

Report
of the
Haigis Parkway Committee

Scarborough, Maine

SEPTEMBER 10, 2001

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Note to users of this report:

An earlier version of this report was published in loose-leaf binders and distributed prior to the workshop with the Town Council on August 28, 2001. This final version contains correction of typographical errors, better descriptions of the cost/benefit scenarios, 30-year financing cost/benefit scenarios, and a complete and indexed Appendix.

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EXECUTIVE SUMMARY

The Haigis Parkway Committee was formed to advise the Scarborough Town Council regarding the two critical aspects of commercial development in the Haigis Parkway Zone (HPZ) and the adjacent B-2 commercial zone (B-2). Those aspects are 1) economic and financial implications of such development; and 2) the impact on the character of the community of such development.

The Council asked that development in the Haigis Parkway Zone be considered in the context of "highest and best use" as indicated in the Economic Overlay District zoning ordinance and that a review of the existing zoning laws be completed to ensure that the ordinances would result in a "highest and best use" development which provided economic return to the people of Scarborough while preserving the character of the community.

The Council noted that much data and analysis had been done and should be used by the Committee and that a "balance sheet" approach to the economic analysis was desired.

The Haigis Parkway Committee worked with existing studies, the Town Planner, and Harvey Rosenfeld of SEDCO to establish the nature and size of the area under consideration. The Earth Tech, Inc. study entitled "Exit 6 Utility Feasibility Study, June 1997" was a primary source for physical data about the area. The Committee established that approximately 10 million square feet of land in the Haigis Parkway Zone was available for commercial development after accounting for existing uses, roads, wetlands, ponds, streams, and setbacks required by the zoning law.

Review of the Zoning Ordinance

The Committee worked with the Town Planner and SEDCO to understand the approved uses in the Haigis Parkway Zone and how it differed from the adjacent B-2 Zone. The major difference is the maximum size of 20,000 square feet for retail establishments in the HPZ with no such restriction in the B-2. The Committee recommends more precision in the language for several of the approved uses, for example, specifying that "fully enclosed" be specifically identified as "inside of a building with a roof", not merely fenced in. The Committee decided that bus or train stations are not consistent with the nature of the HPZ but could be part of the B-2 and still serve the HPZ. Enclosed hotels are recommended, excluding motel units in the HPZ. It was determined that golf course should be allowed in the HPZ and that additional campgrounds (beyond the existing property) should be prohibited.

The Committee was very focused on the impact development may have on the character of the community, and the appearance of development as residents passed near and through the area. The Committee determined that the appearance of development in the HPZ, as seen from the major roadways (Route One, Payne Road, Haigis Parkway), is critical to preserving the character of the community. This led to recommended changes to restrict building height, define signage parameters, and encourage the use of landscape buffers to minimize the view of parking from the public roadway system. The Committee recommends a specific set of revisions to the existing Haigis Parkway Zoning ordinance to ensure that development of the HPZ does not provide a visual impact that is inconsistent with the current character of Scarborough:

Highest and Best Use

The Haigis Parkway Committee met with landowners in the area on two occasions and with real estate brokers and developers on two occasions. Those meetings helped the Committee to establish that “highest and best use” of the HPZ will require that the area attract firms that will have the following characteristics:

- Provide higher tax revenue.
- Require minimal demand for services per tax dollar paid.
- Are committed to and involved in community.
- Attract other services that can benefit the community.
- Provide resources to the community.
- Preserve the general visual character of the community.

Every land owner, broker, and developer interviewed asserted that the type of firms desired to meet the “highest and best use” criteria would not move to the Haigis Parkway unless a high quality utility “backbone” were installed on the Parkway itself and the sections of Route One and Payne Road in the Haigis Parkway Zone.

Utilities

A model of the potential utility infrastructure was necessary for building a model of future development of the Haigis Parkway Zone. With SEDCO’s help, Allen Bingham met with all of the major utilities and the Committee met with the chairman and vice-chair of the Sanitary District.

The Committee used the 1997 Earth Tech Exit 6 Utility Feasibility Study as a basis for identifying the infrastructure required in the Haigis Parkway Zone and the adjacent B-2 Zone. There are four parts to the utility model: new sewer structures, modifications to existing structures, the capacity reserve charge (provision for future expansion of the sewage treatment plant), and the other utilities, including, water, gas, electric, telecommunications, and cable.

The Committee concluded that the expected costs for a full utility infrastructure in estimated 2002 dollars were \$10,464,000. This includes modifications to the existing system that the Committee assumed would be covered by \$1,500,000 of “public” improvements in the Enterprise Park project. The developer of the Enterprise Park will pay these costs at the outset and then be reimbursed over time as tax revenues are generated by the Enterprise Park businesses. The TIF payments to the developer are reflected in the models that include the Enterprise Park.

Excluding the \$1.5 million, the Committee modeled a cost of \$8.9 million for a complete utility infrastructure on the Haigis Parkway and sections of Payne Road and Route One in the Haigis Parkway Zone. This does not include utilities on any other existing roads or on potential future private roads in the area.

The 20-year Development Model

The Committee asked SEDCO to gather data on actual buildings in the greater Portland area, which might be candidates for moving to or expanding into the Haigis Parkway Zone after infrastructure, is in place. The Committee received a comprehensive series of photos and associated size, valuation, and employment numbers for a wide variety of businesses that satisfy the restrictions in the existing Haigis Parkway Zoning ordinance. Using the buildings and data, the Committee constructed a model of future development in the Haigis Parkway Zone in three overlapping phases and lasting 20 years.

The model assumes that approximately two thirds of the available 308 acres of buildable land (195 acres) is owned by 29 businesses which will settle in the Haigis Zone over the 20 years following the completion of the infrastructure. This produces a density of nearly 5,000 square feet per acre which the Town's professional consultant, Applied Economic Research, said was uncrowded and "park-like". These businesses actually develop only 46 acres in the model including parking area and access roads.

The model assumes that 1.1 million square feet of building space is built and that just over 2,600 people are employed in the Haigis Zone. This produces an acceptable level of 422 square feet per employee, slightly greater than the 410 square feet per employee calculated when using the model buildings with the Institute of Professional Engineers recommended amounts per employee by type of business.

The 1.1 million square feet occurs unevenly during the 20 years but averages out to just over 55,000 square feet of new space per year, a rate of absorption considered reasonable by the professional developers and real estate brokers interviewed by the Committee.

Cost/Benefit Economic Analysis

The cost/benefit economic analysis of the 20-year development model takes an income statement approach for the projected development each year. Taxable values are developed from the initial data and are revalued at the outset to reflect Scarborough's 2001 revaluation. Taxable values are increased again in year twelve of the model. Market values reflect expected growth rates arrived at through analysis of the last 10 years by the Scarborough Assessor. Land is expected to appreciate similarly to that of Payne Road properties (with sewer) at a pace of 7.18% per year. Buildings are expected to appreciate at the average annual rate of commercial property in Scarborough over the past ten years: 2.66% per year.

Revenues come in each year from property taxes, excise taxes and fees, and from a special assessment to recoup 50% of the cost of the utility infrastructure over a ten year period. State law prescribes that no more than 50% of infrastructure costs may be recouped via a special assessment district and all assessments must be done within ten years. The Committee recommends the recovery of the full 50%, and chose to use the full ten years to lower the annual dollar impact on developers.

The tax rate is set at \$15.50 per thousand at the outset, the revaluation figure estimated by the Town Assessor. The Committee chose to grow that rate by 3% per year until the next revaluation. In year twelve, revaluation sets taxable values equal to market and reduces the tax rate by 22%.

Excise taxes and other fees are derived by using the appropriate values in the Growth and Services Report to develop a factor that can be applied annually to taxable value in the Zone.

Expenses include annual debt service for the utility infrastructure bonds, demand for Town services, county taxes, impact of new property value on State aid to education, the impact of additional demand for residential housing in Scarborough, and the cost of interest for any annual net cash shortfalls.

The utility infrastructure bonding is modeled as two 20-year, fixed principal notes the first to pay for the engineering design and the second a year later to pay for the installation. The Committee assumed that bond anticipation notes would be issued if the project were approved to allow the Town to lock in an attractive interest rate. In practice, bonding will likely be staggered to gain access to capital as needed.

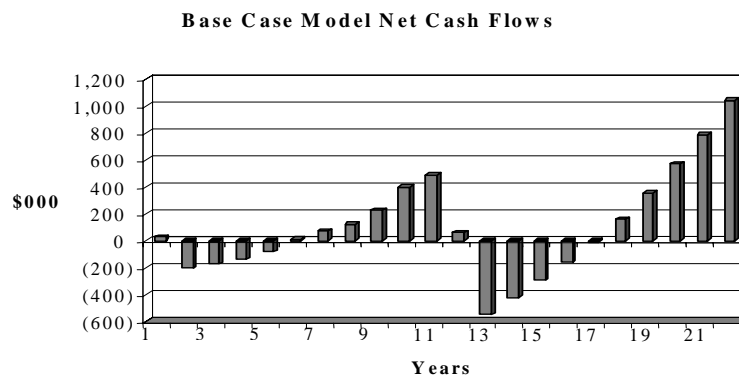
The charge for Town services, county taxes, other intergovernmental fees, and the impact on State aid to education are calculated using factors derived from the Growth and Services report which can be applied each year to the taxable value of businesses in the Haigis model.

The Committee developed a model of potential demand for new homes in sub-divisions due to businesses locating in the Haigis Zone. The Growth and Services Report indicated that 25% of Scarborough residents work in Scarborough. The Committee assumed that 5% of employees already reside in Scarborough (Cumberland County census data) and that over the first five years in the Haigis Zone another 20% of any business's employees would buy a new home in a sub-division in Scarborough. This results in 529 of 2,660 employees demanding new homes in sub-divisions in Scarborough over the 20-year period. The new homes are then assumed to cost the Town \$1,194 each year forever as indicated in the Growth and Services Report.

This approach seems conservative in that it does not allow for spouses in the Zone and people buying existing homes. Applied Economic Research looked at a different approach, taking Scarborough employment as a percent of total Cumberland County employment and deriving a share of housing demand. The AER model suggests demand for only 337 new homes in sub-divisions over the 20-year period.

In each year, if the model results in a net negative cash flow amount, the model charges interest on that amount in the next year as a proxy for the opportunity cost of capital involved in having to fund the shortfall.

By tracking revenues and expenses over an appropriate period of time, in this case 22 years, the model reflects the "time value of money spent or earned" and shows the "timing of net cash flows" to the Town. These are the two critical issues the Town faces when deciding whether to fund a major project. The timing of the net cash flows from the baseline model is presented in the table below.



The stream of net cash flows represents both the net investment by the people of Scarborough and the net return to the taxpayers. Though the model assumes that Scarborough issues bonds for \$8.9 million to fund the sewer and utility infrastructure for the Haigis Parkway Zone, the total costs incurred by the Town are the net negative cash flows.

Using the annual net cash flows, it is possible to examine the economic return to the people of Scarborough by calculating the rate of return on the net investment as represented by the net cash flow stream. This calculation is the internal rate of return. The stream of annual cash flows pictured above is equivalent to a return of 13.3% annually over the 22-year analysis period.

This does not reflect a return on the money invested in the sewer as that would require looking at cash flows from the Haigis Zone with and without the sewer and the Committee decided that the area would not produce a “highest and best use” result without the utilities in place.

Alternative Risk Models

Economic feasibility studies of the type represented by the Haigis Parkway Cost/Benefit Economic Analysis offer decision-makers both an advantage and a dilemma. On one hand, such models require a high level of discipline as facts are used to carefully craft a picture of the future, which can be deemed a “likely” scenario. On the other hand, the model is only as good as the assumptions and no one knows the future. Use of such modeling for decision-making requires examination of several scenarios that represent a range from “good” to “pessimistic” expectations or assumptions. The Haigis Parkway Committee examined several scenarios including the base case economic development model to produce the range of outcomes below. The scenarios included a very poor economic environment where no growth at all occurs in the Haigis Zone for 2 years after the infrastructure is complete. This produced the lowest levels of return and the most cost to the Town. The AER home demand scenario produced the highest levels of return and least cost. The addition of the Enterprise Park produced results somewhat better than the base model alone. All of these results assume that 50% of the utility infrastructure costs can be recovered over time.

Average annual total return to the Town over 22 years	8% to 34%
Net investment required (net negative cash flows):	\$0.5 million to \$1.8 million
Years of negative net cash flows at start:	4 to 8 years
Years to recovery of initial shortfall:	7 to 12 years
Net accumulated value over 22 years:	\$1.2 million to \$7.2 million

Scarborough can borrow for long terms at a rate just over 5% yet the expected return on investment for the development of the Haigis Parkway Zone is between 8% and 34% on an annual average basis over a 22-year period. This suggests a substantial return to the people of Scarborough over and above the cost of capital.

Factors for Financial Success

Results of the Cost Benefit Economic Analysis depend upon a number of key factors:

1. The Town should recover 50% of the cost of the infrastructure through a special assessment or cost sharing with the utility companies and shelter as much of the new value as possible in a TIF district.
2. The Town should not give taxes back to developers/owners in the Haigis Parkway Zone in order to attract businesses to the Zone. The Haigis Parkway Zone is sufficiently attractive to allow the Town to avoid such “give back” type TIF arrangements.
3. The Town should explore financial relationships that might share some of the future tax returns in exchange for more up front cash flows to limit the cash flow shortfalls in the early years.
4. The Town should continue to develop a comprehensive residential growth management plan to limit the impact of new homes on the cash flow and infrastructure needs of the Town.

Conclusions and Recommendations

1. Haigis Parkway Zone, and adjacent B-2 Zone, due to proximity to Exit 6, represent one of the last large commercial development opportunities in Southern Maine with direct access to the Maine Turnpike.
2. The HPZ was developed to ensure that the highest and best use of the area would be achieved with careful management of the impact on the character of the community.
3. Highest and best use of the Haigis Parkway Zone will be achieved through mixed use, low density commercial development attracting firms that have the resources to build within the parameters of the recommended zoning restrictions, the resources to be strong participants in the community, and employees who will take an interest in the community.
4. As the Haigis Parkway Zone is almost entirely private property, it is expected that sites will be developed whether or not the Town provides access to the Sanitary District sewer system. Without sewer and other utility infrastructure, this development will not meet the standard of “highest and best use” as any development will use septic systems, be relatively small, and will not provide the level of tax revenue associated with a high quality commercial development.
5. To attract firms that constitute the highest and best use of the Haigis Parkway Zone, the Committee recommends that the Town of Scarborough authorize the installation of the core utility infrastructure on the Haigis Parkway, portions of the Payne Road and Route One. This should include, but not be restricted to, new sewer lines, downstream sewer line improvements necessary to handle the expected increase from new commercial development, and sub-surface water, natural gas, electricity and telecommunications lines. The telecommunications should be of the capacity and capability to support the most demanding “high technology” firms.
6. To fund the necessary infrastructure, the Town of Scarborough should create tax increment financing areas (TIF’s) and special assessment districts in the Haigis Parkway Zone. The maximum 50% of infrastructure costs should be recovered through a special assessment over a reasonable period of time. 30-year bonds should be used to fund construction.

7. Once the utility infrastructure is in place, significant high quality commercial development can be expected to begin. This development will occur on a privately funded internal roadway system served by the nine existing curb cuts on the Haigis Parkway between Scottow Hill Road and the Payne Road, and on the portion of the Payne Road abutting Haigis Parkway Zone properties.
8. Existing landowners are likely to sell their property to developers. Developers are likely to acquire several parcels of land so that cost-effective, "park-like" commercial developments can be created while making best use of the available landscape and adhering to the demands of the recommended Haigis Parkway Zoning ordinance.
9. The Committee recommends that the Haigis Parkway Zoning ordinance be revised to be very specific concerning the visual presence of buildings, roads, and parked vehicles. These design parameters should be specific to the Haigis Parkway Zone though they can, and perhaps should, be applied to other developments throughout the Town.
10. A "visual analysis" modeling design system should be used to allow Scarborough Planners, Planning Board members, and Town Councilors to estimate the visual impact of any proposed development.
11. High quality development will result in demand for Scarborough housing by employees of the Haigis Parkway firms.
12. The Committee's Baseline Model Development Scenario for the Haigis Parkway Zone suggests that the people of Scarborough can realize a substantial return on public funds invested in infrastructure serving the Haigis Parkway Zone.
13. The Town needs a comprehensive people movement and traffic management design for the geographic "triangle" which includes Eight Corners, Dunstan Corner, and Oak Hill.

Introduction & Process Overview

2.1 Formation of the Haigis Parkway Committee

The Haigis Parkway Committee was appointed by order of the Scarborough Town Council on September 20, 2000 in public session. The Committee consists of 9 members.

The Town Council provided the Committee with specific direction and guidance in its “Charge for the Haigis Parkway Committee”. The “Charge for the Haigis Parkway Committee” is included in the Appendix, Section 1 of this Report.

2.2 Committee Objectives

The Town Council set out objectives for the Committee, which focused on methods to achieve the “highest and best use” of the Exit 6 commercial zones including the economic and community impacts of large-scale commercial development.

The Town Manager asked that the Committee propose strategies for developing the Haigis Parkway District as a high quality regional center for employment, entertainment and cultural activities. The Committee’s efforts focused on strategies to guide and encourage development consistent with the district’s purpose. We proposed financial strategies to construct a utility infrastructure including sewers, and other utilities and to fund public improvements necessary to support the development.

The Council indicated that development should provide a positive economic return to the community and its taxpayers and that a “balance sheet” approach to costs and benefits should be provided. The Committee acknowledged the need to develop, or contract for, an economic analysis that would support its recommended strategies and document the project’s cost/benefit analysis.

2.3 Haigis Parkway Committee Establishes a Plan of Action

The Committee carefully studied the Town Council’s “Charge for the Haigis Parkway Committee” and on November 27, 2000 established a plan of action that would serve as the foundation for the Committee’s work. This plan of action is in Appendix, Section 1 of this report, and is referred to as the “Summary of Council Charges and Deliverables”. Throughout the deliberations of the Committee, this served as the foundation for our work. The plan was designed to be dynamic. As our work progressed and new discovery was uncovered, we deliberated on the issues before us, recorded important findings, then returned to the plan to maintain our course of action.

