

Site Development & Building Standards

Schedule “B” to the Agreement of Purchase and Sale

Between: Halifax Regional Municipality and
[Purchaser’s Name]

FOR

[LOT #]

[PROPERTY ADDRESS]

BAYERS LAKE BUSINESS PARK

[CITY/TOWN], NOVA SCOTIA

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HALIFAX

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Executive Summary

The **Bayers Lake Site Development and Building Standards** set out the basic requirements for building construction and development within the Park. As such, they also set out the requirements for completion of the **Site Development Proposal** which forms part of the **Agreement of Purchase and Sale**. The **Site Development and Building Standards** are comprised of 38 clauses. **Key provisions of the Standards include:**

- **Permitted land uses** include commercial and retail business, offices, light and heavy manufacturing and assembly, and warehousing. The **Standards** also include **Restrictive Covenants (Clause 4)** that provide for setbacks, exterior treatment of structures, structural height, gross land coverage (10 percent minimum to 50 percent maximum of total lot area), parking, receiving and shipping facilities, outside storage, waste disposal, environmental protection, site investigation, and landscaping.
- Sites are sold only on approval of a Site Development Proposal which meets the requirements of the Standards.
- All sites in the Park carry a **I-2 General Industrial Zone (Clause 5)**. Construction, improvements, and operations must comply with the Municipal Planning Strategy and Land Use and Municipal Building Bylaws as well as with all applicable provincial and national codes.
- **Minimum lot frontage is 40 feet and the minimum lot area is 10,000 square feet.**
- Maximum building height is not to exceed 131 feet above the mean elevation at the base. The **minimum construction setback** is 30 feet from the property line. **Side and rear minimum setbacks are 5 feet.**
- **Sanitary Waste Services (Clause 10)** in the Park will handle domestic wastes and water used in cooling and industrial processes. However, some process water may be unacceptable and require pre-treatment on site. A Purchaser must advise the Municipality of anticipated waste water by-products. Approval from the provincial Department of the Environment for acceptable on-site treatment or other disposal methods to meet special needs may be required.
- **Storm Water Services (Clause 11)** are designed to carry storm and surface water only. Special attention must also be paid to naturally occurring runoff when soil is disturbed during construction, requiring mandatory siltation controls (**Clauses 35 through 37**). Similarly, natural watercourses are to be protected (**Clause 30**).
- The **Site Development Proposal** requires a **Site Development and Landscaping Plan (Clause 31)** incorporating conservationist principles with a view to maximizing elements of good functional design and aesthetics.

- This goal also applies to **Signage (Clause 34)**. Signage may include wall mounted or freestanding signage.
 - **Exterior Lighting Standards (Clause 38)** are not mandatory, although aesthetics, security, experience, good business sense, and research all underline the validity of the Park’s own standards.

Bayers Lake Business Park is designed and continues to be developed as a business environment which combines superior location and amenities with the best in aesthetics and environmental protection. The **Bayers Lake Site Development and Building Standards** are an effective tool to this end.

1. Goals and Objectives of Standards

The Bayers Lake Business Park is a mixed-use industrial and commercial park development of Halifax Regional Municipality, hereinafter referred to as the “Municipality”. Purchasers of land or individuals and companies leasing land within the Park are required to comply with the **Bayers Lake Business Park Site Development and Building Standards** hereinafter referred to as the “Standards”.

Development control for the **Bayers Lake Business Park** is carried out by two separate and distinct mechanisms. One is legislated controls administered by Halifax Regional Municipality through its Community Planning and Development Control Staff. The other is the **Bayers Lake Business Park Site Development and Building Standards**. The **Standards** have been prepared by the Business Parks Office of Halifax Regional Municipality which is responsible for the management and development of the Park. Purchasers of land or individuals and companies leasing land within the Park are required to comply with the legislated controls and the **Standards**.

These **Standards** set out various controls, procedures, and policies to ensure that the **Bayers Lake Business Park** continues to be a unique and distinctive setting for business. In addition, the **Standards** are intended to ensure that the **Bayers Lake Business Park** continues to be developed in a manner consistent with superior aesthetic and environmental protection standards and with the declared intention of creating a pleasant and harmonious environment for the Park’s residents. Specifically, the objectives of these **Standards** are:

- to protect property values and enhance the investment of businesses located in the Park by providing a well planned and maintained development;
- to create an attractive and efficient business environment through sound land use, planning, and environmental management standards; and,
- to ensure harmonious relationships among uses, including architecture, landscaping and signage.

