

Focus Report
for the
Proposed Highway 113
Class I Environmental Assessment

March 2006



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1. INTRODUCTION

The Department of Transportation and Public Works (TPW) expects that traffic will continue to grow on major arterial routes, primarily Highway 102, Highway 103 and Hammonds Plains Road, and that eventually another road would be required to keep these existing roads operating at acceptable safety and service levels.

While construction is not anticipated to happen for many years, early planning for the highway is important as this area of HRM is developing quickly and possible routes for a new road are very limited. The majority of the proposed highway alignment crosses private land and generally skirts existing development. Without corridor preservation the majority of land required for the highway could be privately developed. The expected result would be either the elimination of any options for the highway alignment or a highway project that has higher construction costs, and causes greater impacts on existing development and the environment. Some property has been purchased in order to preserve a corridor for the highway where imminent development would have prevented preservation of the land.

Corridor preservation work for the proposed Highway 113 began in 1998. In May 2001 the project was registered under the Nova Scotia Environmental Assessment (EA) process as part of TPW's corridor preservation process. That registration included Addendum No. 1, as TPW provided information additional to the EA report as part of the original submission. At that time, Nova Scotia Environment and Labour (NSEL) determined more information was needed to make a decision about the project. This additional information was submitted in September 2004, as Addendum No. 2.

In October 2004, TPW withdrew the project from the process in order to redefine the project by removing the connector road (Addendum No.3). The connector road will eventually provide access to the highway for residents of the Timberlea, Hubley and Five Island Lake areas and was included in the original project description. It is also a primary road through the Sheldrake Heights subdivision and it was removed from the project description to enable the development of the subdivision to continue. The project was re-registered in October 2004.

In November 2004, the Minister of NSEL decided that there may be limited adverse effects or significant environmental effects related to the proposal and directed TPW to prepare a focus report to examine how the proposed Highway 113 fits with the Halifax Regional Municipality's (HRM's) Regional Municipality Planning Strategy (the Plan). This submission is in response to the focus report requirement and is organized to follow the terms of reference. The Regional Plan is not yet approved and references to the Plan in this report are to the Draft 2, November 30, 2005 version of the Plan (HRM 2005a).

Two reports, commissioned to assist in preparing this focus report, are attached as appendices. Appendix A is a Demand and Strategic Context Focus Study which was commissioned by TPW

and prepared by Delphi-MRC. Appendix B is the Blue Mountain/Birch Cove Assessment Study prepared by EDM Limited. The EDM study was led by HRM with TPW and DNR staff participating on the steering committee. The report is an initial stage in the discussions that will be required to ensure an integrated approach to future highway development, natural resource management and park planning and development. The report has not been presented to HRM Council.

2. PROJECT DESCRIPTION

Highway Location

Highway 113 is proposed as a 100 series highway that connects Highways 102 and 103 and bypasses congested sections of these highways that access the Halifax urban core as well as the alternative route, Hammonds Plains Road (Route 213). The proposed alignment connects to Highway 103 just north of Exit 4 at Sheldrake Lake and continues east between Maple and Frasers Lakes and skirts the southern edge of the Kingswood subdivision. It crosses and connects to Kearney Lake Road with a diamond interchange and continues east to connect to Highway 102 near Exit 3, (Hammonds Plains Road). The right-of-way to be reserved for the highway is 150 metres wide (see Figure 1).

Highway Length

The proposed highway length has been estimated as 9.9 km. The estimate was based on digital topographic mapping and calculated using computer software. Estimating the distance from the midpoint between the lanes where Highway 113 diverges from Highway 102 to the midpoint between the lanes where Highway 113 would merge with Highway 103, the length of the project to two decimal places is 9.84 km. Consistent with typical practice, only the main through lanes are included in the distance estimate. The distance is measured horizontally along the proposed curvilinear alignment. It is not a straight line distance measurement between the points of intersection with Highways 102 and 103.

Underlying Project Assumptions

Highway 113 is proposed to be a 100 series, controlled access, high speed, 4-lane 27.6 metre wide depressed median highway with directional ramp connections to Highways 102 and 103 at either end. A fully directional connection to Highway 102 is not required with the proximity of the proposed Kearney Lake Road diamond interchange. At the western end, the access to Highway 113 for the residents of Timberlea, Hubble and Five Island Lake areas, is by means of a connector road from Trunk 3 to a half diamond interchange on Highway 113. The half diamond and connector arrangement affects less land and does not directly impact existing residences. To provide an interchange at Highway 103 and Highway 113 would be difficult, if not impossible to build given the proximity of Upper Sheldrake and Sheldrake Lakes, Sheldrake Lake sub-division and the existing Highway 103 Exit 4 interchange. Even if it was possible to build, provision for these two movements would be very expensive and underutilized as they would serve a relatively small residential area that can have access via the connector. Only one additional interchange will be considered for future addition to the highway if requested by HRM for service to the existing Kingswood sub-division and/or a regional park.