2.4 Sub-Committees

From time to time specific topics required a focused approach to data gathering and evaluation. The Committee sought volunteer members to serve on sub-committees and report their findings to the full Committee for deliberation. The following is a list of those sub-committees:

- Zoning Ordinance Review
- Development Modeling
- Impacts
- Utilities & Infrastructure
- Cost Benefit Analysis
- Report Formatting

2.5 Meetings of the Committee

The initial meeting of the Haigis Parkway Committee was held on October 19, 2000 as an organizational meeting to choose a Chair, and to begin discussions regarding our course of action and method of operation. During a subsequent meeting the Committee chose a Vice Chair to assist the Chair as needed and to serve in the absence of the Chair.

The Committee established an initial schedule of bi-weekly meetings with the understanding that we would re-evaluate our schedule as the work progressed and make adjustments if needed. On November 30, 2000, after only four meetings, we revised our schedule to meet weekly, and at times, twice a week so we could complete our work in a reasonable time without compromising the quality of our output. The revised schedule resulted in more than 600 man-hours of public meeting time over the course of more than 40 meetings.

During the course of our work, it became important to schedule a series of focused meetings and activities to gather data on certain topics. The following is a listing of special Committee meetings and activities:

- December 16, 2000 Site Walk hosted by Conservation Commission members
- January 4, 2001 Town Manager addresses Committee
- February 1, 2001 Real Estate and Developers roundtable
- February 17, 2001 Landowners and Abutters roundtable
- February 27, 2001 Sanitary District roundtable
- March 13, 2001 Second Landowners and Abutters roundtable
- March 27, 2001 Town Council status review / workshop
- May 24, 2001 Meeting with Consultant Russ Thibeault
- May 31, 2001 Meeting with Real Estate Brokers and Consultant

2.6 Data Sources

The Committee used a variety of resources for data collection. These resources were referenced, as needed, to build our knowledge on key topics relating to the charge from the Town Council. The following is a list of resources used by the Committee.

- Exit 6 Area State Report 1983 and 1986
- Scarborough Long Range Planning Study 1988-89
- Scarborough Comprehensive Plan 1994
- DeWan and Associates Land Use Concept Plan 1994
- Economic Overlay District Ordinance and HP Zone Ordinance, 1996
- HP Workshops for Council 1999 and 2000
- SEDCO TIF Workshops for Council 2000
- Earth Tech: Exit 6 Feasibility Study, 1997 and follow-up interviews.
- Numerous interviews/meetings with representatives of most major utilities.
- An Overview Of TIF Policy For Municipalities in Maine, Planning Decisions 1998
- Report of the Growth and Services Committee, April 2000
- Input from the public – letters, comments.
- Two (2) workshops with land owners and abutters.
- Two (2) workshops with real estate brokers and developers.
- SEDCO staff
- Scarborough Town Planner and Assessor
- Scarborough Sanitary District Board
- Dunston Corner Report

2.7 Public Input and Awareness

The Committee consistently encouraged citizen participation. Every meeting agenda included a provision for public input, and any citizen who attended a meeting was encouraged to comment on any topic of discussion during meetings of the Committee.

Additionally, the Chair of the Committee issued press releases weekly for publication in the Scarborough Leader. These articles provided a public overview of the events of the meetings and commented on the progress of the Committee's work.

All business and special meetings of the Committee were broadcast on local cable TV, subject to availability of the filming crew.

Landowners and abutters to the Haigis Parkway Zone and the Economic Overlay District were invited to attend two meetings to discuss their perspectives on development of the area and to gather their input pertaining to the level of development interest, perceived impacts, and types of development being considered.

The Committee also convened two meetings with real estate professionals and developers to assess market opportunities and the potential nature of development in the Haigis Parkway Zone. The second meeting with real estate professionals was used to test the validity of build-out scenarios and cost benefit analysis assumptions. Russ Thibeault of Applied Economic Research attended the second meeting to assist the Committee in verifying its findings.

2.8 Town Council Workshop

On March 26, 2001 the Committee met with the Town Council in a public workshop to provide an overview of progress to date, and to review critical assumptions the Committee would use in the build-out scenarios and the cost benefit analysis. This was an expressed desire of the initial charge to the Committee provided by the Town Council. We were pleased to receive the Council's approval of our progress and their acceptance of our assumptions at that time.

2.9 Town Staff Assistance

The Committee is pleased to acknowledge the guidance and direction provided by Ron Owens, Town Manager. The Town Manager appeared before the Committee to provide his vision and to offer the assistance of Town staff. Joe Ziepniewski, Town Planner attended various early meetings of the Committee. We also wish to acknowledge the assistance of the Town Clerk's office in recording minutes of meetings and scheduling assistance, as well as the work of the Cable TV Committee in broadcasting our meetings to the people of Scarborough. Throughout our deliberations, the Town Manager remained available to assist the Committee at any time. We wish to specifically acknowledge the Town Manager's assistance in making the Town's consultant, Russ Thibeault of Applied Economic Research, available to the Committee to evaluate and comment on certain key assumptions used in the Committee's "cost benefit analysis".

2.10 SEDCO Assistance

We also received significant cooperation from Harvey Rosenfeld, of SEDCO. Harvey provided critical demographic, business profile data, and the vision of the representative types of buildings that might define the "highest and best use" of the Haigis Parkway Zone. Harvey Rosenfeld also provided the Committee with its initial package of "history" to bring each member up to speed on the status and nature of the Haigis Parkway Zone and the Exit 6 commercial development area.

2.11 Scarborough Sanitary District Assistance

At a special meeting on February 22, 2001, Bud Waldron and Pete Costello of the Scarborough Sanitary District Board of Directors helped to educate the Committee on the details of what it would mean to install sewer infrastructure in the Haigis Parkway Zone, including the requirements for improvements to the existing system and treatment plant. In addition, Pete Costello, and Mike Farmer, the Superintendent of the District, spent several hours answering questions by the Chair in a separate meeting.

Concept of Development

“Highest and Best Use”

3.1 The Concept

A quality development of the Haigis Parkway Zone depends upon a vision of “highest and best use” as the build-out occurs. The Committee focused on issues, that included the density of development, zoning provisions, the preservation of natural resources, the movement of vehicular traffic, and other concerns that point to a value-based project. We found that “highest and best use” is a blend of values that create a high quality business environment that has long-term investment value for the community and private investors, and compliments the character of the Town.

3.2 The Community Impact

The scale of development potential within the Haigis Parkway Zone has a community-level impact. As development in the Haigis Parkway Zone progresses, the character of development will be important to the community. The Committee remained conscious of the image and character of development and the important long-term reflection the development of the Haigis Parkway Zone on our Town.

As we discussed issues such as height, visual impact, traffic, utilities, and other issues, we included the residual impact beyond the area of the Haigis Parkway Zone. The Committee’s work moved in the direction of trying to provide the Town of Scarborough with a very high quality comprehensive plan that would yield our citizens a good return on their investment while complimenting the character of our community such that for generations to come our citizens may pass by and feel that the “highest and best use” was achieved with respect to the preservation of the character of our community.

3.3 Characteristics of “Highest and Best Use”

During the Town Council workshop of March 27, 2001, the Committee briefly reviewed the following characteristics of firms, which would be define the highest and best use of the Haigis Parkway Zone. These are not all-inclusive, but serve to represent certain community benefits, which may be expected by the presence of high quality commercial development.

1. Higher tax revenue
2. Minimal demand for services per tax dollar paid
3. Companies committed to and involved in community
4. Attract services, which can benefit the community
5. Corporate resources available to community
6. Preservation of the general visual character of the community

3.4 Achieving a “Highest and Best Use” Outcome

This is a complex issue that requires specific safeguards and controls that preserve the quality of development and its appearance to the community. The commercial development has to be a well-managed process that extends for many years. A strong zoning and planning involvement is essential to the success of achieving the goals of a long-term quality development. The Committee spent significant time to consider zoning criteria that would provide the Planning Board with tools to insure that the quality of development in the Haigis Parkway Zone will conform to the vision for the area outlined in the Economic Overlay District Ordinance and the Town’s Comprehensive Plan.

The Committee concludes that a comprehensive utility infrastructure or sewer, water, electric power, natural gas, and state-of-the-art communications is a fundamental requirement to “highest and best use” in the Haigis Parkway Zone

3.5 Town Planner & Planning Board

The Town Planner and the Planning Board must be held accountable for the quality of the development in the Haigis Parkway Zone ensuring that highest and best use is achieved and the character of the community is not compromised by the development. While not an easy task, the Haigis Parkway Committee has laid out a series of changes and enhancements to the Haigis Parkway Zoning ordinance, which should provide some help.

Impacts on Our Community

The unique nature of the Haigis Parkway Zone lends itself to being a high quality regional center for employment, entertainment and cultural activities. However, the presence of large-scale development in the Haigis Zone and the adjacent B-2 Zone will have an impact on the immediate Parkway area and on the entire Scarborough community.

The Committee classified potential impacts of development in four categories that considered the long-term implications on the character of the community as well as the dependency on Town services and financial resources. The four categories are: Financial, Environmental, Quality of Life, and Social

Impacts cannot always be easily quantified, but may be significant to the character of the community. The Committee attempted to place a realistic value on those impacts it considered to be measurable. These measurable impacts are presented as considerations within the cost benefit analysis. The following is a listing of certain impacts that may not be specifically quantified, but remain very important to the community as a whole.

4.1 Financial Impact

The financial impacts evaluated in the cost benefit analysis are based upon the data gathered and assumptions made by the Committee. Over a 22-year study period, our analysis shows that a relatively modest investment by the Town can result in significant positive financial return. The initial infrastructure investment will cause a negative cash flow in the beginning years until taxes received from development offset the annual debt service.

4.1.1 Alternative Financial Strategies

The cost benefit analysis depends on creative funding strategies such as Tax Increment Financing (TIF), a well-planned process to recover up to the maximum amount (50%) of the infrastructure costs from the owners, and the length of the bond term.

4.1.2 Town Services

New development in the Haigis Parkway Zone and the associated increased demand for new homes will create additional demand for educational resources and municipal services. These were considered in our cost benefit analysis. The Committee used the Growth and Services Report of April 2000 as the basis for our cost assumptions in these areas.

4.1.3 Residential Housing

The Committee's cost benefit analysis assumes a significant demand for new homes. Our model projects a demand for new homes that is in excess of historical figures that measure the relationship between the number of people who live and work in Scarborough. We acknowledge there are different methods of attempting to quantify this impact. To further test the feasibility of our work, we sought input from the Town's consultant, Russ Thibeault of Applied Economic Research. He concluded that our estimates for housing demand due to jobs moving to the Haigis Parkway Zone are appropriate, and result in a higher number than his model estimates. Mr. Thibeault's comments are in the Appendix as Exhibit 4-1.

4.2 Environmental Impact

This is viewed principally from the perspectives of surface and sub-surface impacts.

4.2.1 Surface Impact

Thoughtful land-use planning, and the careful preservation of natural areas directly affect visual environmental impacts. Commercial development will cause a loss in open space. However, the presence of a well-planned greenbelt and proper protection of wetland areas and delicate vegetation, would help to preserve the natural environment and serve to minimize the inevitable affect on the native wildlife and its habitat. The Committee has recommended certain zoning changes to further strengthen the focus on visual environmental concerns.

4.2.2 Sub-Surface Impacts

This concerns the need to properly handle waste and other materials resulting from development and the increased vehicle and pedestrian activity in the area. These considerations have an impact on the environment in areas outside the Haigis Parkway Zone, such as the marsh and watershed habitat. Waste disposal and storm water runoff containing elements such as road salt, lawn chemicals, and other materials, are significant considerations. The Committee believes that a properly designed sewer system and proper attention to runoff conditions will provide the best solution to sub-surface impacts. Focused attention should be given to the storm water drainage design to consider any impact on the marsh or other environmentally sensitive areas. Accelerated ground water runoff could also affect the water table in certain areas of the Haigis Parkway Zone.

In the absence of a sewer system, highest and best use will not be attained, and the presence of septic systems will proliferate over time. The Committee is concerned that this will have a negative environmental impact.

Installation of a sewer system in the Haigis Parkway Zone, with its associated downstream improvements, will make it feasible to serve Heritage Acres, thus eliminating its ongoing septic problems.

4.3 Quality of Life

The Committee remained mindful of the impact of development on the character of our community. Particular attention was given to the preservation of Scarborough's rural environment and small Town atmosphere. Zoning ordinance recommendations contained in this report are intended to provide safeguards that protect these values. However, the following are impacts of concern that affect the quality of life in our Town.

4.3.1 Traffic

More jobs will cause an increase in traffic directly affecting the ease of commute. This will be a progressive increase as development occurs over time. Pressure will be placed on the major roadways feeding the Haigis Parkway Zone. The analysis required to evaluate the "net" impact of traffic resulting from the proposed development

scenario is beyond the expertise and scope of the Committee. When the Committee discussed obtaining a professional traffic impact analysis, it was clear that such a study limited to the Haigis Parkway Zone would not be meaningful. However, the Committee believes that current traffic conditions in the “triangle” area defined by Dunstan Corner, Eight Corners, and Oak Hill point to the need for a comprehensive traffic analysis in the near future.

4.3.2 Night Sky Light Pollution

The Committee is concerned about the impact that development has on night sky illumination caused by direct lighting of large areas. Particular attention should be given to the design and density of lighting to minimize the effect of night sky light pollution.

4.3.3 New Services & Business Opportunities

Commercial development in the Haigis Parkway Zone will encourage the addition of new service businesses to support the needs of the development. Residents will benefit from the availability of new services in the community. Existing service businesses in Scarborough may also have new opportunities resulting from development in the Haigis Parkway Zone.

4.4 Social Impact

This has many facets and is associated with the “quality of life” considerations. It is felt that the presence of new service businesses and possible new entertainment options would benefit the community. As we considered these benefits we remained conscious of the residual impacts on traffic caused by vehicular trips that may be increased by service and entertainment related businesses. Additionally, the magnitude of the Haigis Parkway development will accelerate the shift from a traditional rural atmosphere to a more urban business setting. New job opportunities will increase the potential for skilled office and technical jobs. Increased demand for housing in the Scarborough area will likely increase the cost of housing and will limit its affordability to certain income groups.

4.5 Indirect Impacts

These impacts are not specifically in the Haigis Parkway Zone, but would occur as a result of a “highest and best use” development. For example, the downstream sewer system upgrade creates capacity to accommodate Scarborough’s anticipated growth east of the Maine Turnpike.

Zoning Ordinance Recommendations

5.1 General Overview

The Haigis Parkway Committee, as required in the charge from the Town Council, reviewed the Haigis Parkway Zoning Ordinance to evaluate whether the ordinance will result in “highest and best use” development in the zone with particular attention to influence on economic value and impacts on the character of the community. This review was extremely beneficial to the members as it provided a foundation on which to consider other critical issues. The Committee reviewed its preliminary findings with developers, real estate professionals and Haigis Parkway Zone landowners and abutters.

The Committee also reviewed the Economic Overlay District ordinance and the adjacent B-2 zoning ordinance. Time did not permit the extensive research necessary to make recommendations for changes to these documents. However, the Committee believes the recommended changes for design and visual appearance are appropriate for the B-2 zone due to its location at the Exit 6 “Gateway” to Scarborough.

After consultation with landowners and real estate development professionals and study of the report of the Growth and Services Committee and the surveys of Scarborough residents in 1990 and 1999, the Committee established a basic definition of “highest and best use” to allow for evaluation of the zoning ordinance and overall development assumptions for the Haigis Parkway Zone:

- Higher tax revenue than alternative zoning
- Preservation of the general visual character of the community
- Efficient demand for services per tax dollar paid
- Companies committed to and involved in the community
- Attract services that benefit the community
- Corporate resources available to the community

The Committee found that fundamental changes to the HP zoning ordinance are required to facilitate the "highest and best use". The following details the rationale for and the changes the Committee recommends be made to the Haigis Parkway Zoning Ordinance and, in some case, to all zones in the Scarborough.

NOTE: The following numbers refer to the specific section number and/or letter of the current Haigis Parkway Zoning ordinance.

Zoning Ordinance Section B

3. The ordinance should be clarified to specify that “fully enclosed” be inside a building with a roof. The Committee feels that the fully enclosed requirement is not met with a fenced in enclosure.

4. Bus stations and the like are not consistent with the intent of the Haigis Parkway Zone. Bus stops, including small covered waiting areas, should be allowed.
6. Becomes #5 when passenger terminals (#4) is deleted. Motels are not appropriate in a high scale business park. Hotels, where room access is from an enclosed building, coupled with other traveler services, should be encouraged.
7. Becomes #6 when passenger terminals (#4) is deleted. Golf courses can be appropriate and attractive additions to the area. While acknowledging that the existing campground is “grandfathered”, and improvements (but not expansion) should be allowed, additional campgrounds should be prohibited.
11. Becomes #10 when passenger terminals (#4) is deleted. In part A, retail sales and services are allowed as written, but warehousing, wholesale distribution and outdoor sales and services are deleted. “B” is added to specify the allowance of freestanding warehousing and wholesale distribution but excluding mini-warehouses, storage facilities, and outdoor sales and services. The recommendation here is a clarification and interpretation of the original wording to avoid potential confusion.
14. Becomes #13 when passenger terminals (#4) is deleted. The Committee recommends that permanent accessory storage containers be prohibited and that temporary accessory storage be limited to one (1) container per site for a maximum of sixty (60) days in a twelve (12) month period.

Zoning Ordinance Section D

The Committee believes that buildings in the Haigis Parkway Zone should be limited to 4 stories and a maximum height of 60’ when measured at the front of the building. The 60-foot maximum will include all aspects of the building, including all components, roofing, structures and attachments. In addition, the building height may not exceed 45% of the distance from the DOT right-of-way on Haigis Parkway.

To protect the non-urban character of Scarborough, development in the Haigis Parkway Zone and throughout the community should preserve the visual integrity of the tree-line view from the major roadways: Haigis Parkway, Route One, and Payne Road.

The Committee strongly encourages the establishment of a “visual analysis” requirement as part of the site plan review for all projects in the Haigis Parkway Zone and the rest of the community. A visual analysis will include a high quality, scaled pictorial representation of the effect of the proposed development on the visual character of the surrounding area. Specific attention should be given to maintaining the visual integrity of the tree line view and preventing buildings from “looming” over the roadsides in the manner of the Maine Medical building under construction on Route One at this writing. We recommend that a definition of a “visual analysis” be added to the zoning ordinance definitions section.

Zoning Ordinance Section E

In an attempt to preserve the rural feel when driving the Haigis Parkway today, the Committee recommends several changes to make this section consistent with other changes made to the ordinance. These changes include landscape adjustments, the removal of signage from buffer areas, and the size of side and rear yards.