2. Site Development Proposal and Compliance with Site Development and Building Standards

Sites are sold for development purposes only on approval of a **Site Development Proposal** and terms and conditions of sale as approved by the Regional Council of the Municipality or its designate. The **Site Development Proposal** which is **Schedule “C” to the Agreement of Purchase and Sale** for a lot in the Park must comply with the **Standards** that are set out below.

3. Compliance with Municipal, Provincial, and Federal building and Site Development Laws and Regulations

The **Site Development and Building Standards** for the Park include and require compliance with all applicable municipal, provincial and federal building and site development laws and regulations. These include, but are not necessarily limited to, municipal planning strategies, land use bylaws and regulations, provincial and national building codes and provincial environmental law and regulations.

4. Protective Covenants

In addition to the **Standards** set out below, Developments in the Park are governed by a set of thirty (30) **Protective Covenants** which were approved by the former City of Halifax Industrial Commission. They continue to place legally binding commitments upon those who purchase land and occupy premises in the Park. The Grantee (the Purchaser) covenants with Grantor (Halifax Regional Municipality) to observe and comply with the following restrictions, the burden of which shall run with each of the lots in Bayers Lake Area of the Bayers Lake Business Park, and the benefit shall run with each of the said lots. This covenant shall be binding upon and enure to the benefit of the respective heirs, executors, administrators, successors and assigns of the parties:

- 4.01 The lands shall be used only for:
 - (a) Commercial Businesses
 - (b) Retail and Wholesale Businesses
 - (c) Offices
 - (d) Light and Heavy Manufacturing and Assembly
 - (e) Warehousing
 - (f) Heavy Industry
 - (g) Outdoor Storage Accessory to the Foregoing.

- 4.02 The construction of any building or any addition to a building shall have the approval of the Municipality. Plans for such buildings or additions

shall be prepared by a qualified engineer or architect in accordance with the **Site Development and Building Standards for the Bayers Lake Business Park - Bayers Lake Area (hereinafter called the “Standards”)**.

- 4.03 Every building shall be completed in accordance with the approved plans before it is occupied; furthermore, site developments and environmental protection measures shall be completed within a reasonable length of time and in accordance with the security procedures of the **Standards**.
- 4.04 Exterior treatments of structures shall be subject to approval by the Municipality.
- 4.05 The gross land coverage for a Development, including building and structures shall not be less than 10% or more than 50% of the total lot area.
- 4.06 There shall be a required setback adjacent to each existing or proposed street of at least ten (10) metres (32.8 feet) of which the first five (5) metres (16.4 feet) adjacent to the street shall be landscaped.
- 4.07 There shall be a required setback adjacent to each side and rear lot line of not less than 1.2 metres (3.94 feet) of green area, extending from the street line to opposite the rear of the main building on the lot.
- 4.08 The maximum height of any building or structure shall be forty (40) metres (131.2 feet) above the mean elevation at the base of the structure.
- 4.09 Every Development shall provide off-street parking to accommodate staff and visitors in accordance with the following:
 - (a) One (1) space for each 1,000 square feet of building area used for industrial purposes;
 - (b) Three (3) spaces per 1,000 square feet of net floor area of office space;
 - (c) Four (4) spaces per 1,000 square feet of net floor area of retail/service store space;
 - (d) Eight (8) spaces per 1,000 square feet of net floor area of restaurant space.
- 4.10 Any parking lot of the capacity of more than twenty-two (22) vehicles shall be landscaped in order to screen the parking lot from an abutting street.
- 4.11 Parking shall not be permitted on driveways leading to a parking area.
- 4.12 Prompt snow removal in parking areas, access road and sidewalks is a responsibility of building owners.

