth Option.	▪ Does the option accommodate the Province's unit and population forecasts? ▪ Does the option achieve a mix of building types and land uses? ▪ Does the option support closer live/work connections? ▪ Will our cultural heritage be protected?

Most evaluators indicated that this growth option supports alternative transportation (transit, walk, cycle), which would positively impact human health by promoting exercise and reducing emissions from transportation.

Many evaluators felt that this growth option would increase stress on green space, recreational facilities, and cultural amenities, which can indirectly affect human health.

A few evaluators indicated that the closer live/work/play connections would promote healthy lifestyles.

3.1.2 Economic Well-Being

Desired Result	Considerations
5.1 This Growth Option will help to attract and retain a skilled, innovative and diverse workforce.	▪ Can this option be efficiently serviced? ▪ How many jobs are provided? ▪ How does the option attract and retain a skilled, innovative, diverse workforce? ▪ How does the option support existing commercial nodes

Most evaluators felt that this growth option with provide limited housing types and therefore limit opportunities to attract and retain a skilled, innovated and diverse workforce.

A few evaluators felt that the increased intensification and mix of residential and commercial areas would increase the vibrancy of the community, which would help to attract and retain a skilled, innovated and diverse workforce.

Desired Result	Considerations
5.2 This Growth Option will position Hamilton as a leading centre of economic growth.	▪ Can this option be efficiently serviced? ▪ How many jobs are provided? ▪ How does the option attract and retain a skilled, innovative, diverse workforce? ▪ How does the option support existing commercial nodes

A few evaluators felt that revitalizing the downtown core will help to attract investors and help position Hamilton as a center of economic growth.

A couple of evaluators indicated that the limited housing choices and availability associated with this growth option would hinder economic growth.

A couple of evaluators felt that the support that this growth option has for existing commercial nodes would improve economic growth.

A couple of evaluators felt that the infrastructure costs related to this growth option would act as a deterrent to economic growth, i.e. by increasing taxes.

Desired Result	Considerations
5.3 This Growth Option will maintain and enhance Hamilton's high quality environmental amenities.	▪ Can this option be efficiently serviced? ▪ How many jobs are provided? ▪ How does the option attract and retain a skilled, innovative, diverse workforce? ▪ How does the option support existing commercial nodes

Most evaluators commented that this growth option would result in no urban expansion and would therefore help to maintain and enhance the environmental amenities outside the urban boundary, such as watersheds, green spaces and agricultural lands.

Many evaluators indicated that the environmental amenities within the existing urban boundaries would be negatively impacted with this growth option.

3.1.3 Ecological Well-Being

Desired Result	Considerations
6.1 This Growth Option will ensure that Hamiltonians share equally in the benefits of a healthy natural environment.	▪ How do we protect the functions of ecological systems? ▪ Does the Option Preserve our Agricultural Land/Rural Areas? ▪ Does this option result in cleaner air and water?

Most evaluators commented that this growth option would result in no urban expansion and would therefore help to maintain and enhance the environmental amenities outside the urban boundary.

Many evaluators indicated that the environmental amenities within the existing urban boundaries would be negatively impacted with this growth option and were therefore concerned that Hamiltonians share equally in the benefits of a healthy natural environment.

A couple of evaluators commented that given the increase in density in the urban area, infrastructure and transportation must be appropriately designed to ensure that Hamiltonians share equally in the benefits of a healthy natural environment.

Desired Result	Considerations
6.2 This Growth Option will enhance economic development in an eco-efficient manner.	▪ How do we protect the functions of ecological systems? ▪ Does the Option Preserve our Agricultural Land/Rural Areas? ▪ Does this option result in cleaner air and water?

Most evaluators indicated that avoiding urban expansion would protect prime agricultural land and enhance economic development in an eco-efficient manner.

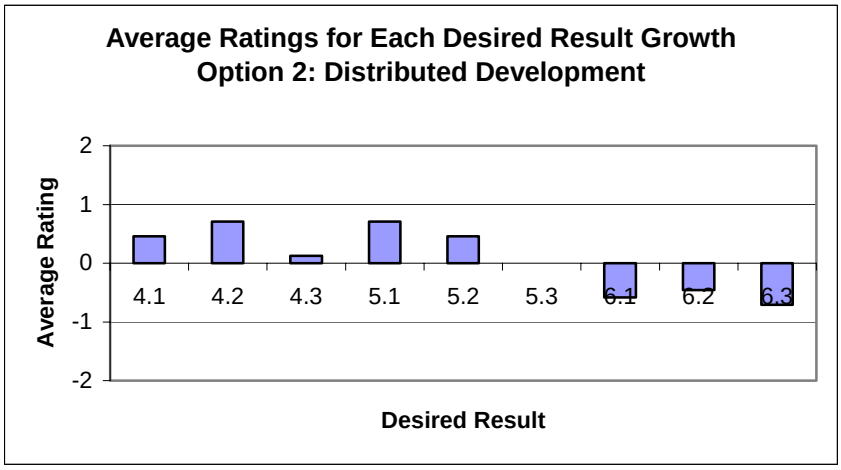
A couple of evaluators indicated that employment growth within the urban boundary would diversify which will enhance economic development.

Desired Result	Considerations
6.3 This Growth Option will protect ecosystem health.	▪ How do we protect the functions of ecological systems? ▪ Does the Option Preserve our Agricultural Land/Rural Areas? ▪ Does this option result in cleaner air and water?

Most evaluators indicated that since this growth option would result in no urban expansion, ecosystem health outside the urban boundary would be protected.

A few evaluators indicated that storm water and water quality issues as a result of intensification would threaten ecosystem health.

3.2 Growth Option 2: Distributed Development



Number of evaluators rated Growth Option 2 the highest:
2 out of 23

3.2.1 Community Well Being

Desired Result	Considerations
4.1 This growth Option will support the delivery of public services in an equitable manner.	▪ Does the option accommodate the Province's unit and population forecasts? ▪ Does the option achieve a mix of building types and land uses? ▪ Does the option support closer live/work connections? ▪ Will our cultural heritage be protected?

Most of the evaluators indicated that since this option comes closest to accommodating the Province's unit and population forecasts for housing mix that this growth option will support the delivery of public services in an equitable manner.

Many evaluators indicated that this growth option would require significant investments to transit, water and sewer, roads, and waste, and this may have a negative affect on delivering public services in an equitable manner.

A few evaluators felt that since growth is isolated to a few new areas that resources will be allocated to these areas and therefore delivery of public services will not be equitable.

A couple of evaluators mentioned that since equitable public service delivery will be hindered since this growth option does not support closer live/work connections.

A couple of evaluators indicated that the support this growth option has for commercial nodes will support the delivery of public services in an equitable manner.