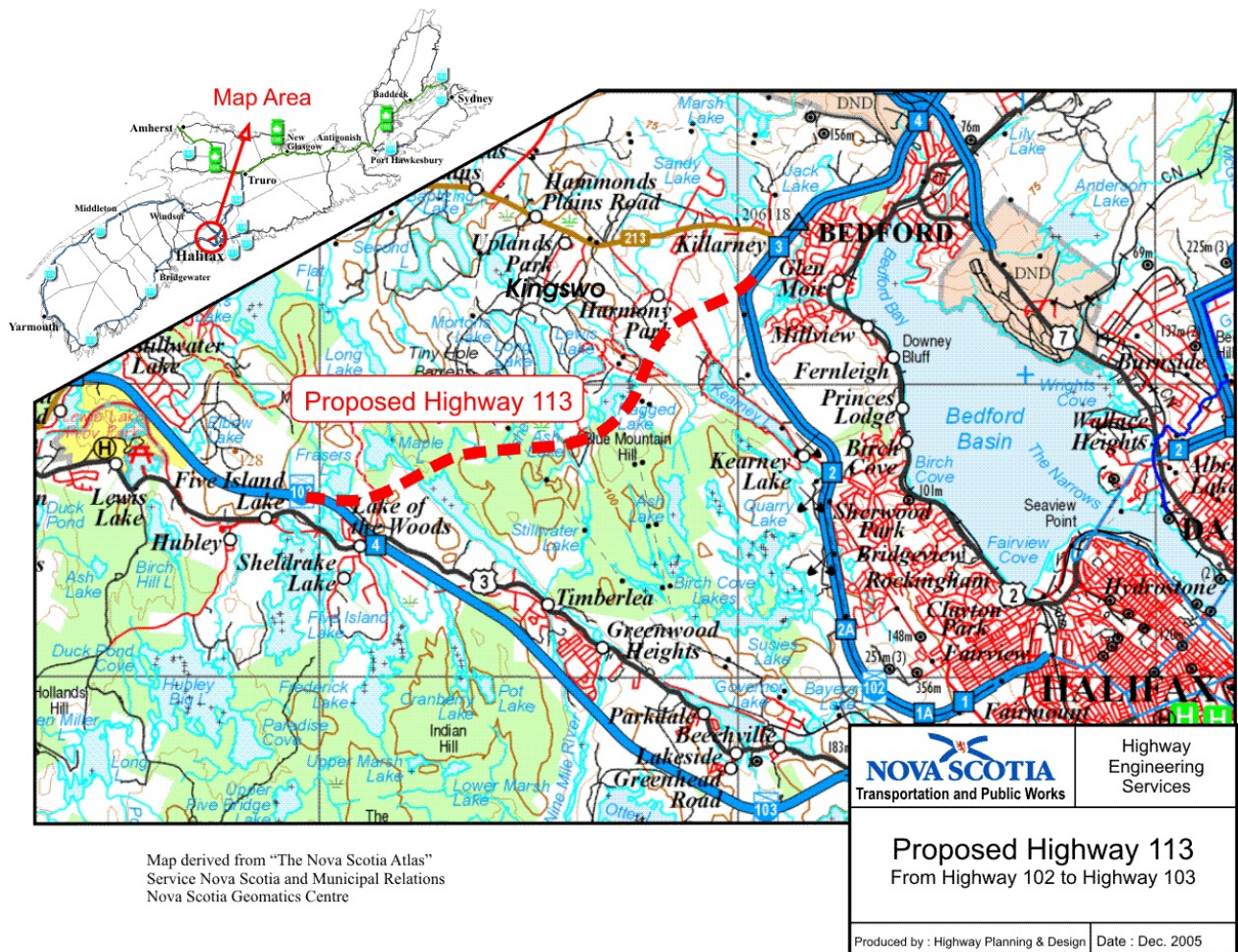


Figure 1 - Highway 113 Location Plan

The first steps in TPW’s corridor preservation process include preparing functional designs based on topographic mapping and conducting a preliminary environmental screening. These steps are taken before the project is registered for a formal environmental assessment in an aim to register the most environmentally appropriate alignment. The preliminary environmental screening involves investigating up to 61 possible constraints and consultation with a number of government departments and agencies in order to identify known environmental features present in the study area. As well, a public consultation is normally conducted in advance of environmental registration. The public consultation for this project was held in July 1998. The corridor preservation process continues with obtaining formal environmental approval and producing a detailed design and concludes with purchasing the land required. It is TPW’s practice to obtain environmental approval for a project before making significant property purchases.

Constraints and goals considered in the functional design/corridor preservation process include the following.

- The alignment was kept as far north as possible to minimize the intrusion into the undeveloped crown land block and for this reason the alignment generally skirts the southern edge of the Kingswood subdivision. At the time the alignment was identified, residential development had not occurred south of Ragged Lake. Ragged Lake was a constraint in locating the highway and development has since filled in between the proposed highway right-of-way and Ragged Lake.
- A balance of separation distances was necessary for siting the highway between Blue Mountain Hill and Ragged Lake. To go south of Blue Mountain Hill would have meant greater intrusion into the crown land block. Blue Mountain Hill has scenic look-off value that TPW recognizes as important. The hill will not be used as a source of aggregate for highway construction. Other nearby, commercial sources are readily available for highway construction.
- The highway design was modified in the initial project stages to minimize wetland impacts. It is standard TPW practice to minimize wetland impacts and to mitigate any unavoidable impacts by restoring, creating or enhancing other wetlands. The original environmental study (AMEC, 2000) concluded that with appropriate design and construction measures no significant residual adverse effects are likely to the hydrology of the wetlands.
- As part of the design process, DNR will be consulted on the need for, location and design of any wildlife crossings. The Environmental Assessment work to date (AMEC, 2004) found that the project area does not include any important moose habitat. This study, conducted in partnership with the Department of Natural Resources (DNR), concluded that while moose may be found occasionally in the area, there is no significant habitat that will be affected by the highway. Further study of the moose population is underway. It is examining the presence and migration patterns so that required wildlife passages can be properly located and designed. The data on the moose will be collected and requirements for crossings determined with DNR prior to the design of any crossings. HRM will be consulted on the location and design of pedestrian crossings in the context of the potential regional park and connectivity to active transportation links. Likewise, Navigable Waters regulations will be followed and local interest groups will be consulted on portage requirements.
- The final detailed design of the highway will reflect its location adjacent to the potential future regional park and context sensitive design principles will be applied. The design of highway crossings will reflect Crime Prevention Through Environmental Design (CPTED) principles.

- Highway 113 is a corridor preservation project at this time. Construction will be contemplated only when the need for the highway is clearly demonstrated and the significant expenditure warranted.

Construction Schedule

The project is not currently scheduled and no funding has been allotted for construction. Highway 113 is a corridor preservation project at this time. TPW anticipates that traffic will continue to grow on regional arterial roads, including Highways 102 and 103 and the Hammonds Plains Road, and that eventually another road will be required to maintain acceptable levels of safety and service on these existing roads.

Highway 113 has been identified as a future transportation route in HRM's Regional Plan. As a future route it is expected to be required beyond the 2026 Plan horizon year. This is consistent with TPW's expectations for the timing of the need for the highway. These expectations are based on the transportation demand management measures, such as providing for increased transit use, which form part of the Plan. The Department's position is that Highway 113 will not be constructed before the need is present. It is difficult to estimate when the highway will be required but it is not expected to be for many years.

HRM has identified other priorities for provincial infrastructure funding including Highway 107 (Burnside to Highway 102) and an additional Highway 101 interchange in Upper Sackville that they foresee will be required within the time frame of the Regional Plan. Highway 113 is among a list of five Future Potential projects identified in the Plan. Also on the list is the Beaver Bank Bypass, a municipal road that HRM has identified as a Future Potential project. Although it is not expected to be required within the Regional Plan horizon, they are actively preserving the corridor now.

TPW is presently working to preserve the right-of-way for the Highway 113 project. Early planning for this road is important as the area is developing quickly and possible routes for the new road are very limited. The proposed alignment primarily passes through private land and generally skirts existing development. Without corridor preservation a majority of the alignment could be privately developed making future construction very disruptive and considerably more expensive.

Ultimately the timing of construction will depend on how quickly traffic volumes grow, the availability of funding, and the project's priority among other government projects at the time the highway is required. The project will be scheduled in consultation with HRM through the Strategic Joint Regional Transportation Planning committee that is to be established as part of the Regional Plan.

3. REASON FOR THE UNDERTAKING

TPW anticipates that traffic will continue to grow on the region's arterial roads, including Highways 102 and 103 and Hammonds Plains Road, and that eventually another route will be required to maintain acceptable levels of service and safety performance. Highway 113 is proposed to address this expected need. It connects Highways 102 and 103 and bypasses the busier sections of these highways providing access to the Halifax urban core as well as the alternative route, Hammonds Plains Road. Highway 113 would attract traffic from these and other busy commuter routes thus improving their levels of service and safety.