- 4.13 Parking lots and access roads shall be finished with pavement or concrete.
- 4.14 Truck receiving and shipping facilities shall be screened from direct right angle line of sight from the street. Plantings, berms and other landscape barriers are appropriate screening elements.
- 4.15 Outside storage of any materials, equipment, supplies, or products shall be located in areas other than the front yard or required landscaped side yards, and further, outside storage shall be screened from adjacent lots or roadways.
- 4.16 Fences shall be erected for security or visual screening purposes only, and the design of such fences must be approved by the Municipality.
- 4.17 For ease of maintenance and inspection, inspection chambers, master water installations and wastewater traps for special contaminants shall be provided and installed by the Purchaser adjacent to the street line.
- 4.18 The manner by which the building and lot are to be externally illuminated shall require approval in principle by the Municipality.
- 4.19 Waste and rubbish must be disposed of as required by the Municipality. Any external collection facilities must be screened from the property limits.
- 4.20 The Purchaser must submit a **Site Development and Landscaping Plan**, signed by a qualified engineer or architect. The **Site Development and Landscaping Plan** shall show all physical features, both existing and proposed, including berms, slopes, walls, shrubs and trees labelled by name and size. The Plan must clearly distinguish between existing plant material which is retained, material to be removed, and material which is to be added. The Purchaser shall adhere to the approved plan unless otherwise instructed by the Municipality.
- 4.21 The Purchaser shall submit an **Environmental Management Plan**, signed by a qualified engineer depicting the manner for control of soil erosion, sedimentation, storm water runoff, and where required, the management of exposed or surface pyritic rock, during and after construction. The plans shall include descriptions of all fill material required. The submission shall include a **Site Drainage Plan** prepared in accordance with the **Standards**. The Purchaser shall refer to the latest revision of the **Erosion and Sedimentation Control Handbook for Construction Sites** and the **Environmental Construction Practice Specifications for the Province of Nova Scotia**.
- 4.22 The Municipality is responsible to obtain necessary approvals from environmental regulatory agencies when the Municipality is doing site work.

- 4.23 The Purchaser is responsible to carry out appropriate site investigations and to ensure compliance with all applicable building and environmental regulations. These policies will be incorporated in the **Agreement of Purchase and Sale** and include, without limitation, the following:
- (a) that the Purchaser acknowledges that the site has been graded and filled to some extent;
 - (b) Retail and Wholesale Businesses that the Purchaser accepts that there may be significant variations in bearing capacity;
 - (c) that the Purchaser is solely responsible for carrying out soils investigation of the site to determine its load bearing capacity for the proposed development;
 - (d) that the Purchaser is solely responsible for determining that the site and the proposed development will comply with all required environmental regulations; and,
 - (e) that any fill material brought to the site by a Purchaser shall be independently tested by a qualified engineer, to the satisfaction of the Municipality. The Purchaser remains responsible for the suitability of such fill.
- 4.24 An acceptable **Landscaping and Maintenance Program**, signed by a qualified engineer or landscape architect, must be approved by the Municipality. The program shall include detail of weed and pesticide control.
- 4.25 The total cost for the installation of landscaping, including sod, and environmental management site features shall be two (2) percent of the total cost of construction of the Development as specified in the **Site Development Proposal**.
- 4.26 The Protective Covenants contained herein shall apply to any new lots which result from a subdivision.
- 4.27 The Grantee agrees to obtain from any subsequent purchaser or transferee from it a covenant to observe the building restrictions herein set forth including this clause.
- 4.28 The foregoing covenants are subject to such variances in the covenants of any Purchaser as in the opinion of the Municipality constitute amendments of only a minor nature that do not materially affect the use and enjoyment of other purchasers; each purchaser hereby agreeing to be bound by the building scheme constituted by these Protective Covenants, notwithstanding any such variances as have been approved in a particular case by the Municipality.
- 4.29 For any item herein requiring the approval of the Municipality such approvals will not be unreasonably withheld or unreasonably delayed.

- 4.30 The foregoing covenants constitute the **Protective Covenants** of the **Bayers Lake Business Park - Bayers Lake Area** as prepared by the former Halifax Industrial Commission with minor variations in text to recognize the abolishing of the Halifax Industrial Commission on March 31, 1996 and the assumption of ownership and management responsibility for the Bayers Lake Business Park on April 1, 1996 by Halifax Regional Municipality. These covenants are effective for all lot sales approved by the former City of Halifax Industrial Commission and, effective April 1, 1996 by Halifax Regional Municipality.

5. Municipal Land Use Regulation

- 5.01 Building construction, site improvements, the operation of facilities, and the use of land must comply with the Municipal Planning Strategy Land Use Bylaws and the Building Bylaws of the Municipality.
- 5.02 All sites in the Bayers Lake Business Park carry a I-3 General Industrial Zone.
- 5.03 Building construction in the Park must comply with the following requirements:
- Lot frontage shall be a minimum of forty (40) feet;
 - Lot area shall be a minimum of ten thousand (10,000) square feet;
 - Lot coverage shall be a maximum of 50% (in the Park the minimum coverage requirement is 10% of the lot);
 - The required setback from the property line for building construction is a minimum of thirty (30) feet of which the first fifteen (15) feet adjacent to the street shall be landscaped.
 - The required setback from each side property boundary and the rear property boundary is a minimum of five (5) feet.
 - The height of any building shall not exceed 131 feet above the mean elevation at the base of the structure.
- 5.04 The Municipality requires that no use is to be made of any lot or portion thereof or any building or structure situated on a lot in the Park which, in the opinion of the Municipality, would constitute a violation of Municipal Bylaws or provincial or federal government legislation and regulations.