Desired Result	Considerations
4.2 This growth option will enhance employment opportunities in Hamilton and ensure they are accessible to all Hamiltonians	▪ Does the option accommodate the Province's unit and population forecasts? ▪ Does the option achieve a mix of building types and land uses? ▪ Does the option support closer live/work connections? ▪ Will our cultural heritage be protected?

Many of the evaluators indicated that since this option comes closest to accommodating the Province's unit and population forecasts for housing mix that this growth option will enhance employment opportunities and ensure they are accessible to all Hamiltonians.

Most evaluators commented that this option has the potential to support closer live/work connections due to intensification and expanded areas.

A couple of evaluators thought this growth option will not support closer live/work connections and therefore will not enhance employment opportunities.

A few evaluators indicated that this growth option would attract diversity in the workforce, however a couple of evaluators felt the opposite.

Desired Result	Considerations
4.3 Human health will be protected through this Growth Option.	▪ Does the option accommodate the Province's unit and population forecasts? ▪ Does the option achieve a mix of building types and land uses? ▪ Does the option support closer live/work connections? ▪ Will our cultural heritage be protected?

Many evaluators felt that limiting new growth to one area would enhance live/work connects and have a positive affect on human health, however there were a couple of evaluators that felt that live/work connections will not be supported by this option, and therefore the option would have a negative affect on human health.

A few evaluators indicated that since this option comes closest to accommodating the Province's unit and population forecasts for housing mix that this will have a positive impact on human health.

A couple of evaluators indicated that the new schools and recreational facilities associated with this growth option would protect human health.

While a few evaluators noted that the commercial nodes would be supportive of public transit and therefore protect human health, a few evaluators thought that limiting growth to one area would enhance automobile travel and have a detrimental affect on human health.

3.2.2 Economic Well-Being

Desired Result	Considerations
5.1 This Growth Option will help to attract and retain a skilled, innovative and diverse workforce.	▪ Can this option be efficiently serviced? ▪ How many jobs are provided? ▪ How does the option attract and retain a skilled, innovative, diverse workforce? ▪ How does the option support existing commercial nodes

Many evaluators indicated that accommodating the Provinces' unit and population forecasts for housing mix would help to attract and retain a skilled, innovative and diverse workforce.

A few evaluators thought that the fact that this option does not support closer live/work connections would not help Hamilton retain a skilled, innovative and diverse workforce.

A few valuators thought that intensification would attract the desired workforce, while a couple of evaluators felt the opposite.

Desired Result	Considerations
5.2 This Growth Option will position Hamilton as a leading centre of economic growth.	▪ Can this option be efficiently serviced? ▪ How many jobs are provided? ▪ How does the option attract and retain a skilled, innovative, diverse workforce? ▪ How does the option support existing commercial nodes

Many evaluators thought that the commercial nodes design of this growth option would enhance goods movement and therefore support economic growth.

A few evaluators felt that the intensification in this growth option would require high infrastructure costs resulting in a detrimental affect on economic growth.

A few evaluators felt that the intensification in this growth option would capitalize on existing infrastructure and enhance economic growth.

A couple of evaluators indicated that the development in new greenfield areas would attract new industry.

Desired Result	Considerations
5.3 This Growth Option will maintain and enhance Hamilton's high quality environmental amenities.	▪ Can this option be efficiently serviced? ▪ How many jobs are provided? ▪ How does the option attract and retain a skilled, innovative, diverse workforce? ▪ How does the option support existing commercial nodes

Many evaluators noted that the servicing related to the escarpment crossing would have a detrimental affect on Hamilton's high quality environmental amenities.

A couple of evaluators commented on the fact that this growth option will not preserve prime agricultural areas.

A couple of evaluators indicated that the Greenfield development in this option presents an opportunity to develop new parks.

3.2.3 Ecological Well-Being

Desired Result	Considerations
6.1 This Growth Option will ensure that Hamiltonians share equally in the benefits of a healthy natural environment.	▪ How do we protect the functions of ecological systems? ▪ Does the Option Preserve our Agricultural Land/Rural Areas? ▪ Does this option result in cleaner air and water?

Most evaluators commented on the fact that this growth option will have a negative impact on prime agricultural lands, which does not enable Hamiltonians to share equally in the benefits of a healthy natural environment.

A few evaluators indicated that the distributed nature of this growth option would negatively affect the natural environment, such as air and water quality.

A couple of evaluators felt this growth option would negatively affect Hamilton's natural heritage systems.

A couple of evaluators indicated that the developed areas that currently exist would not be serviced as equally as the new areas of development.

Desired Result	Considerations
6.2 This Growth Option will enhance economic development in an eco-efficient manner.	▪ How do we protect the functions of ecological systems? ▪ Does the Option Preserve our Agricultural Land/Rural Areas? ▪ Does this option result in cleaner air and water?

Most evaluators indicated that this growth option would have a negative impact on prime agricultural lands, which would not support eco-efficient economic development.

A few evaluators thought that isolating growth in one new area would enhance economic development in an eco-efficient manner.

A couple of evaluators indicated that the distributed development in this growth option negatively affect the natural environment, such as air and water quality and negatively affect eco-efficient economic development.

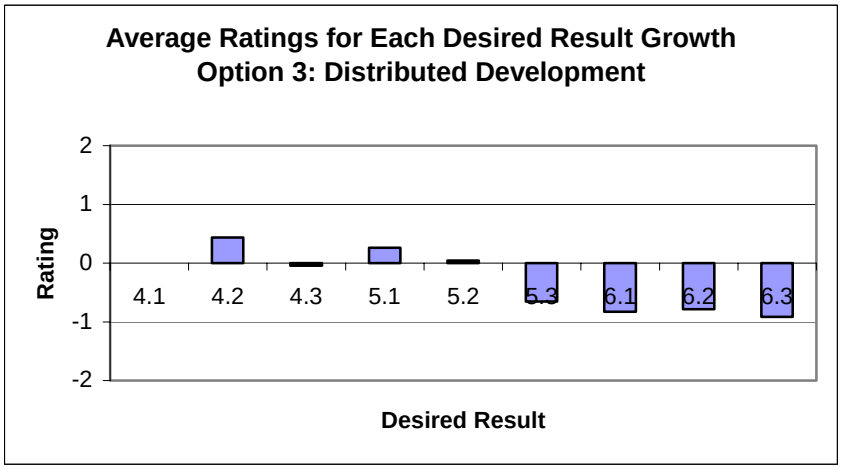
Desired Result	Considerations
6.3 This Growth Option will protect ecosystem health.	▪ How do we protect the functions of ecological systems? ▪ Does the Option Preserve our Agricultural Land/Rural Areas? ▪ Does this option result in cleaner air and water?

Most of the evaluators indicated that this growth option would have a negative affect on water quality and watersheds.

Many evaluators indicated that agricultural lands would not be protected.

A few evaluators suggested that natural heritage systems would be put at risk with this growth option.