The Committee also recommends adding a concealment standard. Parked vehicles and outside storage shall be substantially concealed from the routine view of motorists on major roads such as the Haigis Parkway.

Zoning Ordinance Section F

For safety and aesthetic reasons the Committee agreed that on-street parking should be prohibited on the Haigis Parkway or on interior roadways.

Zoning Ordinance Section G

The Committee agreed that signs in the Haigis Parkway determine the visual integrity of the office parks and the adjacent businesses. To this end, we have crafted detailed requirements concerning the use of signs within the Haigis Parkway Zone.

Zoning Ordinance Section H (this is a proposed new section)

The Committee, in agreement with landowners and developers, also agreed that all new utilities should be underground. This is a new section proposed in the ordinance.

5.2 Specific Revisions to the Zoning Ordinance

To assist the Town Council with an understanding of the specific zoning ordinance changes recommended by the Committee, a copy of the ordinance is included below. The Committee's proposed changes are identified in the following manner.

Words added: These are shown as underlined within the body of the ordinance.

Words removed: There are shown as strikethroughs. (i.e. ~~zoning~~)

Changes: There are highlighted with vertical lines in the margins.

SECTION XVIII.B. HAIGIS PARKWAY DISTRICT HP [8/21/96]

A. PURPOSE

The land immediately surrounding the Haigis Parkway between Payne Road and Route One is unique in its topography, water features, visibility, accessibility and new road frontage. Its proximity to Exit 6 makes it highly desirable as a regional center for employment, entertainment, and cultural activities. The Haigis Parkway District intended to be one of the gateways into Scarborough, and anticipates high quality uses such as office parks, hotels, small-scale retail, convention centers, and places of cultural and civic assembly. The standards listed below are intended to encourage a high quality of campus-style landscape and architectural design, preservation of natural features, integration of pedestrian circulation, and interconnection of open spaces and resource protection areas. The Haigis Parkway District is both the backbone of the Exit 6 Edge City area and a vital complement to the Oak Hill Town center.

The Haigis Parkway is part of the Exit 6 Economic Development Overlay District, and therefore reference should be made to Section VIIA, Exit 6 Economic Development Overlay District, as well as Section VIIA (c), Concept Plan Review requirement.

B. PERMITTED USES

1. Professional offices; financial, insurance, and real estate offices; banks; business services; and business offices; non-municipal government offices.
2. Medical/diagnostic facilities.
3. Fully enclosed places of assembly, amusement, recreation, culture and government, exclusive of arcades and video arcades. Any such use must be enclosed in a building with walls and a roof.
4. High Technology Research Facilities, Light Assembly and Light Manufacturing.
5. Hotels with interior access to rooms and in-house amenities.
6. Golf Courses and Campgrounds.
7. Educational Institutions. (5/5/99)

8. Restaurants.
9. Day Care Centers.
10. A. Retail sales and services, —excluding car washes, automobile repair and service facilities with less than 20,000 square feet of retail floor area per unit of occupancy. (12/03/97)
 _____ B. Freestanding warehousing and wholesale distribution, excluding mini-warehouse and storage facilities and outdoor sales and services, with less than 20,000 square feet of retail floor area per unit of occupancy.
11. Municipal buildings and uses.
12. Public Utility Buildings.
13. Accessory uses, excluding outdoor storage and permanent accessory storage containers. One temporary accessory storage container per twelve (12) months for a single period of no longer than sixty (60) consecutive days is allowed per lot.

C. PERFORMANCE STANDARDS

1. GENERAL. All permitted uses set forth in Subsection B above are subject to the Site Plan Review Ordinance, the provisions of this ordinance and, the following performance standards:
 - 1) The use will not include any outdoor storage of equipment or material;
 - 2) The use will not create unsafe traffic conditions;
 - 3) All activities associated with permitted uses shall take place entirely within the principal structure;
 - 4) Vehicular access to the Haigis Parkway shall be limited to specific existing DOT curb cuts. Internal circulation between lots and connections to adjacent properties will be encouraged;
 - 5) There shall be no vehicular access to adjacent residential districts;
 - 6) Visual impact of structures as viewed from the Haigis Parkway shall be taken into consideration during Site Plan Review.

2. HIGH TECHNOLOGY RESEARCH FACILITIES, LIGHT ASSEMBLY AND LIGHT MANUFACTURING. These uses are permitted subject to the Site Plan Review Ordinance, the provisions of this Ordinance, the Performance Standards described in C. 1, and the following requirements:
 - 1) The use will not create any unhealthy or offensive smoke, dust, odor, or airborne discharge sufficient to constitute a nuisance;
 - 2) The use will not create any offensive noise or vibration to abutting landowners sufficient to create a nuisance; and
 - 3) The use will not involve the handling, storage, or disposal of hazardous waste material in a manner that will threaten public health.

D. SPACE AND BULK STANDARDS

Minimum lot area:	40,000 square feet
Minimum street frontage	
on Haigis Parkway:	200' (even if access and frontage are on internal service road)
on internal roads:	50'
Minimum front yard (setback for structures)	
from Haigis Parkway:	80'
from internal roads:	15', or V2 height of building, whichever is greater
Minimum side and rear yards (set-back for structures)	
from Haigis Parkway:	80'
from all other boundaries:	15', except where abutting Residential Districts
from Residential Districts:	100'
Minimum Landscape Buffer (no structures, drives or parking areas within Buffer except for perpendicular drives providing access to lot) (See Section E below for supplemental landscape details)	
from Haigis Parkway:	25'
from internal roads, side rear lot lines:	15', or V2 height of building, whichever is greater
from Residential Districts:	50', and the buffering requirements of this Ordinance shall apply
Building Height:	Building height shall preserve the integrity of the tree-line view from major roadways to maintain the non-industrial character of the <u>Town</u> . Height shall be limited to 45% of the distance from the DOT right-of-way on Haigis Parkway to a maximum of four occupied stories at the front of the building and a <u>maximum</u> building height of 60 feet, including all components, attachments, and structures. "Visual analysis" shall be required for all development. Rooftop utilities/mechanical devices shall be enclosed or shielded from view <u>from</u> the Haigis Parkway, Payne Road, and US Route #1.
Impervious Surface Ratio:	Maximum of 75% lot coverage. The 25% open space may include landscaped storm water detention facilities but not land occupied by easements or rights-of-ways which may in future be paved.
Access:	Access to lots shall be from existing Haigis Parkway curb cuts, from new interior access and service roads, from Payne Road, or from the future east-west connector. There shall be no access through residential streets or districts.

E. LANDSCAPE BUFFERS

The following standards are designed to guide the development of the buffers to be used in various locations throughout the district.

Location	Width	Landscape Description
Haigis Parkway	25'	Reinforce the Parkway landscape with lawns, evergreen trees, and masses of flowering shrubs; preserve specimen trees; frame views to hills and water bodies; no signage; use naturalistic plantings.
Internal Roads	15'	Urban streetscape consisting of high quality materials , lighting, plantings, pedestrian amenities, artwork-developed as part of a comprehensive plan.
Side/Rear Yards	Greater of 15' or ½ height of buildings	Continuation of Parkway landscape treatment; naturalistic plantings, preservation of existing vegetation and natural features.
Rear Yards/ Residential	50'	Dense naturalistic plantings to reinforce existing vegetation and site features.
Concealment		Parked vehicles and outside storage shall be substantially concealed on a year-round basis from the routine view of motorists on major roads such as the Haigis Parkway, Payne Road and US Route #1. Concealment need not be absolute, but shall be substantial enough to obstruct views of the indicated areas. Concealment shall be accomplished by using such methods as the natural growth and landscape, attractive landscaping techniques, and plantings.

F. OFF-STREET PARKING

Off-street parking shall be provided in accordance with the requirements of Section XI of this Ordinance. No on-street parking shall be permitted.

G. SIGNS

The use of signs throughout the Haigis Parkway Zone will reflect a higher quality business character that compliments the area's attractiveness to high quality long-term investment. A primary goal is to maintain visual attractiveness while meeting business informational needs. All signs must be consistent with high quality, campus style architecture. All signage shall be part of the site plan review.

In this context the Haigis Parkway Zone can be considered to comprise three areas: along the Haigis Parkway, including the entrances at exit 6 and Route #1, and the existing Haigis Parkway curb cuts;

the "internal road" system that will carry traffic from the Haigis Parkway curb cuts to commercial parks and properties served by the internal roadway system; and the individual commercial parks and properties.

1. ___ Signs shall not be located within the buffer zone, except at curb cuts.
2. ___ Signs must not be located within the State DOT right of way along Haigis Parkway, except for street signs at curb cuts, and State traffic control signs.
3. ___ No sign shall contain a permanent string of lights.
4. ___ No sign shall contain neon or other inert type gas illumination, except when used to backlight opaque signage.
5. ___ Signs along internal roads may contain a directory, company name, a name of the office park, or street number. No signs shall contain advertisement.
6. ___ Signs on Buildings and at Building Entrances:

a. Primary Building Signs:

These signs designate a major tenant, building identity, building directory, building address, or other primary acknowledgement of the building. One such sign will be allowed on the building and one may be located detached from the building, but at or near the primary building entrance. The following requirements shall apply:

1. On the Building
 - ___ No sign shall exceed 48 inches in height
 - ___ No sign shall exceed 12 feet in length
 - ___ No sign shall exceed a total of 24 square feet
 - ___ No sign shall be placed on the building at a height of more than 24 feet
 - ___ No sign shall protrude above its attached vertical wall of the building
2. Free standing sign at or near the primary entrance to the building:
 - ___ No sign shall rise above a height of 8 feet
 - ___ No sign shall exceed 12 feet in length
 - ___ No sign shall exceed a total of 24 square feet

b. Buildings with Multiple Entrances Serving Tenants Directly on the First Floor:

Multiple businesses having direct entrances in a single story or multi-story building may have either a sign on the building at their entrance or, a free standing sign designating their entrance, but not both. The following requirements shall apply:

1. On the Building:
 - ___ No sign shall exceed 14 inches in height
 - ___ No sign shall exceed 12 feet in length
 - ___ No sign shall be placed on the building at a height of more than 12 feet.
 - ___ Exterior signs shall not be permitted for exterior entrances, other than first floor entrances.

2. Free Standing Signs at Individual Entrances:

- __No sign shall rise above a height of 48 inches
- __No sign shall exceed 5 feet in length
- __No sign shall exceed a total of 12 square feet

7. __Promotional flags, banners, or streamers are prohibited.

8. __Temporary signs are prohibited except during construction. These signs shall be limited to sixteen (16) square feet.

9. __No freestanding sign shall exceed more than twelve (12) feet above the natural ground elevation.

10. Business Park Directory Signs:

These are signs typically located along the internal road system, or within specific developments, to direct travelers to specific buildings and/or developments within the Haigis Parkway Zone. The following are requirements:

- __No sign shall rise above a height of 8 feet
- __No sign shall exceed 12 feet in length
- __No sign shall exceed a total of 60 square feet
- __All directory signs located on the internal road system shall be accompanied by a paved turnoff from the internal road to encourage people to pull off the internal road system while viewing the directory sign.

H. Utilities

All utilities shall be required to be underground.

Utilities and Infrastructure

6.1 Summary Utility Cost Estimate

Using the information described in this Section, the costs for each of the non-sewer utilities were calculated in current 2001 dollars, and then extrapolated to year 2002. The sewer costs were taken from the 1997 Earth Tech Study and extrapolated to year 2002. These costs are shown in detail in Table 6-1 and summarized for the Haigis Parkway Zone as follows:

Electric Power	\$ 816,356	
Communications	\$ 462,280	
Water	\$ 580,000	
Gas	<u>\$ 593,090</u>	
Sub total non-sewer	\$2,451,726 (2001 \$)	
Sub total non-sewer		\$2,498,574 (2002 \$)
Sewer		<u>\$7,965,768 (2002 \$)</u>
Total utility		\$ 10,464,342 (2002 \$)

During the course of the Committee's work, it became evident that the adjacent Scarborough Downs site might be sold and developed commercially. Therefore, the Committee examined the cost of utility infrastructure that could serve that area if commercially developed. These costs are shown in detail in the appendix and summarized for Scarborough Downs as follows:

Electric Power	\$262,128	
Communications	0 (use CMP Pole line)	
Water	\$688,000	
Gas	<u>\$533,083</u>	
Sub total non-sewer	\$1,483,211 (2001 \$)	
Sub total non-sewer		\$1,511,552 (2002 \$)
Sewer		\$8,283,077 (2002 \$)
Total Utility		\$9,794,629 (2002 \$)

Update Scarborough Downs road to Town Standards	\$1,935,000 (2002 \$)
Total including road upgrade	\$11,729,629 (2002 \$)

It is important to note that these two summaries are "free standing". In other words the cost of improvements to the "downstream" sewer system are included in both.

Note also that the utilities in the Haigis Parkway Zone are all underground, while for Scarborough Downs, only sewer, water and gas are underground, with electric power and communications assumed to share an overhead pole line.

Note further that the cost of upgrading the Scarborough Downs road to Town Standards was included.

Table 6-1
Haigis Parkway Zone Utility Cost Summary Rev. 7

				Notes and Details	
Utilities other than sewer:	units-ft	Cost estimate			See pages 2 & 3
Electric Power, Haigis Parkway (Scottow to Pa	6,100	\$ 816,356		Note 1	Earth Tech '97 210,000
Communication, Haigis Parkway	6100/7500	\$ 462,280		Note 2	-
Water, Haigis Parkway (Rt 1 to Payne)	7,250	\$ 580,000		Note 3	600,000
Gas, Ind Park to HP, on HP to Payne & along	12,200	\$ 593,090		Note 4	412,500
Total "other utilities" 2001 \$		\$ 2,451,726			\$ 1,222,500
Total "other utilities" 2002 \$			\$ 2,498,574	Note 6 inflation factor x '01 \$	

Sewer to serve HPZ:	units-ft	Unit Cost	Cost estimate	Reference	
On/adj to Haigis Parkway interceptor	550			Note 7, Ref 1	
Interceptor Haigis Parkway	3,200			Note 7, Ref 1	
Interceptor Haigis Parkway	2,200			Note 7, Ref 1	
Interceptor Haigis Parkway	800			Note 7, Ref 1	
Road crossing interceptor HP	100			Note 7, Ref 1	
sub total Haigis interceptor	6,850	\$ 150	\$ 1,027,500		
Pump station on Haigis Pkwy	1 station	\$ 750,000	\$ 750,000	Note 7, Ref 1 Drainage Basin B	
Force main on Haigis PkwyP	1,350	\$ 95	\$ 128,250	Note 7, Ref 1 Drainage Basin B	
Payne Rd intercep	2,450	\$ 150	\$ 367,500	Note 7, Ref 1	
sub total new sewer system 1997 \$			\$ 2,273,250		

Modifications to Existing System:	units-ft	Unit Cost	Cost estimate		
Pump Sta 4 (Eastern Rd)			\$ 750,000	Note 7, ref 3 rev 3/26/01; Ph 1& 2	
Pump Sta 5 (Willowdale)			\$ 300,000	Note 7, ref 3 rev 3/26/01; Ph 2	
Pump Sta 6 (Old Neck Rd)			\$ 400,000	Note 7, Ref 3	
US Rt 1 forcemain	3,600	\$ 95	\$ 342,000	Note 7, Ref 3	
Sawyer Rd Interceptor Rt 1 to Pump Sta 4	5,600	\$ 150	\$ 840,000	Note 7, Ref 3	
Rt 1 interceptor	2,300	\$ 150	\$ 345,000	Note 7, Ref 3	
sub total pump stations & Rt1 1997 \$			\$ 2,977,000	Note 7, Ref 3 rev 3/26/01	
Sub total sewers 1997 \$			\$ 5,250,250		
Sub total sewers 2002 \$			\$ 5,833,028	Note 6 inflation factorx '97 \$	
Capacity reserve fee based on total flow gpd =	233,597	\$ 9.13	\$ 2,132,741	\$ 2,132,741	Flow per Note 7, Ref 3 rev 3/26
Total Sewers 2002 \$			\$ 7,965,768		

WW Treatment Plant upgrade			0	Not charged to HPZ	
Total sewer plus "other utilities" 2002			\$ 10,464,343		

In the Committee's study, \$1.5 million of the modifications to the existing sewer system were excluded from Haigis Parkway Zone costs after the approval of the TIF for the Enterprise Park. This reduced the total costs for sewers in 2002 \$ from \$7,965,768 to \$6,465,768 and reduced the overall utility costs in 2002 \$ from \$10,464,343 to \$8,964,343. While the Enterprise Park will incur the cost for \$1.5 million of "public" improvements when they build their system, the Committee has since discovered that only approximately 90% of that will be represented in the existing system modifications as outlined above. At that point it was too late to redo every piece of the analysis so it is hoped that other cost savings and cost sharing with the utility companies will make up the difference if the project is approved.