Traffic has been growing on Highways 102 and 103 at fairly significant rates. As noted in the report in Appendix A, the regional average growth rate on the major HRM highways is just over 5% annually. Even assuming more moderate increases in the future, it is reasonable to expect that at some point additional highway capacity will be needed.

To gain a better understanding of the traffic component of the project, TPW commissioned Delphi-MRC to undertake a study titled *Highway 113: A Demand and Strategic Context Focus Study*. The report concludes that there is a significant level of demand for a high-speed corridor linking Highway 102 and Highway 103 based on traffic modelling for the year 2026. A copy of the report is included as Appendix A. The updated modelling also provided additional insight into where the demand for Highway 113 is coming from through the use of Select Link Analyses. The model results show that 50 percent of the traffic using Highway 113 southbound originates in the Bedford/Sackville area and 42 percent originates in the Dartmouth area. The model also indicates that Highway 113 is a very attractive alternative route to the Hammonds Plains Road or the Highway 102/103 corridor.

The traffic modelling was based on a number of conservative assumptions. It did not include external to external trips (i.e. vehicles travelling through the study area). In addition, the traffic model assumed a relatively conservative traffic growth rate of one percent. An interchange connection with the Kingswood sub-division was not included in the model and the model did not include the planned Highway 107 link from Burnside to Highway 102.

Even without the inclusion of the Highway 107 link, the model indicated that Highway 113 was drawing traffic around the harbour. Figure 10 in Appendix A illustrates the modelled demand for Highway 113. The volume reduction on Highway 103 appears to represent a demand for Highway 113 that originates on the Dartmouth side of the harbour and that uses Highway 113 instead of the harbour bridges and Highway 103. This attraction is assumed to be even greater if Highway 107 is present at the time Highway 113 is built. With the future Highway 107 connection, Highway 113 completes a circumferential highway system connecting Burnside, Bedford, Sackville and Hammonds Plains. HRM's Plan indicates that the Highway 107 connection is required before Highway 113.

The modelling shows that Highway 113 provides traffic relief to Hammonds Plains Road. Hammonds Plains Road, in addition to serving a large residential base, provides a more direct route from Highway 102 to Highway 103 for through car traffic. Trucks are prohibited from using the Hammonds Plains Road although there is still a substantial percentage of trucks using Hammonds Plains Road as discussed in the Delphi-MRC study in Appendix A. The current traffic pressures on Hammonds Plains Road are addressed in the Regional Plan, which proposes to curtail further significant residential activity in the area until a change in infrastructure capacity is provided. The only way to increase capacity is to build a new highway or add lanes to an existing one. HRM is not considering widening Hammonds Plains Road to provide additional capacity but will be making transit improvements that, together with the development restrictions, are expected to ease traffic pressures. Highway 113 is identified in the Plan as a potential future highway indicating that it will likely be required some time beyond 2026.

Highway 113 provides a truck route that bypasses sections of Highways 102 and 103. The Highway 113: Demand and Strategic Context Focus Study, Appendix A, notes that providing Highway 113 as a truck route could likely attract through-trucking trips and would allow Highway 102 to operate as a commuter freeway servicing the Halifax peninsula. It would likely improve short-term capacity constraints and more importantly it would reduce safety risks associated with larger vehicles.

The need for Highway 113 has been discussed and primarily considered on a regional basis. It is important to note that Highway 113 also provides a route for provincial traffic wishing to bypass the busier sections of Highways 102 and 103 that access the Halifax urban core. This traffic was not expected to be a significant component of the total traffic and so it was not included in the model. Nonetheless, it is a role of the highway to be considered.

Given that Highway 113 is not anticipated to be constructed until near, or past, the end of the Regional Plan time frame, the transportation demand management measures identified in the Plan will have the opportunity to be implemented and established before the Highway is part of the network. Transit improvements are expected to delay the need for the highway but eventually Highway 113 will be required to support regional and provincial mobility and promote a vigorous economy.

4. OTHER METHODS/ALTERNATIVES FOR CARRYING OUT THE UNDERTAKING

The description for the other methods of carrying out the undertaking, in section 4 of the original environmental assessment report (AMEC, 2000) is confirmed.

Alternative Routes

An alternative alignment south of the proposed alignment would provide many of the same benefits as the proposed alignment but it would cross the area currently proposed as a regional park rather than follow the northern boundary of it. It would also potentially impact the many lakes present in the area. The currently proposed alignment was selected in response to the existing development and known environmental constraints. Although there is some room for minor adjustment in certain areas within the corridor presented, there are many constraints (lakes, wetlands, hills, opportunities for connection to Highways 103 and 102, existing development) that greatly limit the actual route.

Other routes would displace existing residential development. A bypass road north of Hammonds Plains Road has essentially been eliminated by development. Locating Highway 113 farther north would likely result in the highway attracting less traffic from the other arterial roads that Highway 113, in its proposed location, is intended to serve.

Upgrading Hammonds Plains Road

To widen Hammonds Plains Road would cause significant property damage to homes and businesses. HRM is not currently considering upgrading Hammonds Plains Road. In similar situations, such as the Beaver Bank Road in Sackville, a bypass is usually less disruptive than upgrading. Building a road parallel to Hammonds Plains to provide property access in order to remove direct access to Hammonds Plains Road would also involve property impacts. A parallel access road is also a very costly alternative and HRM does not have plans to construct one. Providing a bypass for Hammonds Plains Road is one of the functions of the proposed Highway 113.

Do Nothing Alternative

Traffic and population have been growing steadily in the region and both are expected to continue to grow. At some point additional road infrastructure will be required to serve the mobility needs of people and goods. It is a reasonable assumption that eventually the highway will be required. In a growing area it is important that the planning for future transportation needs happens early. Waiting until the need arises could result in transportation projects that have greater property and environmental impacts and are significantly more expensive. Doing nothing at this time is not considered to be a responsible option given that the need is reasonably foreseen.

Median Width Options

Highway 113 is currently planned to be a 27.6 metre wide depressed median facility, similar to the design of Highway 103. The difference in overall width of the highway as compared to a barrier median cross-section is 22 metres. Depressed median facilities generally have a better safety performance than barrier median facilities. The recent Nova Scotia 5-year annual collision rate for barrier median 100 series highways is about twice the rate for 100 series depressed median highways. The potential decrease in width of the highway footprint in changing the design to a barrier median cross-section was not considered to offset the safety benefits.

Other Transportation Modes

Increased transit use is an important premise of HRM's Regional Plan. Highway 113 is not expected to limit the potential for increasing transit rider-ship as the highway is not anticipated to be constructed before the Plan is nearing the end of its time frame. Successful implementation of HRM's Plan may delay the need for the highway but eventually it is expected to be required even with increased public transit use. Highway 113 will serve longer commuter routes, trucking and provincial travel that cannot be adequately served by other modes but will provide another option for high-speed transit vehicles. Regardless, Highway 113 will not be built until it is needed. Should the modes of transportation change significantly in the future and the need for the highway never arise, it will not be built.