3.3 Growth Option 3: Distributed Development



Number of evaluators rated Growth Option 3 the highest:
0 out of 23

3.3.1 Community Well Being

Desired Result	Considerations
4.1 This growth Option will support the delivery of public services in an equitable manner.	▪ Does the option accommodate the Province's unit and population forecasts? ▪ Does the option achieve a mix of building types and land uses? ▪ Does the option support closer live/work connections? ▪ Will our cultural heritage be protected?

Many evaluators commented that this option could accommodate the Province's unit and population forecasts supporting the equitable delivery of public services.

Many evaluators suggested that the distributed nature of this growth option would make it difficult to provide public services to these areas efficiently and in an equitable manner.

A few evaluators indicated that the Pleasentview development would be difficult to service, would disturb other communities, and would not be supportive of delivering public services in an equitable manner.

A couple of evaluators indicated that the lack of support for live/work connections would not support the delivery of public services in an equitable manner.

Desired Result	Considerations
4.2 This growth option will enhance employment opportunities in Hamilton and ensure they are accessible to all Hamiltonians	▪ Does the option accommodate the Province's unit and population forecasts? ▪ Does the option achieve a mix of building types and land uses? ▪ Does the option support closer live/work connections? ▪ Will our cultural heritage be protected?

Most evaluators suggested that this growth option will support more live/work connections, such as those near Glanbrook industrial park, however a couple of evaluators felt that this growth option did not support live/work connections adequately.

Many evaluators suggested that the diverse housing mix in this growth option would enhance employment opportunities in Hamilton.

A couple of evaluators indicated that this growth option will not attract investment and therefore will not enhance employment opportunities in Hamilton.

Desired Result	Considerations
4.3 Human health will be protected through this Growth Option.	▪ Does the option accommodate the Province's unit and population forecasts? ▪ Does the option achieve a mix of building types and land uses? ▪ Does the option support closer live/work connections? ▪ Will our cultural heritage be protected?

Many evaluators indicated that cultural heritage would not be protected as a result of the distributed growth, which will negative affect human health.

A few evaluators suggested that the live/work connections promoted by this growth option would protect human health, however a couple of evaluators felt the opposite.

A couple of evaluators felt that this option could accommodate the Province's unit and population forecasts, which would positively influence human health.

3.3.2 Economic Well-Being

Desired Result	Considerations
5.1 This Growth Option will help to attract and retain a skilled, innovative and diverse workforce.	▪ Can this option be efficiently serviced? ▪ How many jobs are provided? ▪ How does the option attract and retain a skilled, innovative, diverse workforce? ▪ How does the option support existing commercial nodes

Many evaluators thought the housing mix in this growth option will help to attract and retain a skilled, innovative and diverse workforce.

A few evaluators indicated that since this growth option does not capitalize on the existing transportation infrastructure that it would not help to attract and retain a skilled, innovative and diverse workforce.

A couple of evaluators felt that the intensification in this growth option would support this desired result, while a couple of evaluators felt the opposite was true.

Desired Result	Considerations
5.2 This Growth Option will position Hamilton as a leading centre of economic growth.	▪ Can this option be efficiently serviced? ▪ How many jobs are provided? ▪ How does the option attract and retain a skilled, innovative, diverse workforce? ▪ How does the option support existing commercial nodes

A couple of evaluators indicated the this growth option does not capitalize on existing infrastructure and would require costly new infrastructure and service delivery, which do not support the desired result.

A couple of evaluators indicated that the housing mix supported by this growth option would help to position Hamilton as a leading centre of economic growth.

Desired Result	Considerations
5.3 This Growth Option will maintain and enhance Hamilton's high quality environmental amenities.	▪ Can this option be efficiently serviced? ▪ How many jobs are provided? ▪ How does the option attract and retain a skilled, innovative, diverse workforce? ▪ How does the option support existing commercial nodes

Most of the evaluators indicated that the distribution of development in this growth option would have a significant impact on Hamilton's high quality environmental amenities.

Most of the evaluators indicated that development in Pleasentview would negatively impact environmental amenities.

Many of the evaluators felt that this option does not support of public transit and therefore does not support this desired result.

3.3.3 Ecological Well-Being

Desired Result	Considerations
6.1 This Growth Option will ensure that Hamiltonians share equally in the benefits of a healthy natural environment.	▪ How do we protect the functions of ecological systems? ▪ Does the Option Preserve our Agricultural Land/Rural Areas? ▪ Does this option result in cleaner air and water?

Many evaluators indicated that this option has a high amount of natural heritage system features within the proposed expansion area would not support enhance this desired result.

Many evaluators felt that the distributed development in this option would have a substantial negative effect on the natural environment and would therefore not be supportive of Hamiltonians sharing equally in the benefits of a healthy natural environment.

Desired Result	Considerations
6.2 This Growth Option will enhance economic development in an eco-efficient manner.	▪ How do we protect the functions of ecological systems? ▪ Does the Option Preserve our Agricultural Land/Rural Areas? ▪ Does this option result in cleaner air and water?

A few evaluators thought this growth option doesn't capitalize on existing infrastructure and the new infrastructure could not be delivered in an eco-efficient manner.

A few evaluators indicated that the Pleasentview development could not be serviced in an eco-efficient manner.

A couple of evaluators indicated that this growth option would protect agricultural and environmentally sensitive lands, however a couple of evaluators indicated the opposite.

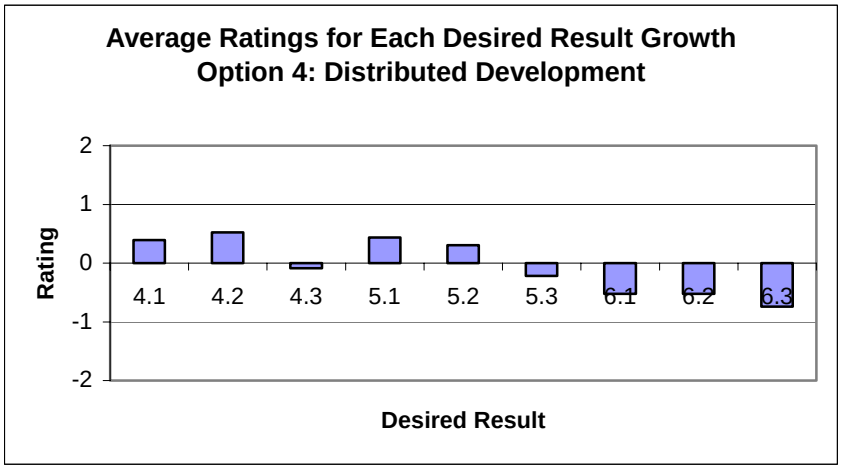
Desired Result	Considerations
6.3 This Growth Option will protect ecosystem health.	▪ How do we protect the functions of ecological systems? ▪ Does the Option Preserve our Agricultural Land/Rural Areas? ▪ Does this option result in cleaner air and water?