6. Uses Permitted

Provided the operations of a business comply with the requirements of Clause 5 above, the following types of business uses are permitted:

- Commercial Businesses

- Retail Businesses
- Offices
- Light and Heavy Manufacturing and Assembly
- Warehousing

7. Soils Examination – Purchaser Responsibility

The Municipality does not guarantee that individual building sites have been prepared with the appropriate bearing capacity for a proposed building. The Purchaser is responsible for carrying out a detailed soils examination of the proposed site prior to planning the positioning of a building on the site. This will determine whether or not the site being considered has sufficient bearing capacity for the size and type of building being considered.

8. Soils Examination–Indemnification of Municipality

The Purchaser acknowledges, with submission of the **Site Development Proposal**, that a soils examination has been conducted of the proposed site and that the site has the appropriate bearing capacity for the proposed building and other proposed site improvements as specified in the **Site Development Proposal**. It is further acknowledged, by the Purchaser, that the Municipality does not have, nor does it accept, responsibility for the composition, bearing capacity, or related characteristics of the site.

9. Site Excavation

The Purchaser is responsible for the removal of all surplus material resulting from the excavation of a site. Areas in the park have been designated for the dumping of “clean, structural” fill material.

10. Sanitary Services

10.01 The central sanitary system in the **Bayers Lake Business Park** is designed to convey waste water from the industrial source to the point of disposal. Waste water includes domestic wastes and water used in cooling and industrial processes. Industries with process water unacceptable to the Municipality’s sanitary system, such as waste which creates a fire or explosion hazard to people, property and the sewage system, are required to pre-treat the water on site to remove the harmful elements.

- 10.02 For ease of maintenance and inspection, inspection chambers, master water installations and wastewater traps for special contaminants shall be provided and installed by the Purchaser adjacent to the street line.
- 10.03 In planning a facility, the Purchaser is required to advise the Municipality of the waste water by-products anticipated for disposal. The Purchaser is required to obtain approval from the Municipality and the Nova Scotia Department of the Environment for acceptable on-site treatment or other disposal methods for any waste unacceptable to the Municipality's sanitary system.
- 10.04 In instances where a proposed facility will have its discharge connected to the Municipality's sewer system the Purchaser must have the anticipated process effluents approved by the Nova Scotia Department of the Environment prior to connection.

11. Storm Water Services

- 11.01 Storm water services are designed to channel storm and surface water from buildings, parking lots, road surfaces, and footing drains to an acceptable discharge point within the Park. The system is to be used to carry only storm drainage water and not industrial waste water.
- 11.02 During any period of construction on the lot which disturbs the surface of the lot, the Purchaser shall direct all drainage from the disturbed area through temporary ponds and barriers placed within the boundaries of the lot in order to prevent the passage of silt and other deleterious materials into watercourses through or adjacent to the lot. Such facilities shall be kept in place and maintained until all surfaced areas in the Development have been finally graded and surfaced. The Municipality reserves the right to stop all construction on a lot, if in the opinion of the Municipality, insufficient precautions are being taken by the Purchaser.
- 11.03 The installation of culverts is the responsibility of the Purchaser and will meet the Municipality's requirements.

12. Water, Sanitary, and Storm Water Service Connections

Companies locating in the **Bayers Lake Business Park** are responsible for sanitary sewer, storm water, and water line lateral connections. Regulations have been established for the construction of sewer and water service laterals to be connected to sewer and water systems owned by the Municipality. The regulations are a supplement to the National Building Code of Canada, and its

latest revisions and addenda and to other specifications subsequently approved by the Municipality.

13. Fire Insurance Underwriter's Requirements

- 13.01 The water distribution system and the number of and location of fire hydrants have been established in accordance with the fire fighting and suppression policies of insurance underwriters. In certain areas of the Park, however, companies may require pressure boosters for their water system in order to meet underwriter's requirements.
- 13.02 The Purchaser of a building site is responsible for determining the water pressure requirements of the proposed building and ensuring that they can be satisfied from the location of their choice within the Park. This should be done as one of the first steps in designing a building and selecting a site.