5. DESCRIPTION OF HRM'S REGIONAL PLANNING PROCESS

Scope

The Regional Plan is the realization of a major benefit of regional amalgamation. The Regional Municipal Planning Strategy (the Plan) has been developed as an overall framework to guide growth for the whole municipality applying integrated land use planning. The previous 18 Municipal Planning Strategies and 15 Secondary Planning Strategies, which address districts individually, will all become Secondary Planning Strategies. The objective is to plan development to protect the quality of life and distinctive characteristics that make HRM an attractive place to live.

The vision and principles that have guided the development of the Plan and were adopted by Regional Council are:

Vision

HRM's vision for the future is one of healthy, vibrant and sustainable communities. HRM will adopt a Regional Plan which, throughout the next 25 years, will guide HRM's physical development to reach this goal.

Guiding Principle

The Regional Plan will seek to address the needs and views of all sectors of HRM, recognizing the diversity of its citizens, community and geography.

Principles

The Regional Plan:

- Provides a framework that leads to predictable, fair, cost effective decision making;
- Supports development patterns that promote a vigorous economy;
- Preserves and promotes sustainability of cultural and historical assets;
- Supports appropriate roles for the Halifax/Dartmouth central business district and local business districts as a focus for economic, cultural and residential activities;
- Manages development to make the most effective use of land, energy, infrastructure, public services and facilities and considers healthy lifestyles;
- Ensures opportunities for the protection of open space, wilderness, natural beauty and sensitive environmental areas; and
- Develops integrated transportation systems in conjunction with the other principles.

(HRM, 2005a)

Regional Planning Process

The two phase regional planning process, which began in November 2001, was led by the Regional Planning Committee made up of a group of citizens and Councillors. In the first phase, completed in December 2002, public consultation and development of background documents were used to help identify the themes of the Plan and guide the creation of the vision and principles. Within this research and information gathering phase, 18 studies were completed. These studies were:

- Land Use Opportunities for Sustainable Development;
- Rural Community Form and Land Use Suitability;
- Greenfield Areas Servicing Analysis;
- Brownfield Analysis;
- Urban Core Residential Capacity Analysis;
- Housing Projections Study;
- Municipal Land Use Policy & Housing Affordability Study;
- Cost of Servicing Analysis;
- Transit and Land Use Form;
- Transit Oriented Development (TOD) & High Capacity Transit (HCT) Opportunities Analysis;
- Transportation Demand Management Options;
- Parking Supply Management Strategies;
- Water Resource Management Study;
- Options for On-Site and Small Scale Wastewater Management;
- HRM Economic Potential;
- Capital District Urban Design Study;
- Cultural Heritage Protection; and
- Harbour Plan.

(HRM, 2004b)

During the second phase, the goals, objectives, activities and the Plan itself were developed. The second phase is still in progress. A first draft of the Plan was released publicly on May 10, 2005. Information presented here is derived from the second draft of the Plan, presented to the public on December 6, 2005 (HRM, 2005a).

Public Participation

Opportunities for public participation were diverse and were incorporated throughout the Plan development process. In Phase I a citizen's survey, community case studies, position papers, a workbook and a Capital District visioning process provided opportunities for public participation. In Phase II, described in 8 steps in Figure 2, opportunities for public participation have been provided during two steps. In Step 2, Develop Goals, Objectives & Opportunities, public input was sought on the objectives of the step. Step 4 was Public Consultation on the Alternatives (HRM, 2003).

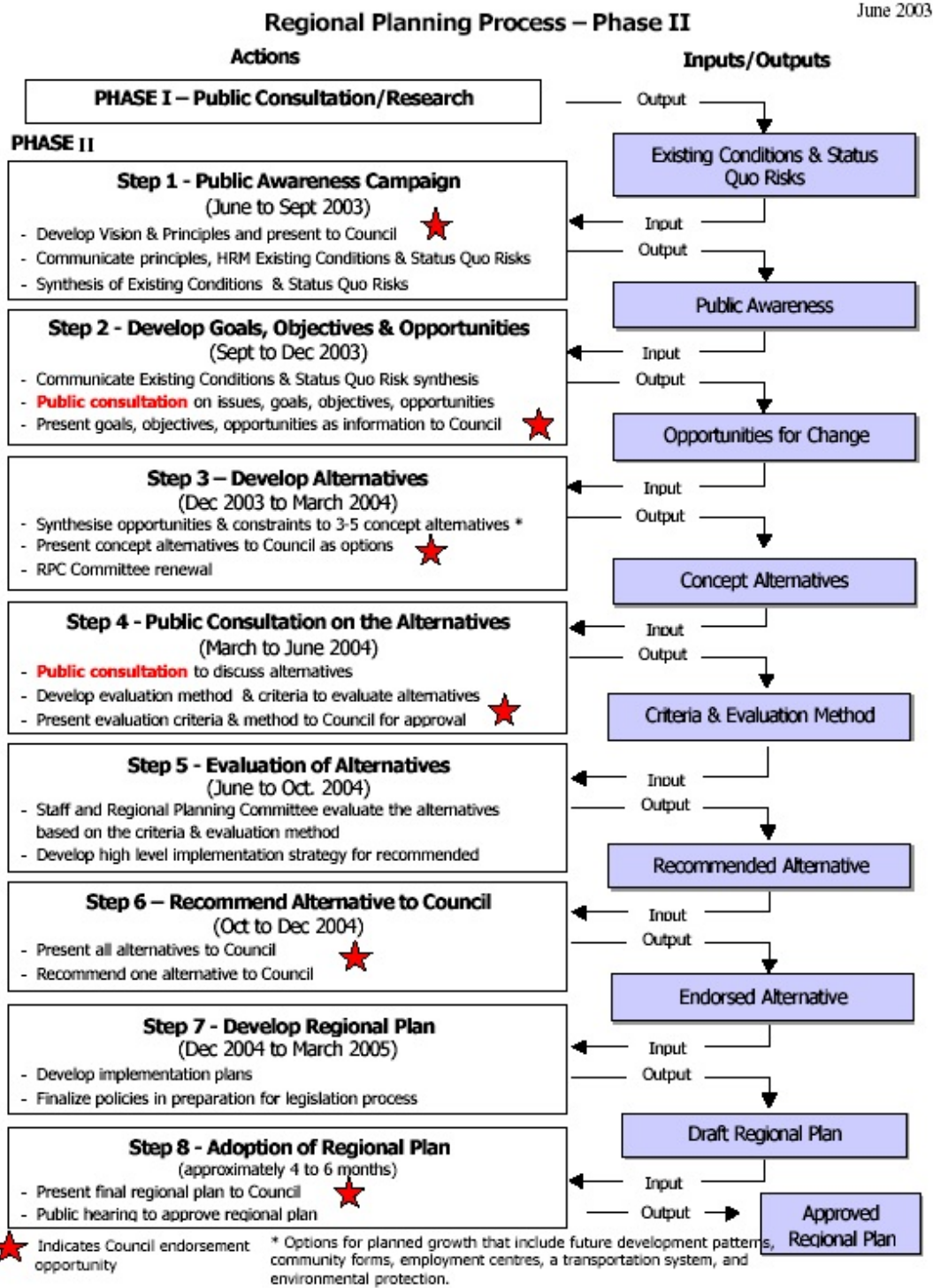


Figure 2 - Regional Planning Process (HRM, 2003)

Themes

The six themes of the Regional Plan are: economy, environment, settlement pattern, transportation, Halifax Harbour and the Capital District. HRM states that although each theme has an associated set of issues and opportunities, they are each dependent on the others for success of the Regional Plan.