Haigis Parkway Zone Utility Cost Summary Rev. 7

Notes and details for Utility Cost Estimates:

Note 1 Electric (CMP)	units-ft	Unit Cost	Costs as of 2001	Data Source
Constr: Concrete duct bank Haigis Pkwy	6,100		\$ 350,000	Note 7, ref 4
Constr: Power cable	6,100	\$ 48	\$ 292,800	CMP notes 3/28/01
Sub total <u>electric</u>			\$ 642,800	
Admin & Engineering Factor (enr by CMP)	0.27		\$ 173,556	Note 5
Total Electric			\$ 816,356	
Underground on HP from Scottow Hill to Payne Rd				
Use existing overhead on HP fr Rt 1 to Scottow Hill				
Use existing overhead on Payne Rd.				
Note 2 Communication (Verizon)				
Constr: Concrete duct bank Haigis Pkwy	6,100		\$ 339,000	Note 7, Ref 4
Constr: Communication cables Rt 1-Payne Rd	7,500		\$ -	by Verizon (mtng notes 3/14)
Land for PCH (switching & connections)	100'x100'	\$ 25,000	\$ 25,000	Land at \$100,000/ acre
Sub total <u>communication</u>			\$ 364,000	
Admin & Engineering Factor (Engr by Verizon)	0.27		\$ 98,280	Note 5
Total Communication			\$ 462,280	
Note 3 Water (PWD)				
Water HP Rt 1 to Payne Rd (12" main)	7,250	\$ 80	\$ 580,000	Note 7, Ref 2 Table 2; PWD 3/12
Admin & Engineering Factor (Engr by PWD)			\$ -	Included in unit cost
Total Water			\$ 580,000	Includes inflation to '01
Note 4 Gas (Northern Utilities)				
Constr. 6" Plastic line on Haigis Parkway	7,500	\$ 35	\$ 262,500	NU 3/12 meeting notes
Constr. 6" Plastic line on Payne Road	2,450	\$ 35	\$ 85,750	NU 3/12 meeting notes
Constr. 6" Plastic line from Ind. Park to HP	2,250	\$ 35	\$ 78,750	NU 3/12 meeting notes
Cross under Rt 1 (directional bore)			\$ 40,000	NU 3/27 phone note
Sub total <u>gas</u>			\$ 467,000	
Admin & Engineering Factor (Engr by NU)	0.27		\$ 126,090	Note 5
Total gas			\$ 593,090	

Requires extension from Industrial Park to HP
 Requires crossing under Rt 1
 Requires extension Payne Rd to boundary of HPZ

Note 5. Multipliers on construction cost	Design	Design
	by Utility Co by Consultant	
Contingency	10.00%	10.00%
Design engineering by consulting engineer	2.00%	10.00%
Construction engineering	10.00%	10.00%
Fiscal items (grant applications, easements, et	2.00%	2.00%
Legal items	3.00%	3.00%
Total	27.00%	35.00%

Note 6 Inflation factors (Engineering News Record)		
year 2002 to 2001 per ENR = 6400/6280 =	1.019	ENR
year 2001 to 1997 per ENR = 6280/5759 =	1.090	ENR
year 2002 to 1997 per ENR = 6400/5759 =	1.111	Note 7, Ref 3

Note 7 References/Sources: (See Appendix 5)

1. Earth Tech Exit 6 Utility Feasibility Study 6/97
2. Earth Tech 5/18/99 letter to Town Mgr
3. Earth Tech 1/22/01 letter to Town Mgr & 3/26/01 rev.
4. Shaw Bros 4/11/01 letter to Haigis Comm
5. e.g. PWD 3/12 refers to meeting w/PWD on 3/12, etc

6.2 Background

In modern commercial and industrial areas, utilities are generally considered to include sewer, water, electric power, and communications. If natural gas is not available nearby, then fuel oil delivered by truck is the only economically viable source of fuel in northern climates. Where gas is available, its convenience makes it an attractive alternative to fuel oil.

6.3 Alternatives Considered

No utility infrastructure currently exists on Haigis Parkway. During the Committee's deliberations several alternatives were considered as follows:

- The Town would provide no utility infrastructure.
- The Town would provide only a sewer system.
- The Town would provide a basic utility infrastructure, defined as including sewer, water, electric power, communications, and natural gas.

After establishing the criteria for "highest and best use", the Committee determined that development without a utility infrastructure would not meet the objectives.

The cost of the other (non-sewer) utilities adds about 50% more when compared to the cost of sewers. The advantages of constructing all utility infrastructure at the outset were perceived to include:

- One construction period (of about nine months) as compared to almost continuous disruption over a period of years as development occurs.
- Town control over the location and functional design of all utilities
- Lower total utility system cost by coordinating the design and construction.
- An identifiable utility system cost basis for determining impact fees to be charged to developers.
- Selling point to potential developers, by having all utilities in place along the Parkway.
- Financial advantage from placing the total utility system cost in a TIF.

Based on these advantages, the Committee decided to consider only the "all utilities" alternative.

6.4 Project Schedule

The Committee developed an estimated time schedule, based on the assumption that the Committee would submit its Report to the Town Council in the late Spring 2001, and that favorable action would result. This schedule is included in the Appendix as Exhibit 6-1, and shows that the most likely construction period is the year 2002.

Earth Tech used Engineering News Record (ENR) construction cost data, published monthly, to “inflate” the 1997 sewer cost data to the year 2002 (using recent past trends to extrapolate into the future). The Committee used this same approach for all utility costs.

6.5 Data Sources

In estimating the cost of the several utilities, the Committee relied heavily on the “Exit 6 Utility Feasibility Study” that Earth Tech Inc. prepared for the Town in 1997. That Study included a detailed description of the additions to the existing sewer system and the upgrades to that system that would be required to serve both the Haigis Parkway Zone, the adjacent B-2 Zone, and also the Heritage Acres residential area off Two Rod Road. Because of its large size, and its availability in the Town Office it is not made part of this Report.

In preparing the 1997 Study, Earth Tech met with representatives of the Scarborough Sewer District and also with each of the other utility companies to determine both the system expansion requirements, and the associated costs.

The 1997 Study included a summary of the additions to existing water, electric, communications and gas utility systems, but in less detail than for the sewer system. For example, the Study included “unit cost” estimates for water, electric, and gas lines, but did not define the lengths of lines involved with the associated total costs. However, Earth Tech’s 5/18/99 letter to the Town included a Table 2 that summarized total distances and costs for each of these non-sewer utilities. That letter and its attachments are included in the Appendix as Exhibit 6-2. In the spring of 2001 a representative of our Committee met several times with Earth Tech Engineers in order to understand and update the material in the 1997 Study.

6.6 Sewer System

Earth Tech’s 1/22/01 letter to the Town confirmed the previously stated \$400,000 fee for sewer system design engineering. The letter also attached a tabulation showing the cost estimates for Phase 1 (basically Haigis Parkway Zone) and Phase 2 Heritage Acres. The table showed separately “new sewers” and “modifications (upgrades) to the existing downstream system”. The 1/22/01 letter and its attachments are included in the Appendix as Exhibit 6-3.

Earth Tech’s March 27, 2001 e-mail transmitted a revision (dated 3/26) of the 1/22/01 Table to the Committee. The revision contained several changes as follows:

- Correction to the cost of Pump Station # 4 from \$400,000 to \$500,000.
- Correction to the total wastewater flow attributable to the Haigis Parkway Zone from 188,338 gallons per day (GPD) to 233,597 GPD. The increase is from the portion of Drainage Basin F (largely Scarborough Downs) that lies within the Haigis Parkway Zone.
- Change to the Capacity Reserve Fee from \$4.78 to \$9.13 per GPD.
- Earth Tech’s Phase 2 existing-system modifications were included in the Haigis Project, because the Sewer District advised Earth Tech that both the new sewer and the “downstream” modifications would be treated as one project. This adds \$550,000. The proposed new sewer system in Heritage Acres itself was not included.

The e-mail transmittal and its associated table are included in the Appendix as Exhibit 6-4.

6.7 Other Utilities

The Committee met at least once, both with engineers and new business representatives, of each of the major utility companies to update the data contained in the 1997 Earth Tech Study. A “discussion item/question” sheet was prepared as a basis for the initial meeting with each utility. These sheets, modified per the utility meetings are included in the Appendix as Exhibit 6-5.

Just a few years ago, utility companies were willing to underwrite a reasonable cost of extending existing system to serve new customers. In 1997, Earth Tech found this to be no longer true, except for NYNEX. In its 2001 meetings with the several utilities, none are willing to underwrite the cost of system expansion to serve new customers. Verizon was the most flexible in this regard, in its willingness to furnish cable and some material.

Utility unit costs in Earth Tech’s 1997 Study include a factor of 35% over basic construction costs. Earth Tech applied this factor to all utility construction costs including sewer. The breakdown is:

Contingency	10%
Design Engineering	10%
Construction Engineering	10%
Fiscal items (grant applications, easements, etc.)	2%
Legal items	3%

The Committee found that the individual utility companies provide design specifications (including construction drawings) for extensions to their system. Therefore a design-engineering firm such as Earth Tech will not have to spend the amount of design effort on water, electric, gas etc. as it does on the sewer system. The Committee discussed this with Earth Tech and agreed to reduce the design-engineering portion of the above factor from 10% to 2% for the non-sewer utilities, reducing the factor to 27% for non-sewer utilities. The remaining 2% would cover the functional design such as optimizing location, road crossings, and other details of the several utilities.

Figure 4-1 from Earth Tech’s 1997 Study is a scale drawing showing the entire Exit 6 Area. It is color coded to show the seven drainage basins (A through G) used to categorize wastewater flows. The Committee used this drawing to measure the lengths of the several utility system extensions. This drawing is in the Appendix as Exhibit 6-6.

6.8 Road Crossings and Property Access

The construction of the road that has come to be called Haigis Parkway was intended to have limited access. The DOT provided access to certain existing properties in the form of “curb cuts” of which there are 10 between Payne Rd. and Scottow Hill Rd. The DOT apparently is willing to consider relocating as may be requested, but will not allow more than the ten.

Apparently DOT’s rules prohibit cutting into the pavement during the five-year period following initial construction. The Road was constructed in 1994, so the DOT may now grant permission to cut a trench across the Road as may be necessary for utility lines. However, the Road was constructed with several steel conduits passing under the Road from east to west. These conduits are 36 inches in diameter, and of varying lengths depending upon the terrain, but

typically about 90 to 100 feet long. There are three between Scottow Hill Rd and Payne Rd. The purpose of these conduits is to allow utility lines to cross the Road without the necessity of cutting a trench. The conduits are probably most useful for sewer, water and gas lines. Since the electric power and communication cables must be in concrete duct banks, it still may be necessary to cut a trench for these. The Town Engineer has a set of "record" (as-built) drawings showing the details of the curb cuts and the utility conduits.

6.9 Water System

In 1997, Earth Tech concluded that a new 12" water main should be constructed along the Haigis Parkway. At that time, Portland Water District (PWD) was using a construction cost of \$45/ft. Earth Tech used a total cost of \$80 per lineal foot, including the above 35%. Since \$80 appears conservatively high, the Committee considered this cost applicable to year 2001 rather than 1997.

The Committee's discussion with PWD is summarized in the Appendix as Exhibit 6-5-1. The discussion confirmed the appropriateness of the 12" water main along Haigis Parkway to connect to existing mains on Payne Road and Route 1. The total length of new water main was measured from Earth Tech's Figure 4-1 as 7,250 ft. from the end of the existing system at Anton Enterprises (on Haigis Parkway) to Payne Rd.

The details and total cost of the water system extension are tabulated in the Utility Cost Summary Table 6-1.

6.10 Electric Power

In 1997, Earth Tech concluded that to serve the Haigis Parkway Zone would require construction of an underground power line along the Haigis Parkway to connect the existing Central Maine Power (CMP) three-phase 12.47 kV lines that exist on Payne Road and Rt. 1. In 1997 Earth Tech was unable to obtain reliable construction cost data, so used a figure of \$35 per foot. Based on its discussions with CMP and Brown Brothers Construction, the Committee concluded that this figure is unrealistically low, and the Committee developed a more realistic unit cost.

The Committee's initial meeting with CMP is summarized in the Appendix as Exhibit 6-5-2. CMP requires that underground power lines serving commercial and industrial areas use concrete encased ducts, with the power cables pulled into the ducts from manholes placed at intervals along the line. CMP initially estimated the cost of this type system to be \$150 to \$250 per lineal foot.

Because of the wide variance of this with the 1997 cost, and the wide range of CMP's estimate, the Committee requested and received from CMP a construction drawing specifically for the Haigis Parkway Zone. Drawing number 905-1409, "Conduit Layout Haigis Parkway" is included in the Appendix as Exhibit 6-7. Based on this drawing, Shaw Brothers Construction Inc. provided the Committee with construction cost estimates for both Power and Communication duct banks. Shaw Brother's 4/11/01 letter, included in the Appendix as Exhibit 6-8, provides estimates of \$350,000 for 6,100 feet of power cable duct bank and \$339,000 for communication cable duct bank. These figures do not include the cable. Shaw Brother's letter documents the cost saving that would naturally accrue from installing both in a common trench, but to be conservative, the Committee did not include this saving in the cost analysis.

Note that a three-phase overhead power line exists along Payne Road. The Committee recommends that all utilities in the Haigis Parkway Zone be underground. Even if this recommendation is accepted and becomes a requirement, the Committee does not propose that the existing overhead lines on Payne Road be converted to underground. Therefore the construction costs for both electric power and communications are only for the extensions from their present terminus at Scottow Hill Rd and Haigis, along the Parkway to Payne Rd.

Based on a recent similar project in Portland, CMP provided to the Committee the cost of 500 MCM cable at \$48/ft. This is a larger size than would probably be used initially for the Haigis Parkway Zone, but its cost is conservatively high. Note that as the electrical load grows with future development, more cable will be required. The duct bank is adequate for the foreseeable growth, but future developers would be responsible for future cable costs.

6.11 Communication

Based on 1997 discussions with NYNEX, Earth Tech concluded that NYNEX would provide without charge, any extensions required to the existing communication system.

The Committee met with Verizon Communications, now the local service provider, and a summary of that meeting is included in the Appendix as Exhibit 6-5-3. Like CMP, Verizon also requires that all underground cables serving commercial and industrial areas be pulled into concrete duct banks. While Verizon will not provide, free-of-charge, an extension of its existing system to serve new customers, it is more flexible than the other utilities, in that Verizon will provide the pre-cast concrete manholes and the duct material, as well as the communication cables. This was factored into the final cost estimate.

Verizon also requires a small building called a PCH (precast concrete hut) to enclose switching and connection equipment. Verizon will furnish the PCH and its equipment, but it requires a small plot of land. The Committee estimated the land requirement at 100x100 feet, approximately one-quarter acre. The cost of this plot was estimated based on \$100,000 per acre.

For other broad band communication needs, the Committee intended to meet with Time Warner, and in fact SEDCO did have one telephone conversation with Time Warner. The Committee was unable to meet with Time Warner Cable, but is comfortable in concluding that the concrete duct bank projected for Verizon has sufficient capacity for other communication. The law requires a utility (in this case Verizon) to lease spare capacity to other utilities.

Verizon also mentioned the possibility of a "Smart Park" project, in which Verizon would underwrite a considerable portion of the initial project cost in return for placing the Verizon name prominently in some way on the project. This relatively new concept has been used in other States, and is being considered for a project in Waterville, Maine. The Committee was not encouraged to think that it would be applicable to the Haigis Parkway Zone.

The costs associated with communications were derived from Shaw Brothers estimate for the concrete duct bank as described above. The \$339,000 cost for the communications duct bank looks high compared to the \$350,000 cost for the electric power duct bank, when one notes that much of the material for the communications duct bank is to be "supplied by others". The Committee rationalized using the \$339,000 at face value because of the uncertainty of the needs for Communications other than Verizon (e.g. Time Warner).

6.12 Natural Gas

In its 1997 Report, Earth Tech concluded that existing gas mains were sufficient to provide service to the Haigis Parkway Zone, and proposed a six-inch plastic gas line at a \$55/ft. unit cost (including the 35% factor).

The Committee met with Northern Utilities, and a summary of that meeting is included in the Appendix as Exhibit 6-5-4. The existing gas line suitable for extension to the Haigis Parkway Zone is located in the Scarborough Industrial Park at the intersection of Washington and Lincoln St. Northern Utilities will not underwrite the cost of extending its system to serve new customers. Therefore the Committee calculated the cost of running a 6 inch plastic line from the Industrial Park, crossing under Rt. 1, along the Haigis Parkway to Payne Rd., and along Payne Rd to the east and west boundaries of the Haigis Parkway Zone. Northern Utilities estimates a total construction cost at \$35 per foot, but after adding internal billing factors, would charge the Town \$48/ft. Therefore, the Committee used Northern's construction cost of \$35/ft., and added the 27% factor described earlier. Northern also estimated \$40,000 for boring under Rt.1 (rather than trenching).

Modeling Concept – A 20 Year View

7.1 Background

To determine the likely development scenario, the Committee met with developers, real estate brokers, landowners of property on and near the Haigis Parkway Zone, and with SEDCO in five different meetings. The Committee attempted to identify the types of companies that had been looking at this property or might in the future, their time frame for development, and what the market place was looking for from a location such as Haigis. We also wanted to gather information on the potential amount of development, lot sizes, valuation, and the number of new employees.

7.2 Data Sources

Discussions with developers provided insights on the likely time frame to develop the Haigis Parkway Zone. Commercial real estate brokers were in agreement that Exit 6 was the last major undeveloped Turnpike exit in the Southern Maine area. Based on the market conditions in and around Cumberland County and the leads the brokers and developers currently had, they suggested twenty years to completion from commencement of a utility infrastructure project. They felt it was reasonable to assume approximately 50,000 square feet of new building would be added on average per year. The following are comments received by the Committee:

- Over the last 10 years, Portland is averaging 150,000 to 200,000 square feet of commercial development (offices) per year (J. Harnden, broker)
- There is currently 8 million sq. ft. of commercial space in Portland
- Along the Haigis Parkway, 150,000 to 350,000 square feet of property is ready to be developed (J. Applebee, broker)
- Demand for Haigis would be primarily from businesses currently located in Maine, with an estimate of approximately 10% coming from out of state.
- The types of businesses the landowners, brokers and developers felt would most likely come to the HP Zone are financial services, medical research and office, call centers, biotechnology and high technology.
- Developers need a clear understanding of the zoning and development requirements to attract development to any area. Developers and real estate brokers further felt that interest would increase quickly once the Town commits funds for the sewer. Additional concern was expressed that a clear set of rules and guidelines need to be established and the wetlands need to be clearly identified. It was their opinion that there is little or no interest in Haigis due to the lack of infrastructure and perception of the uncertain attitude of the Town officials.
- The landowners also concurred that there has been less interest in the property since the discussion of the sewers ended last year. They stated they were not likely to develop the land themselves and were more likely to partner with someone or sell to a developer. It was felt

that due to the wetland and setback restrictions smaller lots were likely to be joined to make larger, more workable lots. Again there was a feeling that once a commitment by the Town was made toward the sewer project interest in development would increase quickly.

- The landowners are willing to accept a special assessment based on usage and a hook-up fee at the time of installation. But those fees and assessments must be stated up front. A large landowner also stated that he expected to share in the cost of providing utilities to his property.
- Landowners are interested and concerned about maintaining the “highest and best use” quality of development to this area. They believe that the natural environmental and zoning restrictions in this area will ensure that only companies interested in highest and best use concepts will develop here. Further, they believe that the natural areas and wetlands will serve to inhibit development.
- Landowners and developers believe that the Town will need to have all utilities installed to get the type of development desired for this area.
- There was concern that numerous septic systems would threaten the sensitive nature of the watershed.

Harvey Rosenfeld of SEDCO helped the Committee with extensive research on the current assessed values of businesses throughout the Cumberland County area. He identified the type of businesses, the size of buildings in square feet, acreage utilized by the businesses, the assessed values of the buildings and personal property where possible, and on the businesses we modeled, the number of employees.