14. Site Coverage

The size of a proposed Development shall have a Minimum Completed Building Area of no less than 10% of the size of the site, and no more than 50% of the size of the site. This standard shall be used as a supplement to the National Building Code of Canada, its latest amendments and addenda; and to other specifications approved by the Municipality. In calculating the Minimum Completed Building Area for the Development the following provisions shall apply:

- (a) for all single-story buildings, the gross floor area of the building shall conclusively determine the completed building area of the single story building and there shall be no calculation of any mezzanine or basement space in any single-story building;
- (b) for all multiple-storey buildings, the gross floor area of each usable floor, excluding basements and deck areas, shall conclusively establish the completed building area of any multiple-storey buildings;
- (c) outside storage areas, partially enclosed areas, basements, mezzanines and deck areas shall not be included in any calculation to determine the completed building area of any building; and,
- (d) in the event of any dispute in the determination of the completed building area of any building, the above provisions and the

standards of BOMA (Building Owners and Managers Association) shall conclusively determine such calculation.

15. Building Construction – Permitted Materials, Exterior Construction

- 15.01 In addition to provisions of the Building By-law, any building constructed in the **Bayers Lake Business Park** shall be finished on the exterior with one or more of the following:
- (a) masonry units (excluding concrete block and cinder block);
 - (b) natural stone;
 - (c) precast concrete;
 - (d) steel panels, glass wall panels, or a combination thereof.
- 15.02 For buildings clad with steel panelling, the front exposed to the street must be further “dressed” with an application of finish brick covering no less than 30% of the frontage area.
- 15.03 Vinyl cladding is not permitted on buildings larger than 5,000 square feet. For buildings clad with vinyl siding, the front exposed to the street must be further “dressed” with an application of finish brick covering no less than 30% of the frontage area.

16. Building Construction – Compliance with Building Bylaw and Relevant National Codes

In addition to Section 15, the layout and construction of buildings must comply with the standards of:

- Building Bylaw C-616 which is based upon the National Building Code of Canada, its latest amendments and addenda and with certain amendments as set out in the Bylaw;
- Canadian Heating, Ventilation and Air Conditioning Code, latest edition;
- Canadian Plumbing Code, latest edition; and,
- Canadian Construction Safety Code, latest edition.

17. Building Construction – Temporary Improvements

Without the approval of the Municipality, no temporary building or other improvements of a temporary nature, including trailers, incomplete buildings,

tents, or shacks shall be permitted on sites within the Park. Temporary improvements used solely in connection with the construction of permanent approved improvements and buildings may be permitted provided they are located as inconspicuously as possible and removed immediately after the completion of construction.

18. Site Improvements – On-Site Parking

Parking facilities shall be provided for all employees and visitor vehicles and for trucks and other equipment related to the business enterprises operating on the site. The Parking Standards are mandatory under provisions of the Municipal Land Use By-law. On-street parking within the Park is strictly prohibited.

19. Building Size to Parking Space Ratios

On-site parking space ratios are required to ensure that sufficient, non-congestive, safe parking is provided for those who work and do business within the Park.

- One (1) parking space for each one thousand (1,000) square feet of building area used for industrial purposes;
- Three (3) spaces per 1,000 square feet of net floor area of office space;
- Four (4) spaces per 1,000 square feet of net floor area of retail/services store space;
- Eight (8) spaces per 1,000 square feet of net floor area of restaurant space.

20. Parking Requirements – Mandatory Asphalt Paving and Curbing

All parking areas, including driveways and manoeuvring areas, shall be asphalt paved and edged with asphalt or concrete curbs. The location of driveway curb cuts are subject to the Municipality's building and development bylaws.

21. Parking Requirements – Special Provisions for Persons with Disabilities

21.01 Every building shall have at least one (1) space for persons with disabilities. A minimum of two (2) spaces per one hundred (100) required spaces for general office or commercial developments shall be designated for the use of persons with disabilities. (Refer to National Building Code)

21.02 These spaces shall be placed as close as possible to the major entrance of the building, and preferably at a distance not greater than one hundred (100) feet. To provide access alongside the vehicle, parking spaces designed for use by persons with handicaps are to be a minimum twelve (12) feet, six (6) inches (3.8 m) wide by twenty (20) feet (6.1m) long. Also, a minimum four (4) feet (1.2m) wide clear aisle should be provided between rows of cars with recessed curb or curb ramp access to sidewalks.