Economy: “The regional plan will determine what locations are regionally significant to support economic expansions and the infrastructure needed to support these assets.” (HRM, 2005b)

This theme addresses the importance of the Capital District commercial areas of Halifax and Dartmouth as well as suburban and rural centres.

Environment: “The Regional Plan will identify ways to protect HRM’s environmental assets, as our region continues to grow.” (HRM, 2005b)

Public participation identified the top five concerns during Phase I of the planning process as:

- Halifax Harbour clean-up;
- Drinking water quality;
- Lake water quality for recreation;
- Loss of wildlife habitat; and
- Conservation of green spaces.

To address this theme, the Plan will provide ways to preserve natural resources, recreation and cultural areas, and the connection of parks and forests to preserve wildlife.

Settlement Pattern & Community Form: “The Regional Plan will identify where HRM should encourage residential growth over the next 25 years.” (HRM, 2005b)

The Plan seeks to provide opportunities for change, balancing lifestyle choices and an increase in the efficiency of development, to reduce the costs of infrastructure such as roads and other services.

Transportation: “The Regional Planning process will determine what type of transportation investment we need to match our growth and citizen’s lifestyles.” (HRM, 2005b)

Transportation has been considered a critical part of the Plan process because of its effects on access to employment, schools, shopping and recreation. The Plan recognizes that investment in the type of transportation will depend on where growth occurs and its form and where employment and resource centres are. The emphasis in the Plan is on the enhancement of transit and other means to reduce the numbers of car trips.

Halifax Harbour: “As a component of the Regional Plan, the Halifax Harbour Plan will address its future development, including all harbourfront lands and the water itself.” (HRM, 2005b)

The harbour is a resource of regional and national importance. Careful management is required for often competing uses, which include: navy; marine and offshore industries; residential; tourism; and recreational uses. A Harbour Plan will be developed with mechanisms to balance the uses of the harbour using policy, regulation and communications between stakeholders.

Capital District: “This Plan provides policies in order that HRM, in cooperation with senior levels of government, citizens and stakeholders, can support and strengthen the critical economic function of the Capital District.” (HRM, 2005b)

The Capital District includes the downtown areas of Dartmouth and Halifax, and surrounding commercial areas. Policies will be provided in the Plan to support economic functions, public infrastructure and new development to compliment the fabric of the District.

6. HIGHWAY 113 WITHIN THE CONTEXT OF HRM'S REGIONAL PLAN

This section describes how the proposed Highway 113 fits within the context of HRM's Regional Plan. The Regional Plan as outlined above addresses six themes that each have specific issues and opportunities; however, there are links between these themes that make them interdependent. The Plan approaches to the themes of environment, settlement pattern & community form and transportation all have a bearing on the need for and function of Highway 113.

Transportation

Through the regional planning process HRM provides for the integration of land use and transportation planning. Traffic demand will be managed through various measures, including: encouraging more use of transit; encouraging car and van pooling; investments in the road network; improvements in transit service levels and increases in ridership; encouraging alternative modes of transportation, which will include active transportation; and increased use of ferry services in Halifax Harbour. The importance of the continued use of the automobile is recognized, while enabling and encouraging the use of alternatives.

The integration of transportation with land use planning will perhaps be best achieved by promoting settlement patterns that integrate transit and pedestrian oriented mixed land use centres. An important land use strategy that will likely have the effect of controlling the rate of increase in traffic volumes is the maximization of new development in areas that are already serviced while managing growth in unserved areas.

Corridor Preservation

Investment in the road network is addressed with the identification of road construction projects and priorities. To enable potential construction of new roadways, the Plan provides the following discussion of transportation corridors:

An efficient and effective transportation system depends upon preserving corridors for future transportation projects. Transportation corridors are wide, linear areas to provide important connections between communities and modes of transportation, for passengers, goods and services.

There are many benefits of transportation corridor planning. These include:

1. resolving major planning issues prior to the beginning of a development project;
2. providing a framework within which individual projects can be reviewed and prioritized;
3. preserving transportation corridors within new communities which help to reduce overall development and infrastructure costs, uncertainty about where corridors will be needed in the future and social and economic impacts; and
4. the protection of investments in the transportation network.

To maintain the system, as well as to accommodate alternative means of transportation within existing corridors, it is essential to identify and retain corridors significant to the integrity of the transportation network and to identify and define the function of each type of road or facility.

(HRM, 2005a, p. 67)

The Plan identifies road construction projects that may still be needed for efficient growth of HRM, even if directed growth reduces the need to build roads and other travel demand management methods are successful. The projects are identified in the categories of programmed, planned and future potential. The latter are expected to be constructed beyond the 25 year horizon of the Plan.

Four projects that would be provincial responsibility are identified. The two Planned Projects are the Highway 107 extension that would connect Akerley Boulevard to Highways 101 and 102, and the Highway 101 connector and interchange. Highway 113 and the Highway 107 Cherrybrook by-pass are identified as Future Potential Projects (HRM, 2005a, p.69).

The Plan provides policy to establish a Transportation Reserve Zone for portions of corridors it plans to acquire. However, the zoning will only be applied for 5 years following adoption of the Plan (HRM, 2005a, p. 69).

The Plan identifies the need to place limitations on subdivision of land for residential development where the roadway network cannot safely accommodate additional demand created by the development. Hammonds Plains and Beaver Bank are identified as areas where this condition already exists. The Plan includes a policy to allow such limitations based on the opinion of the Traffic Authority (HRM, 2005a, p. 70).

Public comments provided to HRM during the review of the Plan suggested that the identified future potential corridor for Highway 113 be removed. The following was provided in response:

The plan provides only for the setting aside of a Highway 113 roadway corridor, not for construction of a roadway. Whether or not the roadway gets built is ultimately a decision for the Province as it forms part of their provincial highway system. Nevertheless, the traffic modelling undertaken for the Regional Plan has indicated some future traffic management value to this corridor and so the municipality is working jointly with the province on procurement of a corridor and mitigation of impacts to the adjacent open space lands.

The settlement pattern set forth in the Plan strives to delay construction of major roadways such as this one. Although roadway capacity demands will be reduced with transit initiatives, the Plan recognizes capacity issues will eventually become acute on Hammonds Plains Road and Highway 102, two roadway sections that will experience traffic reductions once Highway 113 is operational.