Many evaluators indicated that this option has a high amount of natural heritage system features within the proposed expansion area would not protect ecosystem health.

A few evaluators indicated that the Greenfield development in this growth option would not support the desired result.

A couple of evaluators mentioned the Pleasentview development would not protect ecosystem health.

3.4 Growth Option 4: Distributed Development



Number of evaluators rated Growth Option 4 the highest:
0 out of 23

3.4.1 Community Well Being

Desired Result	Considerations
4.1 This growth Option will support the delivery of public services in an equitable manner.	▪ Does the option accommodate the Province's unit and population forecasts? ▪ Does the option achieve a mix of building types and land uses? ▪ Does the option support closer live/work connections? ▪ Will our cultural heritage be protected?

Many evaluators indicated that this growth option would not be support of live/work connections.

Many evaluators indicated that this option has the potential to meet targeted housing mix and that this will support the delivery of public services in an equitable manner.

A couple of evaluators indicated that distributing the development adjacent to existing development would be efficient in terms of infrastructure, however a couple of evaluators felt the opposite was true.

Desired Result	Considerations
4.2 This growth option will enhance employment opportunities in Hamilton and ensure they are accessible to all Hamiltonians	▪ Does the option accommodate the Province's unit and population forecasts? ▪ Does the option achieve a mix of building types and land uses? ▪ Does the option support closer live/work connections? ▪ Will our cultural heritage be protected?

Many evaluators felt that the mix of housing type in this option would enhance employment opportunities.

A few evaluators indicated that live/work connections would be supported by this growth option and therefore enhance employment opportunities, however a couple of evaluators felt the opposite was true.

A couple of the evaluators felt that the opportunities for efficient transit were not supported by this option and therefore the option does not support the desired result.

Desired Result	Considerations
4.3 Human health will be protected through this Growth Option.	▪ Does the option accommodate the Province's unit and population forecasts? ▪ Does the option achieve a mix of building types and land uses? ▪ Does the option support closer live/work connections? ▪ Will our cultural heritage be protected?

Many evaluators indicated that this option does not support live/work connections and therefore does not support this desired result, however a couple of evaluators felt the opposite was true.

A few evaluators felt this growth option would have a high potential for conflict between future land use and cultural heritage resources, which would not support the desired result.

A couple of evaluators indicated that this growth option would not support modal splits in transportation, thereby not supporting the desired result.

A couple of evaluators indicated that this growth option would not support adequate mix land uses to protect human health.

3.4.2 Economic Well-Being

Desired Result	Considerations
5.1 This Growth Option will help to attract and retain a skilled, innovative and diverse workforce.	▪ Can this option be efficiently serviced? ▪ How many jobs are provided? ▪ How does the option attract and retain a skilled, innovative, diverse workforce? ▪ How does the option support existing commercial nodes

Many evaluators felt that the mix of housing types in this option help to attract and retain a skilled, innovative and diverse workforce.

A couple of evaluators thought that the development of the new employment areas would support this desired result

A couple of evaluators indicated that this growth option would not be transit supportive, thereby not supporting this desired result.

A couple of evaluators noted that this growth option was not noted well in terms of attracting and retaining a skilled, innovative and diverse workforce.

Desired Result	Considerations
5.2 This Growth Option will position Hamilton as a leading centre of economic growth.	▪ Can this option be efficiently serviced? ▪ How many jobs are provided? ▪ How does the option attract and retain a skilled, innovative, diverse workforce? ▪ How does the option support existing commercial nodes

A couple of evaluators noted that the housing mix proposed in this growth option would help to position Hamilton as a leading centre of economic growth.

A couple of evaluators indicated that the distributed development would be costly to services and would not support the desired result.

Desired Result	Considerations
5.3 This Growth Option will maintain and enhance Hamilton's high quality environmental amenities.	▪ Can this option be efficiently serviced? ▪ How many jobs are provided? ▪ How does the option attract and retain a skilled, innovative, diverse workforce? ▪ How does the option support existing commercial nodes

Many evaluators felt that that scattered development in this growth option would not help to maintain or enhance Hamilton's environmental amenities.

A few evaluators indicated that the escarpment crossing in this growth option would negatively affect the desired result.

A few evaluators noted that this growth option would not be transit supportive and therefore not supportive of this desired result.

A couple of evaluators indicated that this option would negatively impact the natural heritage system, thereby detrimentally affecting Hamilton's environmental amenities.

3.4.3 Ecological Well-Being

Desired Result	Considerations
6.1 This Growth Option will ensure that Hamiltonians share equally in the benefits of a healthy natural environment.	▪ How do we protect the functions of ecological systems? ▪ Does the Option Preserve our Agricultural Land/Rural Areas? ▪ Does this option result in cleaner air and water?

Many evaluators indicated that agricultural lands and environmentally sensitive areas would be negatively impacted in this growth option.

A few evaluators noted that this option has significant lands in the natural heritage system, thereby not supporting this desired result.

A few evaluators indicated that the distributed nature of the development in this growth option would have a negative impact on the natural environment that would not be distributed equally.

Desired Result	Considerations
6.2 This Growth Option will enhance economic development in an eco-efficient manner.	▪ How do we protect the functions of ecological systems? ▪ Does the Option Preserve our Agricultural Land/Rural Areas? ▪ Does this option result in cleaner air and water?

Many evaluators indicated that this growth option would negatively affect agricultural areas, thereby not enhancing eco-efficient economic development.

A few evaluators felt that the sprawl associated with this growth option was not supportive of eco-efficient economic development.

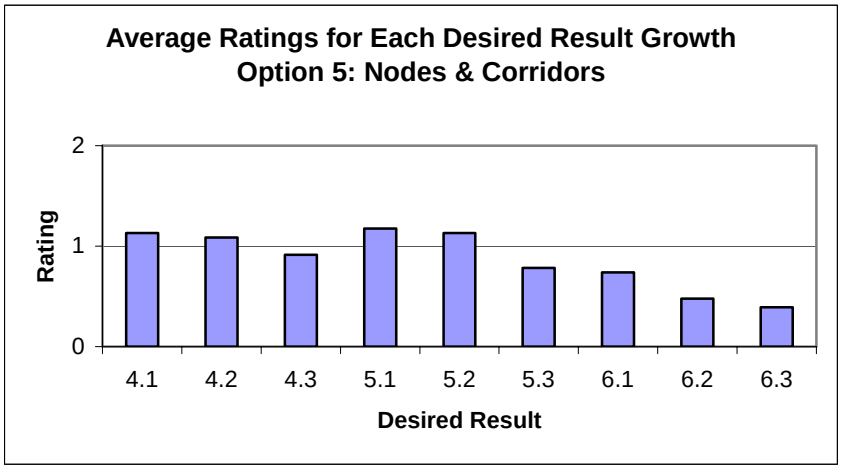
Desired Result	Considerations
6.3 This Growth Option will protect ecosystem health.	▪ How do we protect the functions of ecological systems? ▪ Does the Option Preserve our Agricultural Land/Rural Areas? ▪ Does this option result in cleaner air and water?