22. Parking Requirements – Parking Identification

All parking areas including visitor and service areas shall be clearly marked.

23. Parking Requirements – Individual Parking Space Dimensions

Individual parking spaces shall be eight (8) feet by twenty (20) feet.

24. Parking Requirements and Vehicular Movement

All parking areas shall make provisions for adequate driveway and manoeuvring of vehicles within the parking area. Driveways, entrances, and exit locations shall be clearly shown and subject to the approval of the Municipality. All parking areas shall be so arranged as to cause the least amount of interference with through traffic. All manoeuvring of vehicles shall be provided for such that vehicles within the lot areas leave the property in a forward motion. Finally, the parking layout shall make adequate provisions for a stock piling of snow in a manner which will not reduce the amount of required parking space available.

25. Parking Requirements – Pedestrian Safety and Curbing Requirements

Curbs shall be provided to ensure safety between vehicular movements and pedestrian movements. No parking spaces shall be immediately adjacent to doors or passageways from buildings.

26. Site Improvements – Loading and Unloading Areas

Areas for off-street loading and unloading shall be provided at the sides and rear of the building.

27. Outside Storage – Fencing and Screening Requirements

27.01 Unless specifically approved by the Municipality, no materials, supplies, equipment, or company owned or operated vehicles, shall be stored in any area on a site except inside a closed building or behind a visual barrier that screens such areas from the view of adjoining properties and public streets.

27.02 Materials, products, and equipment shall be stored in a neat and orderly manner on-site and within well defined storage areas. Freightage, trucking and storage yards shall be enclosed by chain link, steel privacy fencing with the surface area covered by plastic slats. The fence shall be a minimum of six (6) feet in height.

28. Commercial Refuse Containers – Screening Required

Garbage and refuse containers shall be concealed from the view of adjoining properties and public streets by means of a screening wall of material similar to and compatible with that of the building. These screening elements shall be integrated with the concept of the site and building plan; be designed so as not to attract attention; and shall be located in the most inconspicuous manner possible.

29. Site Development Design Standards

29.01 For ungraded lots, site development shall include a detailed survey, inventory and analysis of existing site conditions prepared under the direction of professional consultants. Site development is to provide for the retention and preservation of existing features of the Property by incorporating natural topographical features and other characteristics of the Property such as existing vegetation, water courses, rock outcrops, views and vistas.

29.02 Site development is to take full advantage of the natural assets of the Property, in functional and aesthetic terms, in order to enhance the public

presentation of the Development, to accommodate on-site outdoor amenities of a leisure and recreational nature for employees and visitors; and to satisfy screening, shade, shelter, definition, transition and other similar features of a high quality development.

- 29.03 Site development shall preserve natural, continuous, and complimentary relationships between adjacent properties such that development activity does not draw undue or arbitrary attention to legal Property lines. Abutting sites shall not be adversely affected through the creation of difficult, awkward or unattractive development conditions with respect to drainage characteristics, erosion, unnatural elevational disparities, unbuffered exposure to undesirable views (service facilities, parking and loading areas, storage yards) and so on.
- 29.04 Development shall be of a scale appropriate to the Property, and to adjacent projects such that, regardless of compliance with minimum setback and coverage requirements stipulated in the Land Use Bylaw, the Development must not appear to be forced or cramped, ill-placed in its setting or otherwise mismatched to its locale. Setbacks from the streets and adjacent property lines shall be appropriate to the height, mass, and scale of the building, as well as the circumstance of adjacent projects.
- 29.05 Site development shall maintain a good balance of “soft” landscaped territory and asphalt paving, well distributed over the entire Property.
- 29.06 Setbacks from the streets and adjacent property lines shall be undisturbed by development activity, except for approved driveways, and parking areas and authorized accessory entrance installations (entrance signage, lighting), in addition to landscaping programs designed to upgrade and augment the existing vegetation.
- 29.07 Site development shall take into account the visibility of the Development from all public approaches and major vantage points, both on and off-site.
- 29.08 Site development shall provide for logical, intelligent, and safe relationships and connections with adjacent streets; an orderly flow of traffic on and off the Property; effective separation of service/delivery, employee, and public traffic; and appropriate access circumstances for each traffic category.
- 29.09 Site development shall provide for parking capacity compatible with the full needs of the Development, given the absence of on-street parking or private lots. Parking capacity shall be distributed on the Property in a manner which diminishes the overall prominence and visibility of the total parking complement to public view from adjacent streets.
- 29.10 Site development shall ensure that service, delivery, loading, storage, and parking areas and facilities are oriented away from public streets and approaches, or are otherwise effectively screened from public view.