The plan indicates Hammonds Plains Road and Beaver Bank Road are at their traffic volume thresholds and prescribes growth controls to keep traffic loading from worsening. It is recognized, however, a position like that is not supportable unless we can say a solution to resolve the issue is available, even if we argue that, if not currently affordable to the municipality. In the case of Hammonds Plains Road, we are aware of no realistic solution to the traffic loading situation on Hammonds Plains Road other than Highway 113. If a future road corridor is not preserved, all practical options for opening lands along Hammonds Plains Road for development will be lost forever.

(HRM, 2006, pp. 14, 15)

On this basis no change in the Draft 2 Plan was recommended.

Transportation Master Plan

To implement the transportation aspects of the Plan, HRM intends to develop a Transportation Master Plan that will include five functional plans: Road and Road Network; Public Transit; Active Transportation; Transportation Demand Management; and Regional Parking Strategy. These will be developed with the goals of improving traffic movements, reducing single occupant passenger vehicle travel; and shifting to other modes of transportation. Existing components, such as the Metro Transit Strategy will be referenced by the Transportation Master Plan. The Master Plan will be administered by a Strategic Joint Regional Transportation Planning Committee (the Committee).

While land use planning and development issues are mostly the responsibility of HRM, transportation is a responsibility shared with the Province. As a result of discussions between HRM and the Province, key regional transportation stakeholders have been identified and have been included in the Committee. The Committee is expected to be effective in coordinating transportation network management and settlement patterns. Through the Committee, HRM intends to set the priorities for roadway projects and integrate settlement patterns, environmental concerns and transportation planning. TPW will be an active participant in the Committee.

Consistency of Highway 113 with the Plan

Immediate construction of Highway 113 would be inconsistent with the Plan as well as with TPW policy. If Highway 113 were built before traffic demand is sufficient it could undermine both the transportation policies and settlement and housing policies of the Plan, and through induced traffic use might reduce the rate of mode shift from automobiles to other forms of transportation. TPW does not intend to build Highway 113 until the demand justifies its construction, and therefore, it is not inconsistent with the Plan.

TPW has proposed the construction of Highway 113 and submitted it as an undertaking under the *Environmental Assessment Regulations* in order to establish and protect the right-of-way for the time until the Highway is needed.

If the Highway alignment had not been identified for corridor protection in 1998, the ongoing plans for Bedford West would not include the preservation of the corridor through the area and remaining alternatives for a Highway 113 alignment would be severely limited or impossible to obtain.

As demonstrated by the attached study (Appendix A) and consistent with HRM's Plan, Highway 113 will be needed at some point, which may be beyond the 25 year Plan period. With new evaluations by the Committee or during the required 5 year reviews of the Plan it may be determined that Highway 113 or portions of it are needed in a shorter time than 25 or more years.

Highway 113 is consistent with the Plan in that it is identified as a Future Potential Project. Once built, Highway 113 would be consistent with the Transportation goals of the Plan to improve traffic flows and enhance traffic safety.

Private Development

Private development is addressed in the Plan under the heading of Settlement & Housing. The Plan identifies the need to manage growth to avoid risks to the natural environment, to communities and the quality of life. The Plan also seeks to limit extensive expenditures in infrastructure to support new growth. The target balance of growth is 25% in peninsular Halifax and in Dartmouth inside the circumferential highway, 50% in suburban areas and 25% in the rural areas.

The Plan locates centres for growth in areas where services can be provided economically. These services include transit, water and sewer services. The general land use designations are: urban settlement; urban reserve; rural commuter; rural resource; and agricultural.

The Regional Plan identifies a Rural Commuter Designation intended for low to medium-density uses in defined centres. These would be in easy commuting distance to the Regional Centre (HRM, 2005, p. 45).

The Rural Commuter land use designation applies to existing residential and other land uses that have been developed adjacent to 100 series highways, for example areas of Hubley and Tantallon along Highway 103.

The Plan places emphasis on the following topics:

- Planning for centres;
- Management of residential development within rural designations; and
- Housing diversity and affordability.

Functional plans will be developed for Opportunity Sites and Affordable Housing. Opportunity Sites are areas within the Regional Centre for the most part that are vacant or under-used. HRM will seek to encourage and provide incentives for the redevelopment of such sites in the Regional Centre and other areas, consistent with the overall intent of the Plan.

A key means of managing residential development within rural designations will be the discouragement of large as-of-right residential development in the Rural Commuter, Rural Resource and Agricultural Designations. Small scale infill development will be allowed on existing roads and on new roads development will be limited.

For large-scale residential development to be considered it will be in some form of open space design. Development agreements will be required to conserve a connected system of open spaces, avoiding and protecting certain areas and using areas with the best suited soils. Criteria for avoidance or protection include: riparian buffers; wetlands; natural corridors; steep slopes; floodplains; scenic views; trails; and historic sites. In addition to preserving open space and other valued natural and cultural features, the intent of open space design is to create a more compact rural residential form with a compact road network, which decreases service costs.

Consistency of Highway 113 with the Plan

Bedford West is a proposed development to the west of Kearney Lake. The major landowner, Annapolis Group, proposes a residential and mixed use development that is currently being considered under a comprehensive development plan (Bedford West Public Participation Committee, 2005). These lands straddle the proposed right-of-way of Highway 113 for a length of approximately 2.5 km and are adjacent to Highway 102. The area is designated as urban settlement in the Generalized Future Land Use, Map 2 of the Plan (HRM, 2005a) and a Suburban District type of settlement centre (HRM, 2005a, p. 49). The community concept plan includes residential neighbourhoods, a community commercial centre and parks and open spaces immediately adjacent to the proposed right-of-way of Highway 113, as well as residential neighbourhood adjacent to Highway 102. The planning for Bedford West has accommodated the potential presence of Highway 113 and incorporated it into the community design. Should Highway 113 not be constructed, there is a conditional plan for the corridor to revert to the zoning of the adjacent proposed land uses. The plan also includes two community collector road crossings of Highway 113 and is centred around a proposed interchange between Highway 113 and Kearney Lake Road.

The Planned Bedford West development of urban settlement adjacent to Highway 113 is consistent with similar developments, including some recently built and still under development, that abut existing 100 series highways. For example, urban settlement areas of development in Clayton Park and Bedford abut Highway 102. Areas of Beechville, Timberlea and Lakeside also are developed adjacent to Highway 103.

Just south of Bedford West and at the western end of the proposed Highway 113 alignment there are designated areas of Rural Commuter land use. These include a recently developed area around Ragged Lake that is part of Kingswood/Blue Mountain and undeveloped lands of the Annapolis Group south of Bedford West. Piercey Investors Ltd. has proposed a development adjacent to the western end of the proposed Highway 113 alignment.