From this list and comments from the developers and landowners, the Committee developed a hypothetical model of the types of businesses that would likely locate in the Haigis Parkway Zone.

7.3 Development Modeling

The Committee analyzed the businesses from the SEDCO list that exist in the Cumberland County area. The Committee then determined a profile of business types that would likely come to the Haigis Parkway Zone and represent “highest and best use”. Each business was identified with its current assessed value for land, buildings and personal property.

The Committee determined that a model of development in the Haigis Parkway Zone should be based on an analysis of actual businesses that represent the type of businesses that would locate in the Haigis Parkway Zone. This model would consist of a twenty-year development scenario containing three unique phases of development activity. The first phase was assumed to take four years. The second phase would begin in or around year three and continue through year eight. The last building phase runs from year eight through year twenty.

- **Phase I:** If the Utility construction starts by June 2002, development is assumed to begin by June 2003. The developers and brokers had suggested that it could take between nine and eighteen months to sell the land and obtain the proper permits. The Committee assumes that the first phase will begin with the properties that have been actively marketed and surveyed.

We envision a large office building (80,000 square feet), and two to three smaller office and multi-tenant buildings during this stage. Total square footage is estimated to be 178,000 during this phase for a total assessed value of \$27,800,000 (January 2001 values).

- **Phase II:** The second phase is assumed to begin as the first phase is being completed. In this phase, more support services business will begin to move in, such as day care centers, office/retail businesses, more medical and professional offices, light manufacturing and medium distribution centers and restaurants. This phase is assumed to take five to six years, and assumed to add 380,000 square feet of commercial property and \$46,871,200 in new property value (January 2001 values).
- **Phase III:** The final phase of this development is assumed to include several large office and multi-tenant office buildings, more medical and professional buildings and large industrial centers. This phase is assumed to add the greatest square footage to the zone at 557,883 square feet and \$64,100,000 in valuation (January 2001 values).
- **Summary:** At the end of the twenty-year development, the Committee conservatively anticipates that there will be approximately 27 new businesses, occupying 46 acres of the 195 acres owned, and totaling 1,116,000 square feet of building space. The total assessed value will be nearly \$138,800,000 (January 2001 values). This represents a value of \$124 per square foot. We estimate that there will be approximately 2660 employees.
- **Business Mix:** At the end of the development period, the mix of businesses is expected to be as follows: Office 56%, Manufacturing 28%, Retail 1%, Retail/Office 8%, Restaurant 2%, Hotel 3%, Day care 1%.

Table 7-1: Development Phases

	Elapsed time after sewer starts	Yrs @ Phase	# of Busines ses	# of EE's	Total Sq. Foot	Sq. Ft. per Year	Acres Owned	Land Value	Bldg. Value	Pers. Property Value	Total Assessed Value	Value per Sq. Ft.
								(\$)	(\$)	(\$)	(\$)	
Phase 1	1-4 yrs.	4	4	499	178,000	44,500	43	1,649,127	22,310,698	3,861,400	27,821,225	\$156
Phase 2	3-8 yrs.	6	12	841	380,348	63,391	80	3,275,345	34,485,795	9,062,500	46,823,640	\$123
Phase 3	6-20 yrs.	15	11	1321	557,883	37,192	72	4,240,407	53,261,830	6,632,467	64,134,703	\$115
TOTALS:	20 yrs.		27	2,661	1,116,231		195	9,164,879	110,058,323	19,556,367	138,779,569	\$124

Table 7-2: Development Model Detail

HPZ Base 20 year Development Model

Phase 1 Haigis Parkway Zone Only

Assumptions:

1. That one "anchor" type project will come first to a property that is ready - I.e. that has had surveys, or initial planning discussions
2. That other projects will be smaller in nature but taking advantage of better pricing opportunities on the parkway now (land will get more expensive as it gets purchased by developers and the sewer is completed).
3. The first phase will take place in years 2-4.
4. Large office = 3 stories, other office & hotel = 2 stories.

Type of Business	Approx Building Size	Foot print	Lot Size	Park Spaces	EE's	Dvlp'd acres	% Dvlp'd	Land Value	Bldg. Value	Bldg. Val/sf	Land & Bldg Value	LandBldg Val/sf	Personal Property	Total Value	Reference
Office (anchor)	80,000	26,667	23	320	300	3.1	14%	768,802	11,731,198	147	12,500,000	156	2,000,000	14,500,000	Banknorth (Haigis)
Medical (profit)	40,000	20,000	10	160	62	1.7	17%	382,562	4,821,900	121	5,204,462	130	1,150,000	6,354,462	33 Sewall Street
Mixed Office	40,000	20,000	5	160	114	1.7	31%	314,912	1,699,800	42	2,014,712	50	381,400	2,396,112	50 Foden Road
Hotel	18,000	9,000	5	75	23	0.8	16%	182,851	4,057,800	225	4,240,651	236	330,000	4,570,651	Residence Inn
Total	178,000	75,667	43	715	499	7.4		1,649,127	22,310,698	125	23,959,825	135	3,861,400	27,821,225	

357 Sq. ft. per employee.

Phase 2

Assumptions:

1. This phase will take place in years 3-8
2. Larger and more projects will begin to move in to this area.
3. Larger projects will take longer to complete (only because they are larger).
4. Because of set back requirements and the potential for green belt set-asides, the acreage allotment here is greater than the references.
5. Large office = 3 stories, other office & hotel = 2 stories.

Day Care	7,500	7,500	4	38	27	0.5	12%	121,723	750,000	100	871,723	116	230,000	1,101,723	Toddle Inn
Office Park	32,200	16,100	6	129	115	1.4	23%	278,712	3,542,000	110	3,820,712	119	262,300	4,083,012	1685 Congress
Light Manufacturing	68,000	68,000	10	42	50	1.9	19%	402,165	3,400,000	50	3,802,165	56	4,461,400	8,263,565	Rich Tool & Die
Large Medical	40,000	20,000	10	160	62	1.7	17%	382,562	4,821,900	121	5,204,462	130	1,159,700	6,364,162	33 Sewall St
Restaurant	16,200	16,200	7	81	70	1.0	15%	237,662	2,835,000	175	3,072,662	190	150,000	3,222,662	Olive Garden/TGIF
Office Park	32,200	16,100	6	129	115	1.4	23%	278,712	3,542,000	110	3,820,712	119	262,300	4,083,012	1685 Congress
Retail/Office	47,500	23,750	7	211	125	2.2	31%	405,174	3,978,125	84	4,383,299	92	400,000	4,783,299	Cornerbrook
Branch Bank	3,396	3,396	2	14	12	0.2	12%	49,007	195,270	58	244,277	72	154,800	399,077	Gorham Savings
Small Ind Multi tenant	20,000	20,000	7	19	23	0.6	8%	190,567	1,000,000	50	1,190,567	60	96,800	1,287,367	Maralyce Ferree
Medium Distribuion	41,152	41,152	6	54	65	1.4	25%	267,785	2,057,600	50	2,325,385	57	463,200	2,788,585	Huttig Sash & Door
Large Medical	40,000	20,000	10	160	62	1.7	17%	382,562	4,821,900	121	5,204,462	130	1,159,700	6,364,162	33 Sewall St
Office Park	32,200	16,100	6	129	115	1.4	23%	278,712	3,542,000	110	3,820,712	119	262,300	4,083,012	1685 Congress
Total	380,348	268,298	80	1,165	841	15.4		3,275,345	34,485,795	91	37,761,140	99	9,062,500	46,823,640	

452 Sq. ft. per employee.

Phase 3

Assumptions:

1. This phase will begin in years 6 and continue to full build-out by year 20.
2. At least 4 major office/headquarters type projects will take place.
3. Many more support type business will come in (Staples, hotel, restaurants, legal/financial etc)
4. This part of the analysis is purely speculative.
5. Large office = 3 stories, other office & hotel = 2 stories.

Large Office	69,000	23,000	5	276	150	2.7	55%	438,879	7,590,000	110	8,028,879	116	800,000	8,828,879	Comm Union Office
Multi-tenant Office	90,000	45,000	7	360	206	3.9	52%	635,164	9,900,000	110	10,535,164	117	267,000	10,802,164	400-500 Southborough
Large Lt Industrial	92,000	92,000	14	138	166	3.2	23%	640,503	4,600,000	50	5,240,503	57	267,000	5,507,503	Orion Center
Retail/Restaurant	47,000	47,000	7	235	125	2.9	41%	502,698	5,463,750	116	5,966,448	127	400,000	6,366,448	Cornerbrook
Office Park/Financial	55,383	27,692	7	222	201	2.4	33%	431,200	6,092,130	110	6,523,330	118	2,100,000	8,623,330	Dun & Holt
Multi-Office	37,000	18,500	3	148	78	1.6	48%	264,620	4,070,000	110	4,334,620	117	780,232	5,114,851	Foreside Place
Bank	5,500	5,500	3	22	12	0.3	12%	79,500	316,250	58	395,750	72	71,235	466,985	People's Bank
Hotel	18,000	9,000	5	75	75	0.8	16%	182,851	4,057,800	225	4,240,651	236	330,000	4,570,651	Residence Inn
Medical/Bio Tech Office	42,000	21,000	3	168	62	1.8	53%	295,190	4,821,900	115	5,117,090	122	1,200,000	6,317,090	33 Sewall St
Large Lt Industrial	92,000	92,000	14	138	166	3.2	23%	640,503	4,600,000	50	5,240,503	57	267,000	5,507,503	Orion Center
Restaurant	10,000	10,000	3	50	80	0.6	21%	129,298	1,750,000	175	1,879,298	188	150,000	2,029,298	Bugaboo Creek
Total	557,883	390,692	72	1,832	1,321	23.4		4,240,407	53,261,830	95	57,502,237	103	6,632,467	64,134,703	

422 Sq. ft. per employee.

Cost Benefit Analysis

HAIGIS PARKWAY ZONE

8.1 Parameters for Development

The Committee began by establishing the parameters for potential development in the Haigis Parkway Zone and the adjacent B-2 Zone, which includes Scarborough Downs. Existing development was excluded. The June 1997 Exit 6 Feasibility Study by Earth Tech provided the following square footage in Table 8-1-1 from Geographic Information System mapping:

Table 8-1-1
(Millions of sq. ft.)

Exit 6 Area Business Model

Haigis Parkway and Adjacent B2 Zone Development

	HPZ		B2 Zone		
	Million sq. ft.	Acres	Million sq. ft.	Acres	
Total area (million sq. ft.):	17	400	32	737	Earth Tech: "buildable area" is 77% of gross area. EarthTech Exit 6 Feasibility Study June 1997 (excl. RP zone) Buildable area minus 25% for future roads, setbacks, etc.
Buildable area (million sq. ft.):	13	308	25	567	
Adjusted buildable area (million sq. ft.):	10	231	19	425	
					1 acre = 43,560 sq. ft.
Model development	2	46			Buildings, parking and access roads over 20 years.
Percent of buildable land used in	20%	20%			
Model development buildings	1.1				
Density (sq. ft. development per acre):		4,833			Square foot of buildings per buildable acre.

Note 1: Buildable Area excludes wetland areas, water bodies, and roadways. Buildable Area was verified by Town Planner using GIS maps.

Note 2: Adjusted Buildable Area is the buildable area less 25% for future roads, zoning setbacks, sidewalks, and landscaped areas.

The Committee solicited input from landowners and real estate professionals regarding the potential for development in the Haigis Parkway Zone. Applebee Commercial provided acreage and maximum buildable square footage data to the Committee from plans created by and for a number of Haigis Parkway Zone landowners, excluding the proposed "Enterprise Park", the campground, and the existing industrial development. Similar data for three additional landowners was added with help from the Town Planner, Town Assessor, and Tony Armstrong, a representative of some HPZ landowners.

The Committee was not able to verify the data for each of the landowners in Mr. Applebee's memo, but the data does serve as a sanity check against the assumptions in the development model for the Haigis Parkway Zone. Mr. Applebee's data combined with that of Mr. Armstrong and the Town Planner and Assessor suggests that a maximum of 1.1 million square feet could be developed in the Haigis Parkway Zone. Dividing the maximum square footage by the acres held provides an average of 4,833 square feet of development per acre, which, according to

Russ Thibeault of Applied Economic Research, is a very low density. Mr. Thibeault indicated that 5,000 square feet of development per acre is “park-like” while 10,000 square feet per acre is a “Wal-Mart”. Less than five thousand square feet of buildings, including multiple stories suggests a conservative view of the potential for development in the Haigis Parkway Zone. As can be seen in Table 8-1-2 below, the 20-year development model for the Haigis Parkway Zone, using actual buildings in the Greater Portland area and excluding the proposed “Enterprise Park”, was 1.1 million square feet with a final density (after 20 years) of 5,713 square feet per acre owned (using the data for the actual firms in the model). This suggests that the model is reasonable and not aggressive in terms of both total development and projected density.

Table 8-1-2

	Elapsed time		#	#	Total	Sq. Ft.	Acres	Acres	Total	Value
	after sewer	starts								
										(\$)
Phase 1	1-4 yrs.	4	4	499	178,000	44,500	43	7	27,821,225	\$156
Phase 2	3-8 yrs.	6	12	841	380,348	63,391	80	15	46,823,640	\$123
Phase 3	6-20 yrs.	15	11	1321	557,883	37,192	72	23	64,134,703	\$115
TOTALS:	20 yrs.		27	2,661	1,116,231		195	46	138,779,569	\$124
	Square feet of development per acre owned:				5,713					

Absorption rate implied by model:

Highest annual amount of new sq. ft.:	107,891	Occurs	2	times.
Number years > 100,000 sq. ft.:	5			
Lowest annual amount of new sq. ft.:	37,192	Occurs	1	times.
Average annual amount of new sq. ft.:	55,812			

The Committee agreed and Russ Thibeault of Applied Economic Research concurred that an absorption rate of approximately 50,000 square feet per year was reasonable for the Portland area for the foreseeable future. In table 8-1-2 above, it can be seen that the 20-year development model assumes an average annual absorption of 55,812 square feet in the Haigis Parkway zone. Two of the top commercial real estate brokers in the greater Portland area also agreed that approximately 50,000 square feet per year was reasonable to assume for a property such as the Haigis Parkway Zone.

The Committee also calculated the space requirements for parking and connecting roads using Scarborough’s required square footage allocation and found that when allowance is made for parking and connector roadways, the three phase model would require a total of 2 million square feet of buildable land, or 20% of the 10 million square feet of adjusted buildable land available in the Haigis Parkway Zone. This number exceeds the total amount of developable land (1.1 million sq. ft.) as indicated by Mr. Applebee’s numbers and the additional landowner numbers mentioned above. The Committee felt that parking space would be able to be adjusted to adapt to the available landscape and that parking structures could be used where necessary.

Using a similar approach and estimated development sizes from SEDCO, the proposed “Enterprise Park” would use approximately 370,000 more of the 10 million square feet of adjusted buildable land. The HPZ development model plus the proposed Enterprise Park would use 24% of the buildable space in the Haigis Parkway Zone after adjusting for setbacks, roads, and landscaped areas.

8.2 Timing of Development

Working with Scarborough Town staff, the Committee established a time frame for the development of the Haigis Parkway Zone based on the assumption that on July 1, 2001 a decision would be made to fund infrastructure in the Zone. As actual events unfold, time frames can be pushed back accordingly. The chronology of development is summarized in Table 8-2 below:

Table 8-2

Chronology for Haigis Parkway development:

- Year 1: Infrastructure engineering design.
- Year 2: Bond anticipation notes issued based on 2 year AAA general obligation bond rate (Bloomberg).
Bond issued for cost of engineering design.
- Year 3: Bonds issued for infrastructure construction and the capacity reserve charge.
1/4 of phase I value in place.
- Year 4: 1/2 of phase I value in place.
- Year 5: 3/4 of phase I value in place.
1/6 of phase II value in place.
- Year 6: Phase I complete.
1/3 of phase II value in place.
- Year 7: 1/2 of phase II value in place.
- Year 8: 2/3 of phase II value in place.
1/15 of phase III value in place.
- Year 9: 5/6 of phase II value in place.
2/15 of phase III value in place.
- Year 10: Phase II value complete.
2/15 of phase III value in place.
- Year 11- 22: Phase III continues 1/15 per year.

8.3 Baseline Model Development Assumptions

8.3.1 Utility Infrastructure

The utility infrastructure used in all of the Cost/Benefit Analysis (CBA) modeling is consistent with the design parameters of the Earth Tech, Exit 6 Utility Feasibility Study, June 1997, adjusted per the work of the Utility sub-committee and documented elsewhere in this report. It is assumed that a special utility assessment district will be established in the Haigis Parkway Zone to allow the Town to recover up to 50% of the cost of the entire utility system over a period of time not to exceed ten years.

Utilities costs (2002 dollars):

New Haigis Parkway/Payne Road sewer:	2,526,000
Required existing sewer upgrades:	3,307,000
Capacity reserve charge:	2,133,000
All other utilities:	<u>2,499,000</u>
Total cost:	10,464,000

Due to the recent evaluation of sewer costs for the Enterprise Park in the Haigis Zone, the Committee removed \$1.5 million from the cost of improvements to the existing sewer to reflect that those improvements were included in the Enterprise Park project. This reduces the total utilities cost in the Haigis Parkway development model to \$8,964,000.

The overall costs above assume that all utilities will be underground, that the associated firms will not contribute to the cost, and that the design mirrors the Earth Tech June 1997 Exit Six Utility Feasibility Study.

8.3.2 Utility Funding

The special assessment district will allow the Town to recover, from landowners, up to 50% of the cost of the infrastructure construction over a maximum of ten years. For this modeling, the Committee assumed that the full ten years would be used and that the Town will charge interest to the landowners over that period at the ten year, AAA, insured municipal bond rate (Bloomberg.com).

The Committee also assumed that Bond Anticipation Notes (BAN) would be issued for the costs minus the design costs and the capacity reserve charge. The BAN's allow the Town to lock in the level of interest to be paid when the bonds are issued. The BAN's are charged the 2-year, AAA, insured municipal bond rate. At the time the analysis was completed, the 2-year AAA rate was 2.99% per year (Bloomberg.com, Aug. 9, 2001). As of August 24, 2001, that rate was

The Committee tested bonding periods of 20 and 30 years to align more closely with the pace of development. As development is expected to begin concurrent to the bond issuance, the first few years of the model provide a net negative cash flow to the Town as the bond debt service costs and secondary costs of residential development exceed the tax revenue from the initial commercial development. As a result, a longer term of financing is more desirable for the Town as it better aligns costs and cash flows from the development when the Haigis development is seen as a stand-alone, self-funding financial event. In the context of the overall Scarborough budget, it may be possible to use a shorter-term bond structure.