Many evaluators indicated that the ecosystem health of the natural heritage features expanded upon in this growth option would be negatively affected.

Many evaluators indicated that the development in this growth option would have a negative impact on watersheds.

A couple of evaluators felt that agricultural lands would not be protected in this growth option.

3.5 Growth Option 5: Nodes & Corridors



Number of evaluators rated Growth Option 5 the highest:
17 out of 23

3.5.1 Community Well Being

Desired Result	Considerations
4.1 This growth Option will support the delivery of public services in an equitable manner.	▪ Does the option accommodate the Province's unit and population forecasts? ▪ Does the option achieve a mix of building types and land uses? ▪ Does the option support closer live/work connections? ▪ Will our cultural heritage be protected?

Most of the evaluators indicated that this growth option would enhance the delivery of services, thereby supporting the desired result.

Most of the evaluators indicated that this growth option would result in transit-supportive forms of development, thereby supporting this desired result.

Many evaluators noted that this option was shown to achieve a greater economy of scale for delivery of various social service programs.

A few evaluators indicated that this growth option would support closer live/work connections.

Desired Result	Considerations
4.2 This growth option will enhance employment opportunities in Hamilton and ensure they are accessible to all Hamiltonians	▪ Does the option accommodate the Province's unit and population forecasts? ▪ Does the option achieve a mix of building types and land uses? ▪ Does the option support closer live/work connections? ▪ Will our cultural heritage be protected?

Most evaluators indicated that the enhanced live/work connections with this growth option will enhance employment opportunities in Hamilton and ensure they are accessible to all Hamiltonians.

Many evaluators mentioned that the corridors would improve transit services and general accessibility, which will enhance the desired result.

A couple of evaluators indicate that the accessibility of social facilities would help to support this desired result.

Desired Result	Considerations
4.3 Human health will be protected through this Growth Option.	▪ Does the option accommodate the Province's unit and population forecasts? ▪ Does the option achieve a mix of building types and land uses? ▪ Does the option support closer live/work connections? ▪ Will our cultural heritage be protected?

Most evaluators noted that the mixed use of land in this growth option would promote active living and thereby protect human health.

Many evaluators indicated that this growth option would be transit supportive, which would support this desired result.

A few evaluators thought social and recreations services would be delivered well through this option, thereby protecting human health.

3.5.2 Economic Well-Being

Desired Result	Considerations
5.1 This Growth Option will help to attract and retain a skilled, innovative and diverse workforce.	▪ Can this option be efficiently serviced? ▪ How many jobs are provided? ▪ How does the option attract and retain a skilled, innovative, diverse workforce? ▪ How does the option support existing commercial nodes

Many evaluators indicated that this growth option would support existing commercial nodes, which will help to attract and retain a skilled, innovative and diverse workforce.

A couple of evaluators thought that the efficiency by which this growth option could be serviced would help to attract and retain a skilled, innovative and diverse workforce.

A couple of evaluators felt that the opportunities for transit enhancement in this growth option would help to attract and retain a skilled, innovative and diverse workforce.

A couple of evaluators indicated that the live/work connections would help achieve the desired result.

Desired Result	Considerations
5.2 This Growth Option will position Hamilton as a leading centre of economic growth.	▪ Can this option be efficiently serviced? ▪ How many jobs are provided? ▪ How does the option attract and retain a skilled, innovative, diverse workforce? ▪ How does the option support existing commercial nodes

Many evaluators indicated that this growth option supports Hamilton's existing commercial nodes, which will help to position Hamilton as a leading centre of economic growth.

Many evaluators indicated that by supporting the existing transportation network, this growth option is supportive of the desired result.

A few evaluators felt that this growth option could be efficiently serviced, thereby supporting the desired result.

A couple of evaluators noted that this growth option had the greatest number of population related jobs, which would help to position Hamilton as a leading centre of economic growth.

Desired Result	Considerations
5.3 This Growth Option will maintain and enhance Hamilton's high quality environmental amenities.	▪ Can this option be efficiently serviced? ▪ How many jobs are provided? ▪ How does the option attract and retain a skilled, innovative, diverse workforce? ▪ How does the option support existing commercial nodes

Many evaluators indicated that the urban boundary expansion would have a negative impact on agricultural lands and negatively impact the desired result.

A few evaluators felt that this growth option enabled services to be delivered with relative ease, thereby supporting the desired result.

A few evaluators indicated that the way this growth option supports the existing transportation network would help maintain and enhance Hamilton's high quality environmental amenities.

A couple of evaluators thought that by supporting the existing commercial nodes the desired result would be supported.

3.5.3 Ecological Well-Being

Desired Result	Considerations
6.1 This Growth Option will ensure that Hamiltonians share equally in the benefits of a healthy natural environment.	▪ How do we protect the functions of ecological systems? ▪ Does the Option Preserve our Agricultural Land/Rural Areas? ▪ Does this option result in cleaner air and water?

Most evaluators noted that the nodes and corridors option presents a high potential for transit supportiveness, which will help to ensure that Hamiltonians share equally in the benefits of a healthy natural environment.

Many evaluators indicated that this growth option would have a detrimental affect on agricultural lands.

A couple of evaluators indicated that this growth option would have a detrimental affect on watersheds and environmentally sensitive areas.

Desired Result	Considerations
6.2 This Growth Option will enhance economic development in an eco-efficient manner.	▪ How do we protect the functions of ecological systems? ▪ Does the Option Preserve our Agricultural Land/Rural Areas? ▪ Does this option result in cleaner air and water?

Many evaluators that the impact on agricultural land will not enhance economic development in an eco-efficient manner.

A couple of evaluators indicated that since this growth option can be relatively efficiently services that eco-efficient economic development will be enhanced.

Desired Result	Considerations
6.3 This Growth Option will protect ecosystem health.	▪ How do we protect the functions of ecological systems? ▪ Does the Option Preserve our Agricultural Land/Rural Areas? ▪ Does this option result in cleaner air and water?