The Settlement and Housing portion of the Plan includes policy specifically addressing traffic capacity on the Hammonds Plains Road and the Beaver Bank Road. On these roadways the traffic

levels are at or near capacity, so that restrictions on further subdivision activity have been applied. All further residential subdivision activity will be curtailed until a substantive change is made in roadway capacity for these areas.

The extent that the proposed Highway 113 interacts with the Settlement and Housing component of the Plan is limited. The proposed Highway 113 alignment and adjacent existing and planned residential land use is consistent with generalized future land use within the Plan.

Recreational, Parks and Natural Areas Land-use

These land uses are primarily addressed within HRM's Plan under the topic of Environment. The Plan seeks to address protection of the natural environment in the short term by the establishment of development practices sensitive to water, land and air, and through an integrated system of natural areas, parks, trails and corridors. Watershed studies and functional plans will be used to develop integrated environmental planning practices at the local level.

Open Space and Residential Land-use

The Plan identifies an open space network, designated as Open Space and Natural Resources, that includes the traditional notions of parks and natural areas with lands intended for preservation for agricultural, forest, community form, ecological, historical, public safety or recreational purposes.

Lands with the Open Space and Natural Resources generalized future land use designation are presented as generalized areas on Map 2 of the the Plan (HRM, 2005a). One outlined area extends through the Birch Cove Lakes and Blue Mountain areas to the west at Coxs Lake, and from a part of the shore of Kearney Lake to the Timberlea, Lakeside and Beechville urban reserve areas. This designation does not recognize the proposed alignment of Highway 113 or some privately owned lands in some areas.

Since most of the lands included in the Plan as Open Space and Natural Resources areas are federally, provincially, or privately owned, the Plan promotes cooperation of these diverse land holders for the achievement of good environmental management and planning.

In addition to the general policies to be provided in the Plan under the Environment heading, Functional Plans are to be developed for: Water Quality Monitoring; Open Space; Urban Forest; Potential Hazards to Development; and Emission Reduction.

Under Parks and Trails the Plan identifies Neighbourhood Parks, Community Parks, District Parks and Regional Parks. The parks serve recreational needs and include a trail network to provide linkages between communities and the network of parks. The park function of a Regional Park is described as:

The primary objective of a Regional Park will be to preserve and protect significant natural or cultural resources. The essential feature of a Regional Park may include, but not be limited to, open space, wilderness, scenic beauty, flora, fauna, recreational, archeological,

historic or geological resources. A Regional Park will have sufficient land area to support outdoor recreational opportunities for the enjoyment and education of the public. The size of a Regional Park must be sufficient to ensure that its significant resources can be managed so as to be protected and enjoyed. Regional Parks may be federal, provincial or municipal properties and are intended to serve the educational, cultural and recreation needs of the population of the entire region as well as for visitors to HRM.

(HRM, 2005a, p. 30)

Among seven existing and six additional Regional Parks, the Plan identifies the Blue Mountain Birch Cove Lakes Park.

The Plan states:

A study is in progress to determine appropriate geographic boundaries for the Blue Mountain Birch Cove Lakes Park. It is HRM's intention that, over time, private lands within the boundary be acquired as financial resources of the Municipality permit. Remainder lands may then be redesignated for development as appropriate.

(HRM, 2005a, p. 31)

The referenced study is presented as Appendix B to this report.

Policy E-4 provides for the establishment of a Regional Park Zone:

E-4 Within all designations, HRM shall establish a Regional Park Zone under the land use by-law. This Zone shall be applied to all Federal Parks, Provincial Parks, Provincial Park reserves, non-designated Provincial Parks and the new Regional Parks designated under this Plan. The zone shall also be applied to the publicly owned lands within the Blue Mountain Birch Cove Lakes Park. This Zone shall permit recreation uses, park uses and other uses as provided by the existing secondary planning strategies for these areas.

(HRM, 2005a, p. 31)

Natural Corridors

Under Natural Areas and Natural Corridors the Plan identifies 14 Natural Corridors "...significant to the on-going connectivity and conservation of HRM's natural network...." (HRM, 2005a, p. 32). They are presented as generalized lines in Map 4 of the Plan. While the primary function of the corridors will be to conserve wildlife habitat, in some cases these also will be intended to conserve riparian, recreational and cultural lands. One of the corridors (number 5, Map 4) extends from roughly Quarry and Susies Lakes to Coxs Lake. The proposed Blue Mountain/Birch Cove Lakes Regional Park is depicted toward the eastern end of the corridor. Proposed policies under the heading Natural Areas and Natural Corridors (policies E-6 and E-7) do not appear to support the delimitation and designation of natural corridors. However, policy that enables the development of an Open Space Functional Plan is provided to that end. The supporting text of the policy statement (E-19) says: The Open Space Functional Plan should consider:

1. coordinating and managing a program to research and identify potential natural corridor linkages, community networks and significant natural habitats to guide considerations of future development (see Map 5, Significant Habitats and Endangered Species and Appendix C: Species at Risk in HRM 2004)
(HRM, 2005a, p. 39)

To meet part of the requirements of the Terms of Reference for this Focus Report, TPW, HRM and DNR cooperated in the funding and completion of the Blue Mountain/Birch Cove Assessment Study by Environmental Design and Management Ltd. , which is attached to this report as Appendix B. The study evaluated the valued features of the Blue Mountain/Birch Cove Lakes area and used a GIS based modelling process to support the identification of an ideal Regional Park configuration to preserve the identified values. The study also addressed the co-existence of the proposed Highway 113 with the proposed Regional Park objectives.

Through the assessment study an ideal park configuration has been conceptually identified and is presented in Appendix B. The park area identified is large and cohesive, approximately 1450 ha of land or 1700 ha of land and water. It includes a suggested Core wilderness area, with limited access and a surrounding Edge area, which would include all of the Birch Cove Lakes as well as Blue Mountain Hill. The park concept provides for high accessibility to the Edge area from all the surrounding communities: Timberlea, Beechville, Lakeside; Clayton Park, Glenbourne Estates, Rockingham Ridge; Hemlock Ravine and surrounding communities; Paper Mill Lake; Bedford West; Kingswood/Blue Mountain; and Tantallon; as well as the Municipality at large and visitors to HRM.

The ideal park presented also encloses scenery and viewscales; unofficial recreation and trails; mature forest stands; significant wetlands and landscape connectivity.

Consistency of Highway 113 with the Plan

Construction of the Highway would traverse to the west of the Birch Cove Lakes area, leaving the largest part of the designated zone as a cohesive area. Open Space and Natural Resource designations are projected across two other existing 100 series highways, Highway 103 to the west of Tantallon and Highway 102 to the north of the Halifax International Airport. Of the planned transportation projects, the Highway 101 connector and interchange crosses Open Space and Natural Resources lands. The Highway 107 extension at Musquodoboit is a project depicted on the Future Transit & Transportation map (HRM, 2005a, Map 7) but which is not listed as a future or planned project in the Plan. This project would extend through lands designated Open Space and Natural Resources.