8.3.3 Value in Place

In Table 8-1b above, the Committee has laid out a 20-year development scenario involving three overlapping development stages, which are described in detail elsewhere in this report. The economic cost/benefit analysis assumes that each phase of development is accomplished by equal valuation being added in each year of the phase. In addition, the beginning values are increased each year using the average annual growth rate in the value of commercial properties in Scarborough over the past ten years as estimated by the Town Assessor.

In Table 8-3-3a below, the value added each year by new development in the Haigis Parkway Zone is laid out by year with cumulative values by phase. These annual values are the basis for tax revenues in the model.

Table 8-3-3a

VALUATION MODEL

	July '01-'02	July '02-'03	July '03-'04	July '04-'05	July '05-'06	July '06-'07	July '07-'08	July '08-'09	July '09-'10	July '10-'11	July '11-'12
Year:	1	2	3	4	5	6	7	8	9	10	11
"Unused" buildable acres in model:	300	300	289	278	254	230	216	198	180	162	157
<i>Earth Tech "adjusted buildable" acres: 75% of "buildable" acres excluding existing development, wetlands, future roads, setbacks.</i>											
Lots involved in development:	0	0	1	2	5	8	10	13	15	18	19
<i>Lots involved in development not taxed as vacant property.</i>											
Acres developed (bldgs. & parking):	0	0	2	2	4	4	3	4	4	4	2
Acres owned by building owners:	0	0	11	11	24	24	13	18	18	18	5
<i>Haigis Committee development model.</i>											
Taxable values:											
Undeveloped buildable acres:	4,379	4,379	7,066	6,798	6,119	5,441	5,030	4,471	3,912	3,353	3,204
<i>Excludes acres in lots under development.</i>											
Phase 1 Land:			474	981	1,525	2,108	2,108	2,108	2,108	2,108	2,108
Phase 1 Buildings:			5,956	12,070	18,348	24,792	24,792	24,792	24,792	24,792	24,792
Phase 1 Personal Property:			965	1,931	2,896	3,861	3,861	3,861	3,861	3,861	3,861
Phase 1 taxable total:			7,395	14,982	22,769	30,761	30,761	30,761	30,761	30,761	30,761
Phase 2 Land:					720	1,492	2,320	3,207	4,157	5,176	5,176
Phase 2 Buildings:				6,468	13,109	19,926	26,924	34,109	41,484	41,484	41,484
Phase 2 Personal Property:				1,510	3,021	4,531	6,042	7,552	9,063	9,063	9,063
Phase 2 taxable total:				8,699	17,622	26,777	36,172	45,818	55,723	55,723	55,723
Phase 3 Land:							459	951	1,479	2,044	2,650
Phase 3 Buildings:							4,323	8,762	13,319	17,996	22,798
Phase 3 Personal Property:							442	884	1,326	1,769	2,211
Phase 3 taxable total:							5,225	10,598	16,124	21,809	27,660
TOTAL Taxable Value in place:	4,379	4,379	14,461	21,780	37,587	53,824	62,569	76,630	91,089	105,961	117,199

	July '13-'14	July '14-'15	July '15-'16	July '16-'17	July '17-'18	July '18-'19	July '19-'20	July '20-'21	July '21-'22	July '22-'23	
Year:	13	14	15	16	17	18	19	20	21	22	
"Unused" buildable acres in model:	148	143	138	133	128	124	119	114	109	105	
Lots involved in development:	20	21	22	23	23	24	25	26	26	27	
Acres developed (bldgs. & parking):	2	2	2	2	2	2	2	2	2	2	
Acres owned by building owners:	5	5	5	5	5	5	5	5	5	5	
Taxable values:											
Undeveloped buildable acres:	2,907	2,758	2,609	2,524	2,452	2,380	2,308	2,237	2,165	2,093	
Phase 1 Land:	3,789	3,789	3,789	3,789	3,789	3,789	3,789	3,789	3,789	3,789	
Phase 1 Buildings:	30,976	30,976	30,976	30,976	30,976	30,976	30,976	30,976	30,976	30,976	
Phase 1 Personal Property:	3,861	3,861	3,861	3,861	3,861	3,861	3,861	3,861	3,861	3,861	
Phase 1 taxable total:	38,626	38,626	38,626	38,626	38,626	38,626	38,626	38,626	38,626	38,626	
Phase 2 Land:	7,525	7,525	7,525	7,525	7,525	7,525	7,525	7,525	7,525	7,525	
Phase 2 Buildings:	47,880	47,880	47,880	47,880	47,880	47,880	47,880	47,880	47,880	47,880	
Phase 2 Personal Property:	9,063	9,063	9,063	9,063	9,063	9,063	9,063	9,063	9,063	9,063	
Phase 2 taxable total:	64,467	64,467	64,467	64,467	64,467	64,467	64,467	64,467	64,467	64,467	
Phase 3 Land:	3,897	4,593	5,339	6,138	6,995	7,914	8,898	9,953	11,084	12,296	
Phase 3 Buildings:	29,580	34,641	39,836	45,170	50,646	56,267	62,038	67,963	74,045	80,289	
Phase 3 Personal Property:	2,653	3,095	3,537	3,979	4,422	4,864	5,306	5,748	6,190	6,632	
Phase 3 taxable total:	36,129	42,329	48,713	55,288	62,063	69,045	76,243	83,664	91,319	99,217	
TOTAL Taxable Value in place:	-	-	142,130	148,181	154,416	160,906	167,609	174,519	181,645	188,995	196,578

A series of discussions with the Town Assessor and Town Manager resulted in the assumptions used to develop the values in Table 8-3-3a above:

Valuation Model Assumptions

Building \$		<i>per 3 phase development model.</i>
		<i>Phases develop in equal amounts each year.</i>
		<i>SEDCO research from local assessors, late '00, early '01.</i>
Bldg values	2.66%	<i>per year.</i>
		<i>Town Assessor: expect 30% over 10 years.</i>
Land \$	14,600	<i>\$ per acre for unimproved land in HPZ (post-reval. & pre-utilities).</i>
		<i>per Twon Assessor.</i>
	27	<i>Number of lots used in model.</i>
	150,000	<i>\$ per acre "Prime" value.</i>
	15,000	<i>\$ per acre "Excess" value.</i>
		<i>Prime value basis: Payne Rd. \$400k/acre, Ent. Park \$100k/acre.</i>
Undeveloped lots with utilities:		<i>1 acre @ 80% of Prime value, remainder @ Excess value.</i>
		<i>(Prime minus 20% for vacancy adjustment.)</i>
		<i>Model assumes min. 5 lots valued with 1 prime acre at any time to reflect future sub-division.</i>
Developed lots (3 phase model):		<i>Developed portion @ Prime value, remainder @ Excess value.</i>
Land values	7.18%	<i>per year after utilities installed.</i>
		<i>Assessor: Payne Rd frontage 1990:\$200k/acre, 2001 \$400k/acre.</i>
Personal		<i>Depreciation offset by replacement: net no change over time.</i>
		<i>SEDCO research from local assessors, late '00, early '01.</i>

Land valuation in the Haigis Zone after revaluation but before sewer and utilities is estimated by the Town Assessor to be \$14,600 per acre up from an average of approximately \$6000 in 2000 (346 acres at \$2.2 million).

Post-utilities prime and excess values were estimated using data from revaluation on the Payne Road (\$400,000 per acre prime) and the Enterprise Park (\$100,000 per acre prime). The Committee decided to use \$150,000 per acre for prime acreage in the Haigis Zone showing slightly more value than the Enterprise Park but not yet approaching the value of sewered Payne Road land. The Town Assessor indicated that values in the Haigis Zone could be expected to appreciate rapidly once serious development begins. The Committee chose to keep a constant low level appreciation rate to be conservative in the forecast so that variability in regional economic performance could be expected to have little effect on the outcomes in the model.

In order to revalue the development in year 12 of the model, market values were calculated along with the assessed values and tracked by year using the appreciation rate of 2.66% per year supplied by the Town Assessor and representing the estimates annual average change in value of Scarborough buildings over the last ten years. Land values appreciated using a rate of 7.18% per year, which reflects the change in value of Payne Road properties on sewer over the last ten years. Table 8-3-3b displays the market valuation model for the base case scenario development.

Table 8-3-3b

VALUATION MODEL	July	July	July	July	July	July	July	July	July	July	July	July
	'01-'02	'02-'03	'03-'04	'04-'05	'05-'06	'06-'07	'07-'08	'08-'09	'09-'10	'10-'11	'11-'12	'12-'13
	1	2	3	4	5	6	7	8	9	10	11	12
Market values:			(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)
Unimproved buildable	4,379	4,379	7,066	7,288	7,131	6,913	6,979	6,853	6,672	6,431	6,689	6,951
Value per acre:	15	15	24	26	28	30	32	35	37	40	43	46
Phase 1 Land:			474	1,015	1,632	2,332	2,500	2,679	2,871	3,077	3,298	3,535
Phase 1 Buildings:			5,956	12,229	18,831	25,776	26,462	27,166	27,888	28,630	29,392	30,174
Phase 1 Personal			965	1,931	2,896	3,861	3,861	3,861	3,861	3,861	3,861	3,861
Phase 1 market total:			7,395	15,175	23,359	31,970	32,823	33,706	34,621	35,569	36,551	37,570
Phase 2 Land:					720	1,544	2,482	3,547	4,752	6,112	6,551	7,021
Phase 2 Buildings:					6,468	13,281	20,451	27,994	35,923	44,254	45,431	46,640
Phase 2 Personal					1,510	3,021	4,531	6,042	7,552	9,063	9,063	9,063
Phase 2 market total:					8,699	17,846	27,465	37,582	48,227	59,428	61,044	62,723
Phase 3 Land:								459	984	1,583	2,262	3,030
Phase 3 Buildings:								4,323	8,877	13,670	18,711	24,011
Phase 3 Personal								442	884	1,326	1,769	2,211
Phase 3 market total:								5,225	10,746	16,579	22,741	29,252
TOTAL market Value in	4,379	4,379	14,461	22,463	39,189	56,729	67,266	83,366	100,266	118,007	127,026	136,495
Assessed/Market			100%	97%	96%	95%	93%	92%	91%	90%	88%	86%

	July	July	July	July	July	July	July	July	July	July	July	
	'13-'14	'14-'15	'15-'16	'16-'17	'17-'18	'18-'19	'19-'20	'20-'21	'21-'22	'22-'23		
	13	14	15	16	17	18	19	20	21	22		
Market values:			(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	
Unimproved buildable			7,216	7,483	7,751	8,020	8,287	8,551	8,810	9,062	9,306	9,537
Value per acre:			49	52	56	60	65	69	74	79	85	91
Phase 1 Land:			3,789	4,061	4,352	4,664	4,999	5,358	5,743	6,155	6,597	7,070
Phase 1 Buildings:			30,976	31,800	32,646	33,514	34,406	35,321	36,261	37,225	38,215	39,232
Phase 1 Personal			3,861	3,861	3,861	3,861	3,861	3,861	3,861	3,861	3,861	3,861
Phase 1 market total:			38,626	39,722	40,860	42,040	43,267	44,541	45,865	47,241	48,673	50,163
Phase 2 Land:			7,525	8,065	8,644	9,264	9,929	10,642	11,405	12,224	13,101	14,042
Phase 2 Buildings:			47,880	49,154	50,461	51,804	53,182	54,596	56,048	57,539	59,070	60,641
Phase 2 Personal			9,063	9,063	9,063	9,063	9,063	9,063	9,063	9,063	9,063	9,063
Phase 2 market total:			64,467	66,281	68,168	70,130	72,173	74,300	76,516	78,826	81,234	83,745
Phase 3 Land:			3,897	4,873	5,968	7,196	8,570	10,103	11,813	13,716	15,831	18,179
Phase 3 Buildings:			29,580	35,427	41,566	48,005	54,758	61,836	69,252	77,018	85,149	93,658
Phase 3 Personal			2,653	3,095	3,537	3,979	4,422	4,864	5,306	5,748	6,190	6,632
Phase 3 market total:			36,129	43,395	51,071	59,181	67,749	76,803	86,370	96,482	107,170	118,469
TOTAL market Value in			146,439	156,881	167,849	179,371	191,475	204,194	217,561	231,612	246,383	261,915
Assessed/Market			97%	94%	92%	90%	88%	85%	83%	82%	80%	78%

In year 12 of the model, a second revaluation occurs which results in the assessed (taxable) values in the model being reset to the market values and the tax rate being reduced by 22%.

8.3.4 Taxation and Other Revenues

Property taxes in the model reflect a beginning mill rate (taxes paid per thousand dollars of value) of \$15.50. This is an estimate of the post-revaluation rate given to the Committee by the Town Assessor. It is assumed that the tax rate will increase by 3% per year for the remainder of the model.

The mill rate for each year is applied to the new cumulative property value in the development model as shown in Table 8-3-3a above. The mill rate and taxes for each year in the model can be seen in Table 8-3-4 below.

Table 8-3-4 also contains the annual excise and other taxes and fees which are received from the Haigis development. These values are based on a factor taken from the Report of the Growth and Services Committee, April 2000. The section of the report titled "Cost/Benefit of

Land Use Options in Scarborough”, contains net cost/benefit spreadsheets for “hypothetical new corporate office” buildings and “hypothetical manufacturing development” in Scarborough. The Haigis Committee combined the revenues of the lines titled “excise taxes” (line 11) and “all other own-source revenues” (line 12) and divided the sum by the “total assessed value of development” (line 5).

The resulting factor, 0.4%, was then reduced by the same amount that the tax rate is reduced for the 2001 revaluation. This adjustment is repeated in the 12th year when revaluation occurs again. The resulting factor is applied to each year’s cumulative Haigis Parkway Zone development valuation to estimate excise taxes and other own-source revenues (i.e. fees, etc.).

Table 8-3-5

REVENUE MODEL		July	July	July	July	July	July	July	July	July	July	July	July
		'01-'02	'02-'03	'03-'04	'04-'05	'05-'06	'06-'07	'07-'08	'08-'09	'09-'10	'10-'11	'11-'12	'12-'13
Year:		1	2	3	4	5	6	7	8	9	10	11	12
				(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)
TOTAL Taxable Value in place:		4,379	4,379	14,461	21,780	37,587	53,824	62,569	76,630	91,089	105,961	111,498	136,495
Total Market Value in place:		4,379	4,379	14,461	22,463	39,189	56,729	67,266	83,366	100,266	118,007	127,026	136,495
Taxable value % of market value:				100%	97%	96%	95%	93%	92%	91%	90%	88%	100%
New value in year (\$000):				7,395	7,587	16,486	16,915	9,155	14,621	15,018	15,431	5,685	5,850
Mill rate: (\$Taxes /\$1000)		15.5	16.0	16.4	16.9	17.4	18.0	18.5	19.1	19.6	20.2	20.8	16.2
Taxes paid (\$000):		68	70	238	369	656	967	1,158	1,461	1,789	2,143	2,323	2,218
Excise taxes & other revenues:		1.6	1.6	24	46	93	142	169	211	254	299	315	332

		July	July	July	July	July	July	July	July	July	July	July
		'13-'14	'14-'15	'15-'16	'16-'17	'17-'18	'18-'19	'19-'20	'20-'21	'21-'22	'22-'23	
		13	14	15	16	17	18	19	20	21	22	
		(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)
TOTAL Taxable Value in place:			142,130	148,181	154,416	160,906	167,609	174,519	181,645	188,995	196,578	204,404
Total Market Value in place:			146,439	156,881	167,849	179,371	191,475	204,194	217,561	231,612	246,383	261,915
Taxable value % of market value:			97%	94%	92%	90%	88%	85%	83%	82%	80%	78%
New value in year (\$000):			6,022	6,199	6,384	6,576	6,775	6,982	7,198	7,422	7,655	7,898
Mill rate: (\$Taxes /\$1000)			16.7	17.2	17.8	18.3	18.8	19.4	20.0	20.6	21.2	21.8
Taxes paid (\$000):			2,379	2,554	2,742	2,943	3,157	3,386	3,630	3,890	4,167	4,463
Excise taxes & other revenues:			417	436	455	474	495	515	537	559	582	606

8.3.5 Utility Special Assessment

The final piece of the revenue stream for the Haigis Parkway development model is the assessment for the costs of building the utility infrastructure. As noted in previous sections, the Town may recover up to 50% of these costs via a special assessment of landowners over no more than ten years. In the model, the Committee assumed that the assessment would be made in equal annual installments over ten years and that interest on the outstanding balance would be assessed at the ten year municipal bond rate.

Table 8-3-5 below shows the pattern of the special assessment revenues to the Town. No assessment revenue is received after the 12th model year (10th assessment year).

Table 8-3-5

REVENUE MODEL	July	July	July	July	July	July	July	July	July	July	July	July
	'01-'02	'02-'03	'03-'04	'04-'05	'05-'06	'06-'07	'07-'08	'08-'09	'09-'10	'10-'11	'11-'12	'12-'13
Year:	1	2	3	4	5	6	7	8	9	10	11	12
			(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)
Utility assessment: (NewVal / TotVal * Cost)												
New			126	126	126	126	126	126	126	126	126	126
Upgrade			90	90	90	90	90	90	90	90	90	90
CRC			107	107	107	107	107	107	107	107	107	107
Utilities			<u>125</u>	<u>125</u>	<u>125</u>	<u>125</u>	<u>125</u>	<u>125</u>	<u>125</u>	<u>125</u>	<u>125</u>	<u>125</u>
Utilities TOTAL:			448	448	448	448	448	448	448	448	448	448
Outstanding balance:			4,034	3,586	3,138	2,690	2,241	1,793	1,345	897	448	0
Interest on outstanding balance:			184	165	146	126	107	87	68	49	29	10

	July	July	July	July	July	July	July	July	July	July	July	July
	'13-'14	'14-'15	'15-'16	'16-'17	'17-'18	'18-'19	'19-'20	'20-'21	'21-'22	'22-'23		
	13	14	15	16	17	18	19	20	21	22		
	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)
Utility assessment: (NewVal / TotVal * Cost)												
New	0	0	0	0	0	0	0	0	0	0	0	0
Upgrade	0	0	0	0	0	0	0	0	0	0	0	0
CRC	0	0	0	0	0	0	0	0	0	0	0	0
Utilities	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Utilities TOTAL:	0	0	0	0	0	0	0	0	0	0	0	0
Outstanding balance:	0	0	0	0	0	0	0	0	0	0	0	0
Interest on outstanding balance:	0	0	0	0	0	0	0	0	0	0	0	0

8.3.6 Revenues

Overall revenues for the Haigis Parkway development model are the sum of property taxes, excise taxes/fees, the special assessment for utilities, and the interest on the unpaid balance of the special assessment.