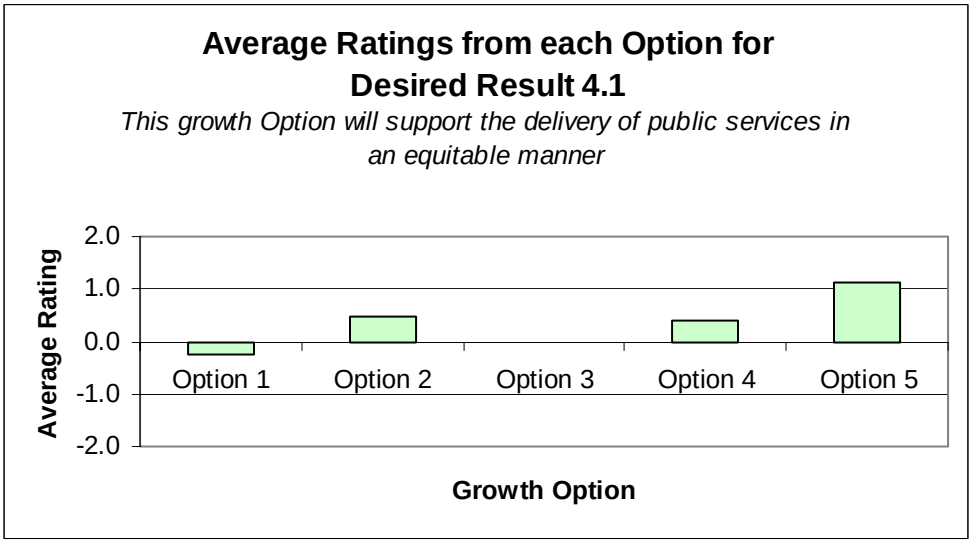
Most evaluators indicated that ecosystem health would be fairly well protected in this growth option.

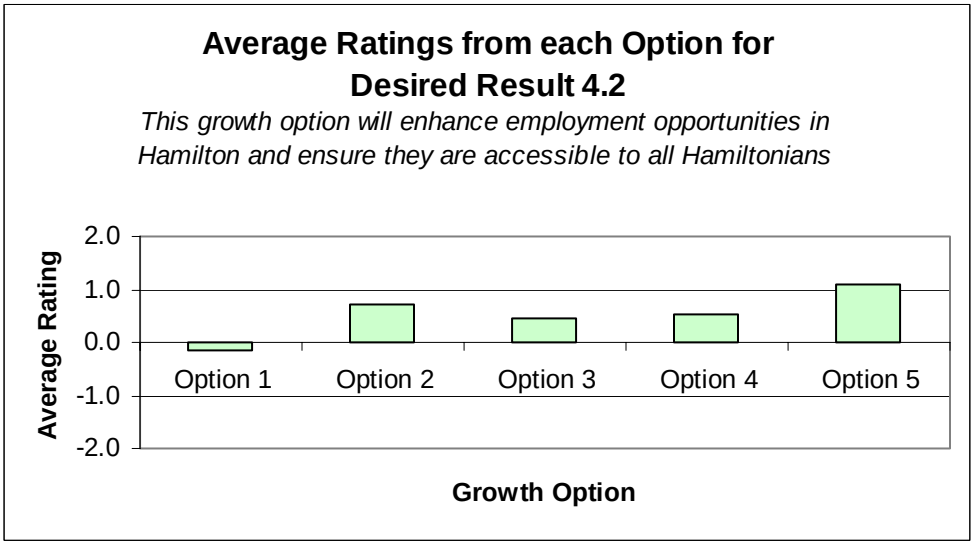
A couple of evaluators indicated that agricultural lands and watersheds will be negatively impacted with this growth option.

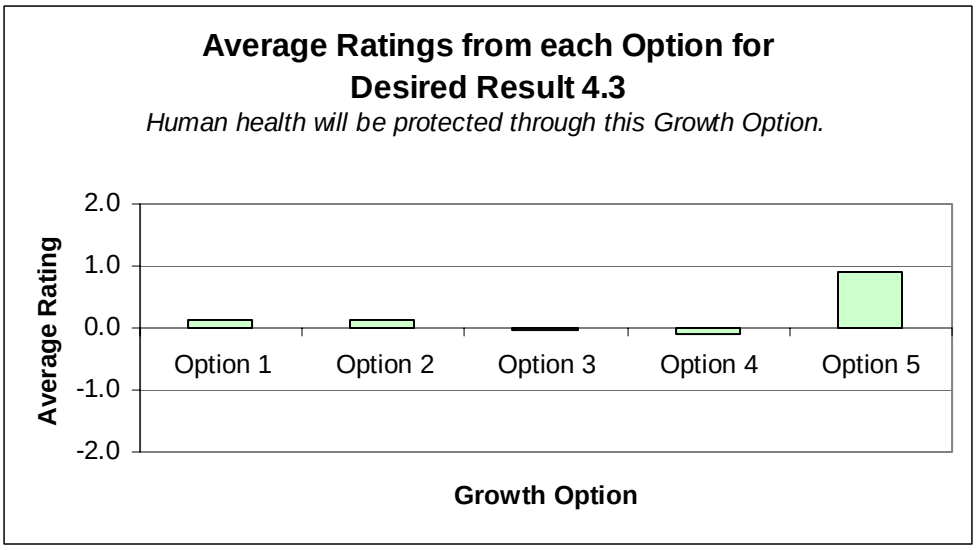
4 Summary of Average Ratings from each Growth Option for each Desired Result