- 29.11 Site development shall provide for future expansion and development in a manner which maintains and enhances the essential integrity of the original Development.

30. Natural and Enhanced Watercourses

Watercourses in the Park include all natural and enhanced streams, lakes, wetlands, and drainage ditches. They are to be protected by the Purchaser of a Property from disturbance resulting from construction and operational activities. No deleterious substance is to be allowed to enter a watercourse. No alteration to a watercourse, either temporary or permanent is permitted except with the expressed approval of the Municipality and with the appropriate permits as required by the **Nova Scotia Water Act**. Construction equipment is not permitted to operate within a watercourse. Buffer zones of undisturbed habitat, or suitable areas of green space are required for around all watercourses. It is not permitted to lead drains or wastewater pipes into watercourses, nor is it permitted to draw water from watercourses.

31. Landscaping Standards

As part of the **Site Development Proposal** a **Site Development and Landscaping Plan** showing completed landscaping features shall be submitted to the Municipality. Landscaping shall include all areas of the Property which are not covered by buildings, paving or gravelled areas at the rear of the building(s).

- 31.01 The **Site Development and Landscaping Plan** shall show all physical features, both existing and proposed, including berms, slopes, walls, shrubs, and trees labelled by name and size. The Plan must clearly distinguish between existing plant material which is retained, material to be removed, and material which is to be added.
- 31.02 In all development areas of the Park, but especially on lots with pyritic rock, occupants are encouraged to incorporate existing stands of vegetation within their site design and to develop landscape plans which allow for the planting of aesthetic and productive trees, shrubs and ground covers.
- 31.03 Front and side slopes of sites shall be landscaped. Landscaping shall include a combination of: sodding, trees, hedges, and flower beds and selective cutting and pruning of any natural topography of the site. Sodding by itself shall not be acceptable as a minimum level of landscaping treatment.

- 31.04 Driveways, parking areas, storage areas, and loading and unloading areas shall be separated from landscaped areas by continuous concrete or asphalt curbing.
- 31.05 Consideration is to be given to environmental factors as they relate to shade/sun and wind to create a pleasing work environment. Landscaped areas should provide a visual and physical connection between the building(s) and outdoor spaces.
- 31.06 Landscaping is to be treated as an integral, “structural” component of Development design and construction, rather than as a superficial “cosmetic” addition to the Property.
- 31.07 Landscape development shall incorporate conservationist principles, generally emphasizing the preservation and upgrading of existing topography, vegetation, and cover, in conjunction with supplementary plantings and treatments of a consistent and compatible nature. Interesting, distinctive, and unique site features and relationships in the existing environment shall be incorporated into the **Site Development and Landscaping Plan** as organizing elements. These elements are to be highlighted and accentuated by complementary landscape installations and treatments where appropriate.
- 31.08 Landscape development shall exhibit a high degree of technical respect for the natural environment, and feature sensitive handling of essential performance issues such as surface drainage, erosion control, and maintenance in an efficient, functional, and appealing manner.
- 31.09 Wherever possible the existing natural drainage patterns shall remain undisturbed, and any alterations required in the surface drainage due to site development are to be integrated into the existing drainage network with minimal environmental and visual impact. Drainage features such as ditches, culverts, head-walls, and outfalls shall be sensitively designed, constructed of natural materials, and carefully landscaped to blend in with the surrounding environment.
- 31.10 Landscape development shall effectively avoid or minimize the requirement for, and the visual impact of, severe and abrupt grade changes which are unnatural to or uncharacteristic of the prevailing landform, and which imply major disturbance to the Property. Slopes shall be no steeper than three (3) horizontal to one (1) vertical, except in bedrock.
- 31.11 Landscape development shall feature the retention, preservation, and improvement of the existing environment. Proposed treatments shall emphasize continuity and integration with adjacent properties, and with the existing streetscape. This will generally involve the selective pruning and thinning of existing trees to remove diseased plants and dead wood, augmented by the supplementary planting of native species.