Table 8-3-6 lists the annual total revenues for the model development. Revenues are very small in the first 2 years reflecting taxes on undeveloped property without sewer and other utilities.

Table 8-3-6

REVENUE MODEL	July	July	July	July	July	July	July	July	July	July	July	July
	'01-'02	'02-'03	'03-'04	'04-'05	'05-'06	'06-'07	'07-'08	'08-'09	'09-'10	'10-'11	'11-'12	'12-'13
Year:	1	2	3	4	5	6	7	8	9	10	11	12
			(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)
Taxes paid (\$000):	68	70	238	369	656	967	1,158	1,461	1,789	2,143	2,323	2,218
Excise taxes & other revenues:	1.6	1.6	24	46	93	142	169	211	254	299	315	332
Utilities TOTAL:			448	448	448	448	448	448	448	448	448	448
Interest on outstanding balance:			184	165	146	126	107	87	68	49	29	10
TOTAL REVENUE:	70	72	894	1,028	1,343	1,684	1,882	2,207	2,559	2,939	3,115	3,008

	July	July	July	July	July	July	July	July	July	July	July	July
	'13-'14	'14-'15	'15-'16	'16-'17	'17-'18	'18-'19	'19-'20	'20-'21	'21-'22	'22-'23		
	13	14	15	16	17	18	19	20	21	22		
	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)
Taxes paid (\$000):	2,379	2,554	2,742	2,943	3,157	3,386	3,630	3,890	4,167	4,463		
Excise taxes & other revenues:	417	436	455	474	495	515	537	559	582	606		
Utilities TOTAL:	0	0	0	0	0	0	0	0	0	0		
Interest on outstanding balance:	0	0	0	0	0	0	0	0	0	0		
TOTAL REVENUE:	2,796	2,990	3,196	3,417	3,652	3,901	4,167	4,449	4,749	5,069		

8.3.7 Tax Increment Financing

The Committee assumed that the Haigis Parkway development can be included in a tax increment financing (TIF) district where 50% of the value added will be sheltered from the State of Maine valuation formula when calculating revenue sharing for municipalities. The form of the TIF is a simple allocation of tax receipts to pay for the Town's infrastructure costs and does not involve tax rebates to firms locating in the Haigis Parkway Zone. As a result, the Committee's model simply calculates available revenues and expenses for the Haigis Parkway Zone development. The proposed TIF is within the three legal limitations: financial, land area, and municipal indebtedness as explained in the memo from Harvey Rosenfeld in Appendix 8-X.

8.3.8 Utility Infrastructure Expense

The debt service costs associated with issuing bonds to fund the Haigis Parkway Zone utility infrastructure are listed in Table 8-3-8 below. As noted previously, the base model assumes a 20-year financing term for the bonds. Bonds are issued in the 3rd year of the model development period to fund the \$500 thousand engineering design. The following year, bonds would be issued for the remaining utility infrastructure cost of \$8.4 million. The model assumes level principal payments over the life of the bond.

Table 8-3-8 shows that the infrastructure expense is "front-weighted" in that larger costs are incurred in the early years of the Haigis Parkway development model than in the later years.

Table 8-3-8

EXPENSE MODEL	July	July	July	July	July	July	July	July	July	July	July	July
	'01-'02	'02-'03	'03-'04	'04-'05	'05-'06	'06-'07	'07-'08	'08-'09	'09-'10	'10-'11	'11-'12	'12-'13
	1	2	3	4	5	6	7	8	9	10	11	12
			(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)
Infrastructure expense:												
BAN issued (\$000)		6,332	New sewer, downstream, utilities (excludes \$500k for engineering).									
Interest (\$000):		189										
Borrowed (\$000):		500	Engineering design.									
Principal (\$000):		25	25	25	25	25	25	25	25	25	25	25
Interest (\$000):	15	26	24	23	22	20	19	18	17	15	14	13
Balance:		475	450	425	400	375	350	325	300	275	250	225
Borrowed (\$000):			8,465	BAN principal plus the capacity reserve charge.								
Principal (\$000):			423	423	423	423	423	423	423	423	423	423
Interest (\$000):			432	410	389	367	345	324	302	281	259	237
Balance:			8,042	7,619	7,195	6,772	6,349	5,926	5,502	5,079	4,656	4,233
Total infrastructure expense:	15	240	904	881	858	836	813	790	767	744	721	698

	July	July	July	July	July	July	July	July	July	July	July
	'13-'14	'14-'15	'15-'16	'16-'17	'17-'18	'18-'19	'19-'20	'20-'21	'21-'22	'22-'23	
	13	14	15	16	17	18	19	20	21	22	
	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)
Infrastructure expense:											
Borrowed (\$000):											
Principal (\$000):		25	25	25	25	25	25	25	25	25	
Interest (\$000):		11	10	9	8	6	5	4	3	1	
Balance:		200	175	150	125	100	75	50	25	0	
Borrowed (\$000):											
Principal (\$000):		423	423	423	423	423	423	423	423	423	423
Interest (\$000):		216	194	173	151	130	108	86	65	43	22
Balance:		3,809	3,386	2,963	2,540	2,116	1,693	1,270	847	423	0
Total infrastructure expense:		676	653	630	607	584	561	538	516	493	445

8.3.9 Demand for Municipal Services

Table 8-3-9 shows the annual costs for using municipal services, the development's share of annual municipal operating costs and debt service, and the increase in county taxes due to the added valuation in the Haigis Parkway Zone.

These values are based on a factor taken from the Report of the Growth and Services Committee, April 2000. Using the same section referenced previously for "hypothetical new corporate office" buildings and "hypothetical manufacturing development" in Scarborough, the Haigis Parkway Committee combined the expenses in lines 19-29: municipal operating costs, increase in county tax, and debt service, and divided the sum by the "total assessed value of development" (line 5).

The resulting factor, 1.1%, was adjusted for revaluation and then applied to each year's cumulative Haigis Parkway Zone development valuation to estimate the total cost of services, county taxes, and debt service to be allotted to the Haigis Parkway development each year.

Table 8-3-9 includes the fiscal impact on State revenue sharing and aid to education due to the added value of the Haigis Parkway Zone development. These values use the same Growth and Services report tables. The Committee combined the expenses of lines 14-16: "State GPA education", "State revenue sharing", and "All other intergovernmental", and divided the sum by the "total assessed value of development" (line 5).

The resulting factor, -0.8%, was then adjusted for revaluation and applied to each year's cumulative Haigis Parkway Zone development valuation to estimate the total cost to the Town of changes in State revenue sharing and other benefits due to the increased value in the HPZ. All of the factors developed from the Growth and Services Report were reviewed with Jim D'Amicis, who developed them in his role at the time as consultant to the Growth & Services Committee. Jim was comfortable that the way in which the Haigis Parkway Committee used his numbers was consistent with the intent of the analysis and represented a reasonable estimate.

	<u>Growth & Services report</u>	<u>Reval.('01)</u>	<u>Reval. ('12)</u>
Excise tax & other revenues	= 0.37% <i>of property value per G&S new corp. office or manuf.</i>	0.29%	0.30%
State GPA, Rev. share, Other intergovt.:	= -0.77% " " "	-0.61%	-0.63%
Town services, county tax, debt service:	= 1.14% <i>of property value per G&S new corp. office (.1% > manuf.).</i>	0.90%	0.93%
Excise tax & other revenues	= 0.04% <i>of property value per G&S open space.</i>	0.03%	0.03%
State GPA, Rev. share, Other intergovt.:	= -0.26% " " "	-0.21%	-0.21%
Town services, county tax, debt service:	= 0.58% " " "	0.45%	0.47%

Table 8-3-9 also includes the annual total expenses allocated to the Haigis Parkway development in the model. These include the principal and interest charges in the debt service as shown in Table 8-3-8.

Table 8-3-9

EXPENSE MODEL	July	July	July	July	July	July	July	July	July	July	July	July
	'01-'02	'02-'03	'03-'04	'04-'05	'05-'06	'06-'07	'07-'08	'08-'09	'09-'10	'10-'11	'11-'12	'12-'13
	1	2	3	4	5	6	7	8	9	10	11	12
			(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)
Impact on St. GPA, rev share, other (w/TIF):	11	11	15	38	89	141	169	214	261	308	325	400
Town services & county tax:	25	25	99	166	312	462	542	672	805	942	992	1,217
Tax cost of employees buying homes in Scar.:			36	60	143	204	258	385	478	537	588	631
Interest on accum. net cash flow:		0	9	18	25	29	28	25	18	7	0	0
TOTAL EXPENSE:	41	277	1,063	1,164	1,427	1,671	1,811	2,086	2,329	2,538	2,628	2,946

	July	July	July	July	July	July	July	July	July	July	July
	'13-'14	'14-'15	'15-'16	'16-'17	'17-'18	'18-'19	'19-'20	'20-'21	'21-'22	'22-'23	
	13	14	15	16	17	18	19	20	21	22	
	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)
Impact on St. GPA, rev share, other (w/TIF):		432	452	472	493	514	536	558	582	606	630
Town services & county tax:		1,607	1,676	1,748	1,823	1,900	1,979	2,061	2,145	2,232	2,322
Tax cost of employees buying homes in Scar.:		631	631	631	631	631	631	631	631	631	631
Interest on accum. net cash flow:		0	0	8	23	31	31	23	5	0	0
TOTAL EXPENSE:		3,345	3,412	3,489	3,577	3,660	3,739	3,812	3,879	3,962	4,029

8.3.10 Secondary Impacts - Housing Demand

The expenses also include the implied cost to the Town of demand for new homes in residential sub-divisions due to firms moving into the Haigis Parkway Zone. The Committee recognized that some level of new home demand in Scarborough is represented by the creation of jobs in the Town of Scarborough. While there was disagreement concerning whether the demand is “new”, that is, not represented by the ongoing demand for Scarborough homes, the Committee agreed that the model should demonstrate such demand in the interests of including the full range of potential costs.

The Committee began by estimating the number of employees in the firms in the Haigis Parkway development model using actual data on the sample firms used in the model. Then the Committee determined that Scarborough residents represented 5.4% of all Cumberland County employed as of the 1990 census. (2000 census figures were not yet available). Therefore, when a firm moves to the Haigis Parkway Zone from a Cumberland County area, it was assumed that 5.4% of employees already reside in Scarborough. In addition, the Committee knew that the Growth & Services Report had indicated that as of the 1990 census approximately 25.8% of employees in Scarborough firms live in Scarborough.

For firms coming to the Haigis Parkway Zone from Cumberland County, the Committee assumed that 5.4% of the employees already live in Scarborough and some portion of the remaining employees would demand new homes in sub-divisions in Scarborough over the first five years after relocating to the Haigis Parkway Zone until 25% of employees live in Scarborough.

For firms coming to the Haigis Parkway Zone from outside of Cumberland County, it was assumed that 90% of employees were not top management and would likely be hired from the greater Portland area allowing the Committee to use the same 5.4% Scarborough resident assumption.

Senior management, with the resources to locate anywhere nearby, will likely select from the five major areas: Scarborough, Cape Elizabeth, Portland, Falmouth, and Cumberland/Yarmouth. Scarborough was assumed to be equally desirable and so would attract 20% of senior management relocating to this area when the firm moves to the Haigis Parkway Zone. As a percent of Haigis employees, senior management represents only 10% of employees with firms from outside Cumberland County.

The Committee decided to assume an even split between firms from away and those coming from Cumberland County, in spite of input from the Real Estate Broker workshops and Harvey Rosenfeld at SEDCO that interest in the Haigis Parkway Zone would be heavily weighted toward firms already in the Greater Portland area. A 50/50 split weights the analysis toward more home demand and provides an additional level of conservatism to the model assumptions.

The result of the above logic was as follows:

	<u>Haigis employees</u>
50% of employees in HPZ from Cumberland County firms:	50%
50% of employees from "away" (50%):	
- Local hires (90% of 50%):	45%
- Senior managers (10% of 50%):	<u>5%</u>
	100%

Potential Haigis Parkway Zone employees living in Scarborough when the firm moves to the Haigis Parkway Zone can then be estimated as follows:

Percent of HPZ employees expected from Greater Portland:	95.0%
Percent of Greater Portland employees living in Scarborough:	5.4%
Percent of HPZ employees already living in Scarborough:	5.1% (5.4% of 95%).

The senior managers moving to Scarborough represent 20%, or 1/5th, of the 10% of employees who are senior management. The Committee assumed that senior managers selecting to live in Scarborough would buy new homes in sub-divisions immediately.

Firms coming from "away":	50%
Senior management as % of employees:	10%
Senior management as % of HPZ employees:	5% (10% of 50%)
Senior managers buying in Scarborough:	20%
Percent of HPZ employees who are management and will demand new homes in Scarborough:	1% (20% of 5%)

The Haigis Parkway development model assumes that 5.1% of future Haigis Parkway Zone employees already live in Scarborough and that another 1% (senior managers) will buy in Scarborough immediately when the firm moves into the Haigis Parkway Zone.

Table 8-3-10a shows the assumed pattern for added demand for new homes in sub-divisions over the first 5 years after a firm moves to the Haigis Parkway Zone.

Table 8-3-10a

Five year model:

Max. % EE's live in Scarborough:	25%	<i>Growth & Services Report, Spring 2000.</i>
Years to max. % EE's live in Scarborough:	5	<i>Committee guess.</i>
Use in model spreadsheet for each Phase:	% EE's live in <u>Scarb.:</u>	EE's buying new homes @ yr. due to <u>Haigis</u>
Year 0	5.1%	
Year 1	11.1%	5.98% <i>Column I: Yr1 - yr 0.</i>
Year 2	15.3%	4.16% <i>Yr2 - yr 1.</i>
Year 3	19.0%	3.75% <i>Yr3 - yr 2.</i>
Year 4	22.3%	3.26% <i>Yr4 - yr 3.</i>
Year 5	25.0% <i>G&S Study, 2000</i>	2.71% <i>Yr5 - yr 4.</i>
Year 6	25.0% <i>Net in/out of Scarborough = 0 after year 5.</i>	
	I	II

Notes:

I Creating a progression from Year 0 level of Scarborough residents to 25% Scarborough residents in year 5. The progression is front-weighted per Haigis Parkway Committee views.

II This column is the year to year change in the number of Scarborough residents (households). These percentages will be used in Table 4 below to estimate new home demand in Scarborough due to Haigis development.

For detailed version of the formulas underlying Table 8-3-10, please refer to the appendix.

Five years after a firm moves into the Haigis Parkway Zone, the model assumes that net demand for new homes in Scarborough sub-divisions is zero: new demand is met by employees selling existing homes in sub-divisions.

This complex model describes above results in a pattern of new home demand that can be seen in Table 8-3-10b below. Note that the overlap in the phases of development result in more than 25% of employees living in Scarborough on average over the period of the Haigis Parkway development. The Committee decided not to correct for this effect to ensure that the model added yet another layer of conservatism to allow for the variability possible in future events.

Table 8-3-10b

TABLE 4: Home demand by year in the development model.

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	
Added EE's buying homes in Scar.:	Phase I: 5.98%	4.16%	3.75%	3.26%	2.71%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
	<i>ii</i>											
	Phase II:		5.98%	4.16%	3.75%	3.26%	2.71%	0.00%	0.00%	0.00%	0.00%	
	<i>iii</i>											
	Phase III:					5.98%	4.16%	3.75%	3.26%	2.71%	0.00%	
	<i>iv</i>											
	June '01-'02	June '02-'03	June '03-'04	June '04-'05	June '05-'06	June '06-'07	June '07-'08	June '08-'09	June '09-'10	June '10-'11	June '11-'12	June '12-'13
	1	2	3	4	5	6	7	8	9	10	11	12
			(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)
New employees phase I::		125	125	125	125							
	<i>Each year is 1/4th of base model phase I employees.</i>											
Total EE's phase I::		125	250	374	499	499						
	<i>Employees added each year accumulate to phase I total in year 4.</i>											
Phase I EE's buying homes in Scar. @ year:		30	21	19	16	14						
	<i>ii above times total employees in phase I.</i>											
New employees phase II::				140	140	140	140	140	140			
Total EE's phase II::				140	280	421	561	701	841			
Phase II EE's buying homes in Scar.:				50	35	32	27	23	0			
	<i>iii above times total employees in phase II.</i>											
New employees phase III::							88	88	88	88	88	
Total EE's phase III::							88	176	264	352	440	
Phase III EE's buying homes in Scar.:							79	55	50	43	36	
	<i>iv above times total employees in Phase III.</i>											
New home demand in Scarborough each year of Haigis development:		30	21	69	51	45	106	78	50	43	36	
<i>Cumulative new homes:</i>			51	120	171	216	322	400	450	493	529	

	June '13-'14	June '14-'15	June '15-'16	June '16-'17	June '17-'18	June '18-'19	June '19-'20	June '20-'21	June '21-'22	June '22-'23
	13	14	15	16	17	18	19	20	21	22
	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)
New employees phase III::	88	88	88	88	88	88	88	88	88	88
Total EE's phase III::	528	616	705	793	881	969	1,057	1,145	1,233	1,321
Phase III EE's buying homes in Scar.:	0	0	0	0	0	0	0	0	0	0
New home demand in Scarborough each year of Haigis development:	0	0	0	0	0	0	0	0	0	0
<i>Cumulative new homes:</i>	529	529	529	529	529	529	529	529	529	529

In the Haigis Parkway development model, the line in Table 8-3-10b entitled “new home demand in Scarborough each year of Haigis development” represents the number of new homes added solely due to development in the Haigis Parkway Zone. The Committee then attributed each new home a net after-tax cost of -\$1,194 (from the Report of the Growth & Services Committee, April 2000, section titled “Cost/Benefit of Land Use Options in Scarborough”, Table 1: net cost/benefit spreadsheet for “single family sub-division built since 1990” in Scarborough). This net “cost” is attributed annually to each new home from that point forward in the model.