4 Summary of Average Ratings from each Growth Option for each Desired Result

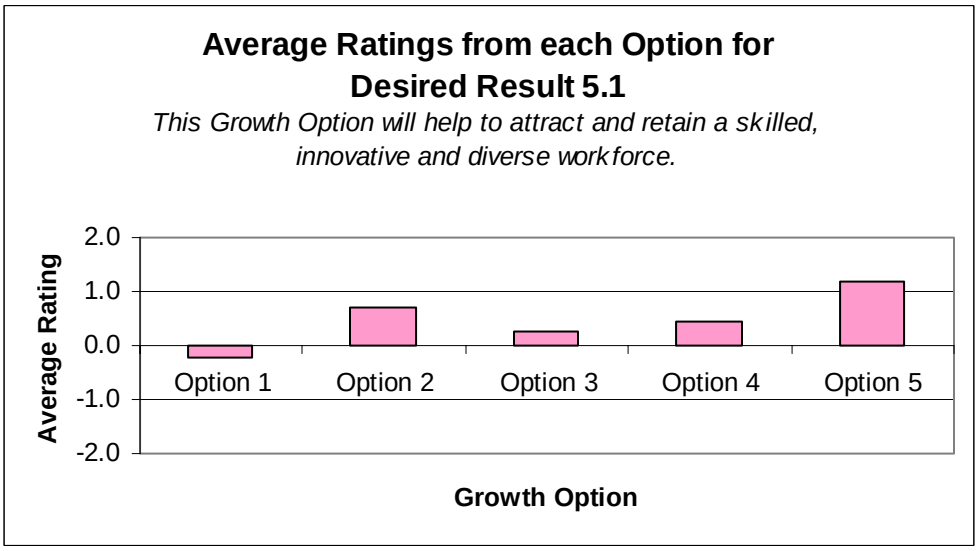
4.1.1 Community Well Being

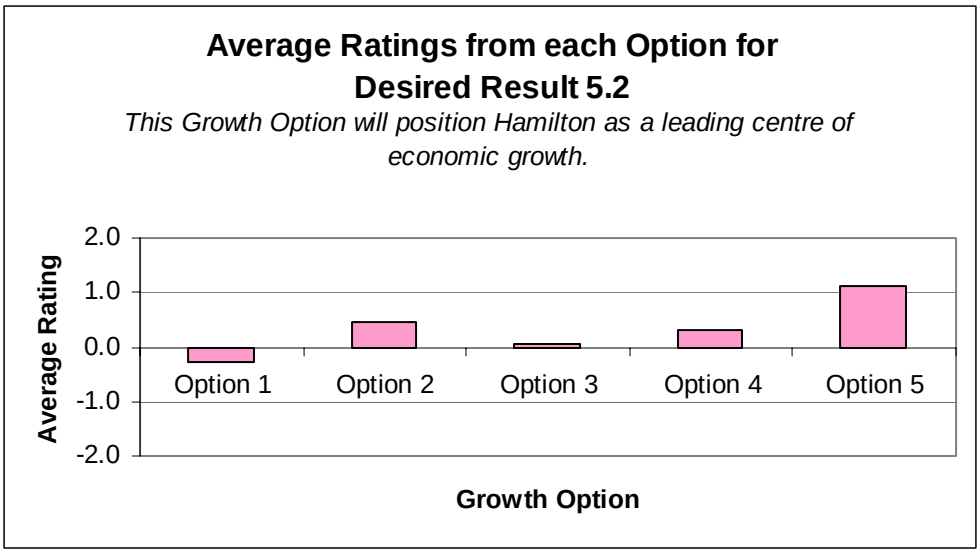


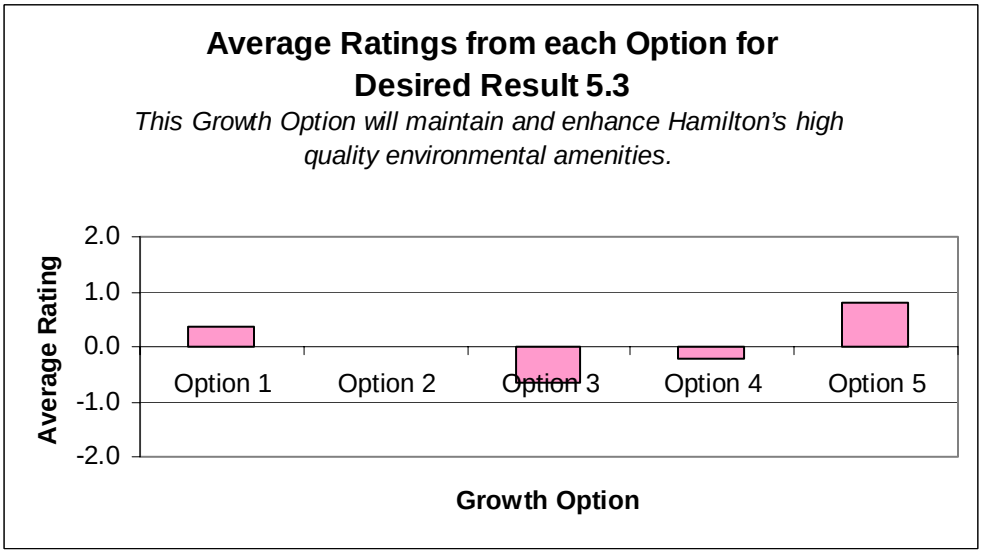




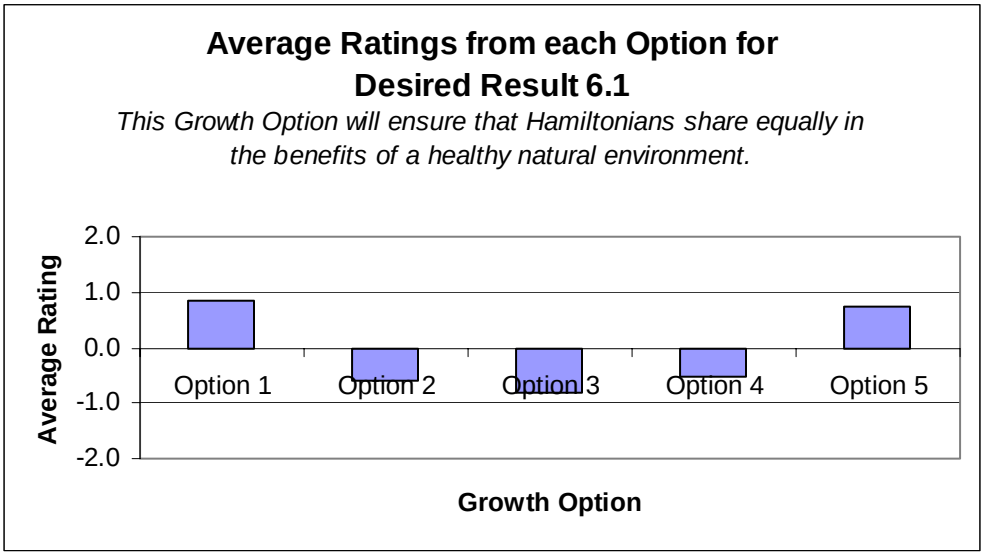
4.1.2 Economic Well Being

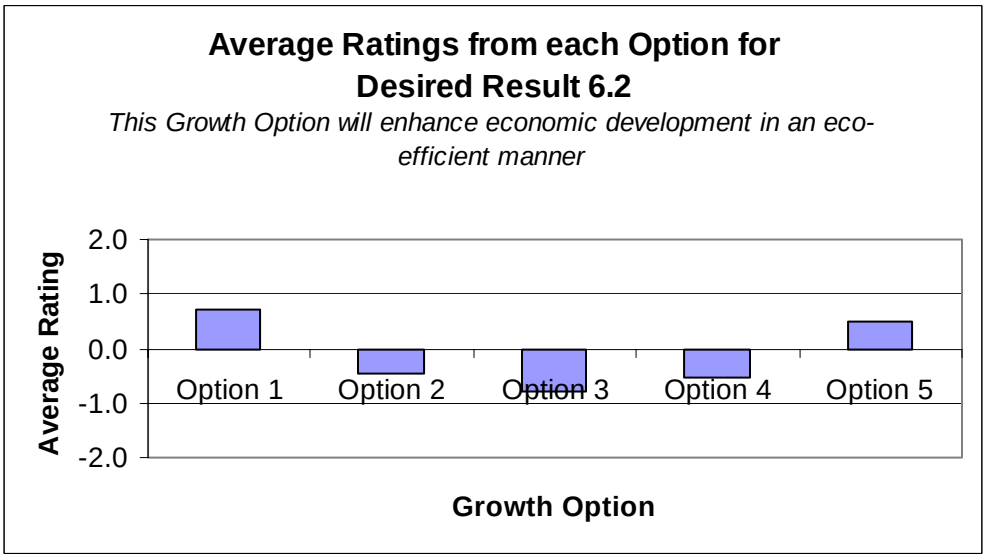


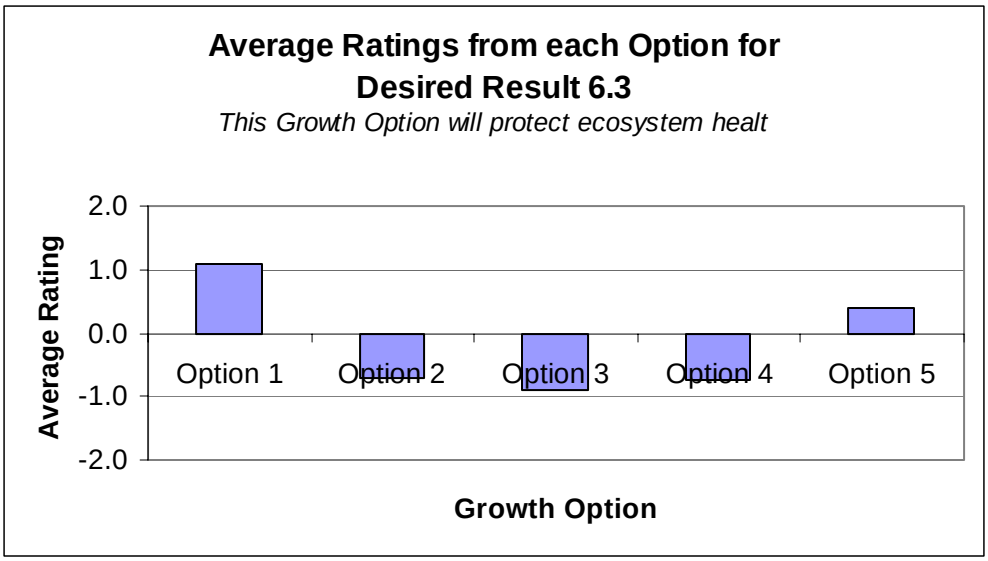

Average Ratings from each Option for Desired Result 5.2
This Growth Option will position Hamilton as a leading centre of economic growth.
2.0
1.0
0.0
-1.0
-2.0
Average Rating
Option 1
Option 2
Option 3
Option 4
Option 5
Growth Option


Average Ratings from each Option for Desired Result 5.3
This Growth Option will maintain and enhance Hamilton's high quality environmental amenities.
2.0
1.0
0.0
-1.0
-2.0
Average Rating
Option 1
Option 2
Option 3
Option 4
Option 5
Growth Option

4.1.3 Ecological Well Being






Average Ratings from each Option for
Desired Result 6.3
This Growth Option will protect ecosystem healt
Average Rating
2.0
1.0
0.0
-1.0
-2.0
Option 1
Option 2
Option 3
Option 4
Option 5
Growth Option

5 Summary of Feedback on Growth Options and Sustainability Appraisal

5.1 Are there ways to mitigate the negative effects of particular growth options, i.e. through design solutions or policy options?

Most of the TBL evaluators felt there were ways to mitigate the negative effects of particular growth options. Some of the suggestions are:

- Sensitive and comprehensive secondary planning exercises and strong supporting policy.
- Special area plans, i.e. to address stormwater opportunities and challenges at the neighbourhood level, particularly where intensification is high.
- Innovative approaches to the delivery of acceptable parkland and recreational services.
- Altering the shape/area of particular Growth Options to decrease the impact on natural areas.
- Urban design guidelines to address adequate waste collection areas and access (waste was not considered infrastructure in this exercise).
- Revisit the size and hierarchy of the nodes in Option 5 to ensure they are not disruptive to existing communities.
- Offset road infrastructure expansion by implementing the approved Transportation Demand Management measures in the Transportation Master Plan.
- Mitigation should be proactive and cost effective, especially to tax-supported actions/policies/works.
- Corridors for higher order transit need to be designated immediately with a staged implementation plan.

5.2 Are there features of given options that could be blended?

Many evaluators thought that Option 5 could be improved upon and/or blended with Option 2 to achieve a better Growth Option. Some of their reasoning and suggestions are:

- Blending Options 2 and 5 would achieve a dynamic synergy between promoting intensification opportunities in the built-up urban area and capturing residential growth that is presenting leapfrogging over Hamilton to other urban municipalities.