TPW acknowledges that HRM's Regional Municipal Planning Strategy applies a concept that crosses several themes with the intent of maximizing growth in serviced areas and minimizing growth in unserved areas, minimizing the numbers of automobiles by decreasing trips, increasing passenger numbers, modal shifts from cars to transit, and other measures. If successful the effect of these combined policies would be to slow the growth in traffic volumes. HRM recognizes the possible future need for Highway 113 and includes Highway 113 in the Plan. However, it is not

expected to be needed within the 25 year span of the Plan. The Plan does recognize the continued importance and use of the automobile.

TPW's mandate is to provide a transportation network for the safe and efficient movement of people and goods. Successful implementation of HRM's Regional Plan has the potential to greatly assist in achieving this mandate for the provincial road network within HRM. In particular, management of growth, encouragement of efficient use of existing serviced lands for development, and a comprehensive traffic management plan with significant enhancement of transit services may all serve to improve the safety and efficiency of the highway network, or at least will likely delay the need for substantial upgrades and new linkages. Therefore TPW supports HRM's intentions in the Regional Plan. However, HRM's intention to apply integrated planning, including protection of corridors for future highway needs, would not be well served if other land uses, whether residential development or regional park uses were developed over lands that are available now and offer the only practical alignment for the proposed Highway 113.

The Blue Mountain/Birch Cove Assessment Study (Appendix B) provides the following conclusions summarized below relative to the implications of Highway 113 to the "ideal" Regional Park (*with additional comments provided in italics by TPW*):

- A small proportion of the ideal park is bounded by the Highway 113 corridor and the grade of the highway below the elevation of the park provides mitigation of the visual effects of the highway on the park;
- The Highway 113 alignment where it abuts the ideal park boundary is immediately adjacent to developed residential lands; the Highway right-of-way will serve to curtail further expansion and preserve some lands most appropriate for the park;
 - *In addition, the ideal park boundary would include lands to the east of the Highway 113 corridor that are now privately owned, and would likely be developed for residential use if not incorporated in the park as identified;*
- Highway 113 has the potential to provide a regional access location to the park, as well as immediate access to Blue Mountain, as part of an interchange to Kingswood;
 - *The decision to construct an interchange to serve both or either of Kingswood and the park will be the responsibility of HRM; TPW expects to cooperate with HRM and DNR in determining the need for, location, configuration and conceptual design of an interchange; if no road access to Kingswood will be provided, then TPW will participate in the design and construction of an active transportation crossing of Highway 113 to provide access to the park from Kingswood;*
- The design of the Highway 113 right-of-way should consider mimicking natural landscape forms as well as other aesthetic criteria;

- *Where practical, considering grades, elevations and other design constraints, the construction of the highway and rehabilitation of constructed and disturbed areas will use natural landscaping and native wild plant species plantings; lighting installations will be minimized; clearing will be limited to the minimum necessary for safety and normal function of the highway; TPW's Integrated Roadside Vegetation Management Manual (TPW, 2002), in the form current at the time of design and construction, will form the basis for vegetation management;*
- The proposed Highway offers the potential for development of an active transportation corridor within the edge of the right-of-way, which could be linked to the park and provide linkage between other active transportation corridors;
- *While TPW policy normally does not allow extensive uses such as active transportation within 100 series highways rights-of-way, the 150 m right-of-way width planned for this project may provide an opportunity to review the policy;*
- There is concern that Highway 113 would interrupt access for people in all modes of travel into the park; access for Kingswood, Bedford West and Tantallon residents should be provided; trails and portage routes should be provided as part of the corridor through the Crown resource lands between Birch Cove Lakes and the west towards Coxs Lake;
- *Access could be provided to the park from Kingswood as discussed above related to a Highway 113 interchange; at least two collector roadways will cross the Highway 113 corridor in Bedford West, which will provide connections to the park; an interchange for the connector road from Highway 113 to the Sheldrake Lake subdivision is planned, which could be designed to accommodate pedestrian and active transportation connections across Highway 113; the span over the watercourse between Frasers Lake and Maple Lake will be designed to accommodate safe watercraft and foot crossings of Highway 113; where they are the responsibility of TPW, each of these crossings could be designed to accommodate active transportation, if appropriate, applying the principles of CPTED;*
- Highway 113 has the potential to interrupt the movement of wildlife along the corridor between Birch Cove Lakes and the west as well as isolate plant assemblages;
- *In consultation with DNR, the provision of passage for a variety of species will be considered in the design of the structure crossing the Maple Lake/Frasers Lake watercourse; in addition, four water crossings will be required over Fishers Brook and Stillwater Run; two of these are fish habitat; avoidance of fish habitat damage and provision of fish passage must be provided for these crossings; in the design of these crossings*

consideration will be given to providing sufficient width and span height to allow the passage of all but the largest wildlife species, which would provide connectivity in areas with less human presence than the Maple Lake/Frasers Lake crossing may have;

- With detailed highway design, the proposed Highway 113 offers many opportunities for both the protection of the ideal park land area by limiting development expansion and for providing significant regional and local access to the Blue Mountain/Birch Cove Lakes Regional Park when it is established;
 - *TPW will participate with HRM and DNR in the subsequent processes of planning for the Regional Park, through the Strategic Joint Regional Transportation Planning Committee and, as appropriate, the development of the Open Space Functional Plan.*

Options for Integrated/Collaborative Planning

Through the development of the Blue Mountain/Birch Cove Assessment Study (Appendix B) TPW, DNR and HRM have demonstrated the beginning of the process of integrated and collaborative planning towards the creation of the Blue Mountain/Birch Coves Lake Regional Plan. Participation by TPW with HRM and other stakeholders in the Strategic Joint Regional Transportation Planning Committee is expected to be the primary method for determining the need for and construction timing of the proposed Highway 113. TPW is willing to participate in other processes such as the Transportation Master Plan and five subsidiary Functional Plans, as well as the Open Space Functional Plan and others where it is appropriate.

It is TPW's intention to construct Highway 113 when it is needed, and similar to HRM must spend funds wisely and appropriately. The attached study (Appendix A) indicates traffic loads may be sufficiently high that Highway 113 could provide sufficient benefit to justify its construction by the end of the 25 year planning horizon. The study modelled traffic volumes with and without Highway 113 assuming a 1% growth in traffic volumes. This is a substantially lower rate of increase than has occurred recently in HRM. Implementation of the Plan and various other factors, such as high fuel costs, could change the volume and patterns of vehicle use. The relative success of the Plan and effects of other factors could accelerate or delay the need for the highway.

TPW will participate in the Strategic Joint Regional Planning Commission to consider the Provincial role in meeting the potential transportation needs throughout HRM as the Plan is implemented and progresses. Among the other projects, the needs of HRM as well as provincial requirements and responsibilities will be considered in the decision if and when Highway 113 will be constructed. Consequently it is necessary for TPW to obtain the right-of-way and reserve the lands to allow Highway 113 construction at some yet to be determined future date.

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