Demand for new homes due to added employment in a municipality is a key issue as towns throughout the northeastern United States consider growth management strategies. In the Committee’s model of the Haigis Parkway Zone development, the annual cost to the Town of new homes in sub-divisions is very significant. A slight change in the assumptions can swing the analysis significantly. To test the Committee’s assumptions for validity and reliability, Applied Economic Research analyzed the Haigis model and concluded that the Committee’s assumption that 529 units of new homes in sub-divisions would be required by the Haigis Parkway development was rather aggressive (high) relative to their model which was based on Scarborough increasing its share of Cumberland County jobs over the model period from 13%

to 19%. AER's model predicted demand for 337 units over the 22-year period. Table 8-3-10c shows the AER housing demand by year. The memo from AER can be found in the appendix.

Table 8-3-10c

	June '01-'02	June '02-'03	June '03-'04	June '04-'05	June '05-'06	June '06-'07	June '07-'08	June '08-'09	June '09-'10	June '10-'11	June '11-'12	June '12-'13
	1	2	3	4	5	6	7	8	9	10	11	12
Applied Economic Research model:			(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)
New home demand in Scarborough each year of Haigis development:			16	31	31	31	15	27	27	27	11	11
Cumulative new homes:				47	78	109	124	151	178	205	216	227
<i>Scarborough share of Cumberland County jobs grows from 13% to 19%.</i>												

	June '13-'14	June '14-'15	June '15-'16	June '16-'17	June '17-'18	June '18-'19	June '19-'20	June '20-'21	June '21-'22	June '22-'23
	13	14	15	16	17	18	19	20	21	22
Applied Economic Research model:										
New home demand in Scarborough each year of Haigis development:	11	11	11	11	11	11	11	11	11	11
	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)
	238	249	260	271	282	293	304	315	326	337
<i>Scarborough share of Cumberland County jobs grows from 13% to 19%.</i>										

8.3.11 Opportunity Cost of Capital

The final expense line in Table 8-3-9 above represents the interest due on funds borrowed in the model when the net cash flow from the Haigis Parkway Zone development model is negative. Assuming the Town must fund the shortfall, there is a cost of capital involved which the Committee chose to assume was equal to the short-term (2 year) municipal bond rate used in the utility assessment calculation. This expense compensates the people of Scarborough for the net cost (if any) of development in the Haigis Parkway Zone.

When the opportunity cost charge turns positive, there is no longer a negative balance outstanding from the public investment in the project's early years. The significance of this will be described in detail in the next section.

8.4 Baseline Model Structure and Measures

The economic cost/benefit analysis has a very simple form taken from the income statement approach of corporations:

$$\text{Revenues} - \text{Expenses} = \text{Net Cash Flow}$$

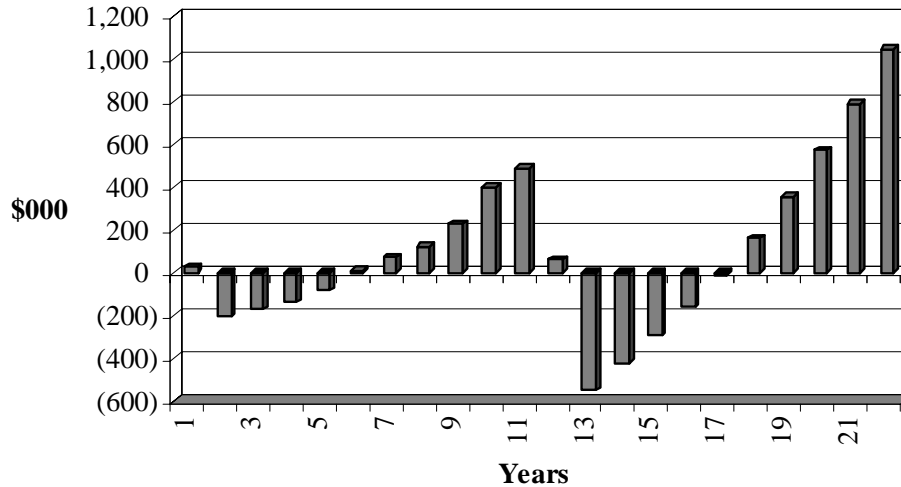
If the model accounts for all sources of revenues (cash being paid to the Town) and all sources of expense (cash payouts by the Town), the difference between the two is the Net Cash Flows to the Town in a given time period. In a given year, if the net cash flow is positive, the Town has made money and if it is negative the Town has had to cover a shortfall using funds from some other source. The baseline model assumes that borrowing covers shortfalls so the additional interest cost to the Town is added into the expense line of the analysis.

By tracking revenues and expenses over an appropriate period of time, in this case 22 years, the model reflects the "time value of money spent or earned" and shows the "timing of net cash flows" to the Town. These are the two critical issues the Town faces when deciding whether to fund a major project.

The timing of the net cash flows from the baseline model is presented in Table 8-4 below. The detailed spreadsheets are included in the appendix.

Table 8-4:

Base Case Model Net Cash Flows



The stream of net cash flows represents both the net investment by the people of Scarborough and the net return to the taxpayers. The negative cash flow in the early years of the baseline development model is the total amount the people of Scarborough would invest after all of the dollar costs and benefits are accounted for each year. Though the model assumes that Scarborough issues bonds for more than \$8 million to fund the sewer and utility infrastructure for the Haigis Parkway Zone, the total costs incurred by the Town exceed the income received by under \$600 thousand over the first five years of the model period. After revaluation in year 12, costs exceed revenues again for a period of four years.

By year ten, the initial revenue shortfalls (borrowing) have been paid off by net positive cash flows in years 6-11. The shortfalls in years 12-16 are paid off by subsequent positive net cash flows and more than \$2 million accumulates after all shortfalls are repaid.

Using the annual net cash flows, it is possible to examine the economic return to the people of Scarborough by calculating the rate of return on the net investment as represented by the net cash flow stream. This calculation is the internal rate of return. The stream of annual cash flows pictured above is equivalent to a return of 13.3% annually over the 22-year analysis period.

This does not reflect a return on the money invested in the sewer as that would require looking at cash flows from the Haigis Zone with and without the sewer and the Committee decided that the area would not produce a “highest and best use” picture without the utilities in place.

8.5 Alternative Risk Models

Economic feasibility studies of the type represented by the Haigis Parkway Cost/Benefit Economic Analysis require a high level of discipline as facts and suppositions are used to carefully craft a picture of the future which can be deemed a “likely” scenario. If the job is done conscientiously, the results are both a valid approach to the problem and a reliable method for looking at alternative outcomes. Use of such modeling for decision-making requires examination of several scenarios, which represent a range from “good” to “pessimistic” expectations or assumptions. The Haigis Parkway Committee examined several scenarios including the base case economic development model.

To examine pessimistic conditions, the Committee developed a scenario where no development occurs for two years after the utility infrastructure is complete and a scenario in which the 20 year development model occurs as expected but only 25% of the cost of the utility infrastructure can be recovered versus 50% in the base case model.

Applied Economic Research (AER) is the consultant employed by the Town to evaluate the Haigis Committee's work. AER modeled new home demand based on Scarborough's 13% share of Cumberland County jobs increasing to 19% over the 22-year period. This produced significantly less new home demand than the Committee's model, which was based on the percent of people living and working in Scarborough. As a result, the AER home demand scenarios offer a better return picture than the base case model.

In addition, the Committee looked at the base case model including the Enterprise Park proposed development. The Enterprise Park model includes the rebate of \$1.5 million of taxes to the developer to compensate him for up front investment in public infrastructure.

Table 8-5-1 charts the results of the alternative scenarios versus the base case 20-year model. A range of potential outcomes can then be established.

The following notes apply to the results in Table 8-5-1.

The Base Case 20-year Development Model of the Haigis Parkway Zone excludes the Enterprise Park, assumes that 50% of utility construction costs can be recovered through a special assessment, and has development beginning immediately after the completion of utility construction.

The 22-year average annual rate of return is an Internal Rate of Return (IRR) calculation which shows the annual return on investment necessary to produce a cash flow stream equal to the net cash flows produced in the 22-year model. The IRR represents the annual average total return to the Town from the Haigis Parkway Zone over the model period.

Note that the utility costs of \$10,464,000 include modifications to the existing system, which are assumed to be partially covered by \$1,500,000 of "public" improvements in the Enterprise Park project. The developer will pay these costs at the outset and then be reimbursed over time as tax revenues are generated by the Enterprise Park businesses. The TIF payments to the developer are reflected in the models, which include the Enterprise Park.

Table 8-5-1:

	<i>Base Case * with revaluation</i>	<i>Base case + No Growth for 2 years</i>	<i>Base case + 25% Utility Cost Recovery</i>	
22 year annual average rate of return (IRR) :	13.3%	7.9%	Neg.	***
Maximum net investment:	(614)	(1,045)	(4,966)	\$000
22yr. Cumulative Net Cash Flow:	2,301	1,710	(3,065)	\$000
Years to initial shortfall paid off:	9	10	NA	years
Utility costs ‡:	8,965	8,965	8,965	\$000
Utility cost recovery:	4,483	4,483	2,241	\$000
Employees at end 22 years:	2,661	2,485	2,661	Employees
New home demand over 20 years:	529	464	529	# homes

	<i>Base Case development + AER** Model of New Home Demand</i>	<i>AER** New Home Demand + 25% Utility Cost Recovery</i>	
22 year annual average rate of return (IRR) :	32.5%	8.2%	Ann. Avg. Return
Maximum net investment:	(520)	(1,901)	\$000
22yr. Cumulative Net Cash Flow:	7,163	3,605	\$000
Years to initial shortfall paid off:	7	12	years

Utility costs ‡:	8,965	8,965	\$000
Utility cost recovery:	4,483	2,241	\$000
Employees at end 22 years:	2,661	2,661	Employees
New home demand over 20 years:	337	337	# homes

	<i>Base Case with revaluation</i>	<i>Base case + Enterprise Park</i>	<i>Base case w/Enterprise Park + 25% Utility Cost Recovery</i>	
22 year annual average rate of return (IRR) :	13.3%	15.5%	Neg.	Ann. Avg. Return
Maximum net investment:	(614)	(985)	(5,229)	\$000
22yr. Cumulative Net Cash Flow:	2,301	3,089	(2,359)	\$000
Years to initial shortfall paid off:	9	9	NA	years

Utility costs ‡:	8,965	10,464	10,464	\$000
Utility cost recovery:	4,483	4,483	2,241	\$000
Employees at end 22 years:	2,661	3,023	3,023	Employees
New home demand over 20 years:	529	600	600	# homes

A number of primary conclusions can be drawn from the results in Table 8-5-1.

First, it is important that the Town recover the maximum allowable amount of the costs of the utilities. That recovery should include the 50% special assessment which is in the model and cost sharing with the utility companies involved. While the Committee found that the utility companies were not open to that idea, development in the Haigis Zone will add major rate-paying customers to the consideration for the communications, electric, and gas firms which will raise the ante and make negotiations more viable.

The financial results are also very sensitive to the assumptions concerning new home demand in Scarborough sub-divisions. The AER model suggests that the Committee's approach may be too conservative and expect too much demand for new homes in sub-divisions. Furthermore, the model does not account for spouses working in the Haigis Zone.

Finally, the Enterprise Park (and by extension, the development of the adjacent B-2 zone) adds value to the economic analysis by spreading the utility costs across a larger number of commercial enterprises and a larger tax base.

Development of the Haigis Parkway Zone, within the basic expectations as determined by the research of the Haigis Parkway Committee, can be expected to provide economic results in a range as seen in Table 8-5-2 below. The results were developed from the above data and assumed that the Town could recover 50% of the costs of the utility infrastructure.

Table 8-5-2

Average annual total return to the Town over 22 years	8% to 34%
Net investment required (net negative cash flows):	\$0.5 million to \$1.8 million
Years of negative net cash flows at start:	4 to 8 years
Years to recovery of initial shortfall:	7 to 12 years
Net accumulated value over 22 years:	\$1.2 million to \$7.2 million

Scarborough can borrow for long terms at a rate just over 5% yet the expected return on investment for the development of the Haigis Parkway Zone is between 8% and 34% on an annual average basis over a 22-year period. This suggests a substantial return to the people of Scarborough over and above the cost of capital.

Another important issue is the term of the public financing for utility infrastructure development. Because the construction costs occur in advance of the majority of development, cash flows are negative in the early years as noted above. Extending the term of the municipal bonds from 20 years to 30 years reduces the risks associated with potential variability in other factors in the model and minimizes the impact of cash flow variability from unforeseen events.

Table 8-5-3

	<i>Base Case with revaluation (30-yr. bonds)</i>	<i>Base case + No Growth for 2 years (30-yr bonds)</i>	<i>Base case + 25% Utility Cost Recovery (30-yr bonds)</i>	
22 year annual average rate of return (IRR) :	45.7%	31.0%	-1.4%	
Maximum net investment:	(196)	(277)	(2,853)	\$000
22yr. Cumulative Net Cash Flow:	3,950	3,627	(413)	\$000
Years to initial shortfall paid off:	5	7	never	years

8.6 Factors for Financial Success

Results of the Cost Benefit Economic Analysis depend upon a number of key factors:

1. The Town should recover 50% of the cost of the infrastructure through a special assessment, negotiate cost sharing with the utility companies, and shelter as much of the new value as possible in a TIF district.
2. The Town should not give taxes back to developers/owners in the Haigis Parkway Zone in order to attract businesses to the Zone. The Haigis Parkway Zone is sufficiently attractive to allow the Town to avoid such “give back” type TIF arrangements. If the Town chooses to invest in the Haigis Parkway Zone and install the necessary infrastructure, this will include improvements to the existing sewer system, which constitute a significant public expenditure towards the betterment of private property. As such, requests for tax rebates by developers in the Haigis Zone and the adjacent B-2 Zone should be very carefully analyzed to ensure that additional public expenditure (in the form of tax rebates) is warranted.
3. The Town should finance utility infrastructure over 30 years to reduce the cash flow impact in the early years of development and explore financial relationships that might share some of the future tax returns in exchange for more up front cash flows to limit shortfalls in the early years.
4. The Town should develop a financial plan for municipal and school buildings and infrastructure that to some degree reflects the cash flows expected to be achieved through the development of the Haigis Parkway Zone.
5. The Town should continue to develop a comprehensive residential growth management plan to limit the impact of new homes on the cash flow and infrastructure needs of the Town.

Conclusions and Recommendations

1. Haigis Parkway Zone, and adjacent B-2 Zone, due to proximity to Exit 6, represent one of the last large commercial development opportunities in Southern Maine with direct access to the Maine Turnpike.
2. The Haigis Parkway Commercial Zone is a primary “gateway” to the Town of Scarborough and as such will set the tone for visitors’ perception of the community. The HPZ was developed to ensure that the highest and best use of the area would be achieved with careful management of the impact on the character of the community.
3. Highest and best use of the Haigis Parkway Zone will be achieved through mixed use, low density commercial development attracting firms that have the resources to build within the parameters of the recommended zoning restrictions, the resources to be strong participants in the community, and employees who will take an interest in the community.
4. As the Haigis Parkway Zone is almost entirely private property, it is expected that sites will be developed whether or not the Town provides access to the Sanitary District sewer system. Without sewer and other utility infrastructure, this development will not meet the standard of “highest and best use” as any development will use septic systems, be relatively small, and will not provide the level of tax revenue associated with a high quality commercial development.
5. To attract firms that constitute the highest and best use of the Haigis Parkway Zone, the Committee recommends that the Town of Scarborough authorize the installation of the core infrastructure on the Haigis Parkway, portions of the Payne Road and Route One. This should include, but not be restricted to, new sewer lines, downstream sewer line improvements necessary to handle the expected increase from new commercial development, and sub-surface water, natural gas, electricity and telecommunications lines. The telecommunications should be of the capacity and capability to support the most demanding “high technology” firms.
6. To fund the necessary infrastructure, the Town of Scarborough should issue 30-year bonds and create a Special Utility Assessment District to recover 50% of the cost of utility construction from those who will use the infrastructure. Infrastructure costs should be recovered over a reasonable period of time, which by law cannot exceed ten years. In addition, the Town should create tax increment financing areas (TIF’s) in the Haigis Parkway Zone wherein a portion of each dollar of taxes would be allocated to paying off the costs of infrastructure while sheltering as much of the growing valuation as possible from State of Maine revenue sharing formulas.
7. Once the utility infrastructure is in place, significant high quality commercial development can be expected to begin. This development will occur on a privately funded internal roadway system served by the nine existing curb cuts on the Haigis Parkway between Scottow Hill

Road and the Payne Road, and on the portion of the Payne Road abutting Haigis Parkway Zone properties.

8. Existing landowners are likely to sell their property to developers. Developers are likely to acquire several parcels of land so that cost-effective, "park-like" commercial developments can be created while making best use of the available landscape and adhering to the demands of the recommended Haigis Parkway Zoning ordinance.
9. Scarborough is perceived as a rural community defined by views of open grasslands, trees, and neighborhoods. The Haigis Parkway Committee has determined that the Haigis Parkway Zoning ordinance, as written, does not sufficiently protect the character of Scarborough as commercial development occurs in the Exit 6 area. Specifically, the Committee recommends that the Haigis Parkway Zoning ordinance be revised to be very specific concerning the visual presence of buildings, roads, and parked vehicles. These design parameters should be specific to the Haigis Parkway Zone though they can, and maybe should, be applied to other developments throughout the Town.
10. A "visual analysis" modeling design system should be used to allow Scarborough Planners, Planning Board members, and Town Councilors to estimate the visual impact of any proposed development.
11. High quality development will result in demand for Scarborough housing by employees of the Haigis Parkway firms. The service demand costs resulting from such housing have been acknowledged in the Haigis Parkway area economic feasibility study contained in this report.
12. The Committee's Baseline Model Development Scenario for the Haigis Parkway Zone suggests that the people of Scarborough can realize a substantial return on public funds invested in infrastructure serving the Haigis Parkway Zone.
13. The Town needs a comprehensive traffic management design for the geographic "triangle" which includes Eight Corners, Dunstan Corner, and Oak Hill. The design should anticipate the growth of flow within the "triangle" from both known and likely levels of commercial and residential development in Scarborough. Whether or not the Haigis Parkway Development reaches its potential, it is the opinion of this Committee that the need to implement significant traffic improvements in the "triangle" is a strategic condition that extends beyond the scope of any single development.
14. Considering the Committee's Baseline Model Development Scenario for the Haigis Parkway Zone, it is our conclusion that a "highest and best use" development of the Haigis Parkway Zone should yield a very significant long-term positive financial benefit to the people of Scarborough. The Committee believes that the potential future revenue stream resulting from this development can help to fund the growing infrastructure and service needs of our community.