- Option 5 could be improved by including all of deferral 11 area as a mixed use area depending on airport nef lines and urbanize both sides of major corridors to create true mixed use corridors that connect nodes.

- Urban development on both sides of old Highway 6 south and Centenial Parkway should be pursued.
- Enhance Option 5 by incorporating the distributed growth pattern of Option 4
- Enhance Option 5 by establishing a node priority system that acknowledges the downtown core as the top growth development area with secondary nodes based upon community core/community service center areas.
- The intensification in Option 5 is unrealistic, but could be improved by identifying one large contiguous area of urban expansion.
- Option 5's higher order transit network could be adopted for any Option.
- Options 4 and 5 could b blended to scale back the risks and public investment needed to make the new Mountain node work to the level anticipated.
- Development boundaries need to be reviewed in order to optimize the serviceability of planned growth areas.

5.3 Do you have general feedback on Growth Options or the Sustainability Appraisal (i.e. evaluation process, online tool, & etc.)?

Growth Options

- Options 2, 3 and 4 are more the same old way of developing the city
- Difficult to understanding how Growth Options play such a deterministic role in economic development. Growth patterns shouldn't necessarily determine economic vitality and diversification in employment opportunities a significant stretch.
- Options 2 and 5 are similar in that they promote distributed growth. Growth is limited to fully serviced urban areas and essentially eliminated rural settlement growth.
- Intensification to date has required significant municipal subsidies.
- Soft service infrastructure does not get developed unless there is significant development charge funding.
- Brownfield development does not have the necessary supportive funding from senior levels of government.
- Intensification exclusively cannot accommodate the potential economic growth of the region.

Sustainability Appraisal

- Does not reflect the complexity and comprehensive context of the 'real world'. Too academic and overly biased towards 'do nothing'.
- There is no opportunity for 'weighting' criteria, evaluation process needs to be aware of intangible criteria such as land ownership, phasing.
- Not enough information to evaluate the ecological side of desired results.
- Good approach to a complicated set of issues.
- Different level of assessment for each of the appraisers.
- TBL approach of not comparing options to one another is challenging given the desired absolute outcomes.

- Process and presentation of materials was good
- Tool was easy to use.
- Not enough time was given to do the appraisals
- Written evaluation material with the online tool was helpful in reviewing, organizing and evaluating a large amount of data.
- Appreciation for the online tool expressed
- Tool has evolved to be much more user friendly. Web page needs a sign/log out button.