- 31.12 Where existing vegetation is not-existent, or of such poor quality that preservation is not warranted, infill planting shall be used to reinstate connections and continuity with more established growth on nearby and neighbouring properties. Such infill planting shall be intensive in nature.
- 31.13 The development of driveways, parking areas, and other paved expanses shall provide for actively landscaped boulevards, medians and borders. Parking areas shall be subdivided into blocks not to exceed twenty thousand (20,000) square feet in paved area. Such subdivision shall be achieved using islands and medians of sufficient width to sustain existing or new tree and shrub plantings as a strong visual border and screen.
- 31.14 All areas of a Property subject to construction and development disturbance, directly or indirectly, shall be restored to good visual quality via attractive landscape treatment.
- 31.15 Landscape development shall be considered as a companion element to all constructed settings, including prominent freestanding sign installations, and outdoor recreational amenities.
- 31.16 All driveways, parking areas, delivery areas, service bays, and other areas subject to vehicular traffic shall be surfaced with asphalt or concrete. All such areas shall likewise be provided with curbing except for service areas which are not exposed to public view, or areas where it can be shown that drainage requirements would be better served through the deletion or interruption of the curb system.
- 31.17 Walkways serving major building entrances and parking lots, or other amenities exposed to public contract and view, shall be surfaced with concrete or otherwise executed in an ornamental unit paver of suitable texture and durability.
- 31.18 Landscape development shall exemplify the latest standards and practices with respect to barrier-free accessibility, in terms of curb cuts, non-slip surface treatments, gradients and ramps, and so on.
- 31.19 The value of the landscaping treatment, excluding paving, shall be no less than 2% of the developed value of the site. For example, if the value of the site, complete with finished buildings, paved driveway and parking areas, and fenced storage, is \$2,000,000 the value of the landscaping treatment shall be no less than \$40,000.

32. Security for Completion of Landscaping and Other Site Improvements

- 32.01 A certified cheque or guaranteed unconditional line of credit in the amount of 50% of the developed value of the landscaping, fencing, curbing and

asphalting shall be required to provide a guarantee for completion of this work. This is to be provided to the Municipality on or before the closing date for the purchase of the Property.

- 32.02 If the landscaping, fencing, curbing or asphalt paving is not completed according to the **Site Development and Landscaping Plan** within the time frame set out in the **Site Development Proposal**, the Purchaser acknowledges the right of the Municipality to cash the cheque or draw upon the guaranteed unconditional line of bank credit and use the proceeds towards completion of the landscaping, fencing, asphalt paving and curbing as provided for in the **Site Development Proposal**

33. Landscape Maintenance

The Purchaser of a Property in the **Bayers Lake Business Park** shall at all times keep the landscaping in good order and condition. Each Purchaser shall maintain the landscaping and trees to the curb of the street(s) bordering the Property. Maintenance shall include, but is not limited to, fertilizing, pruning, and pesticide and herbicide programs.

34. Signage Standards

- 34.01 Sign Standards have been prepared to help individual businesses and building owners create effective exterior identification signs which portray a suitable image for their organizations and which help visitors find them easily. At the same time, the Municipality intends to maintain a high standard of quality so that the signage of Park residents creates a positive image for the whole Park and makes it easy for visitors to navigate and find intended destinations in the Park.
- 34.02 The **Bayers Lake Business Park's** own signage program presents a high profile to vehicular traffic arriving at major entrances and also offers comprehensive directional information about the Park. The main objective for individual building signs should be to make the Property easily recognizable to approaching vehicles.
- 34.03 Signage is to be designed to conform to the particulars of each building site and the building's architecture. The signage design should achieve the following objectives:
- identify the business name on the building/site from direct vehicular approaches;
 - create easy-to-find vehicular access to the parking and loading area; and
 - create easy-to-find pedestrian access to the building.

Whenever possible, signage should be integrated with the building itself to keep the number of signs to a minimum and to maintain as clean and natural an environment as possible.

- 34.04 Plans and specifications for the construction, installation, or alterations of all outdoor signs, including traffic or directional signs, shall be first submitted to and have the prior written approval of the Municipality.
- 34.05 For a Property in the **Bayers Lake Business Park** the minimum setback required for signs and any part of a sign including the foundation is fifteen (15) feet from the property line. In addition, the minimum setback for signage that will front on provincial highways shall be one hundred and fifty (150) feet from the centre line of the travelled portion of the highway.
- 34.06 **Wall Mounted Identifications Signs** are permitted and can be fabricated from any material compatible with the building facade. No part of any sign should project beyond the perimeter of any wall in such a way as to alter the profile of the building. Where larger signs are required to aid readability for long distance vehicular approaches, or on large scale architecture, individually formed letters are recommended using the wall itself as a sign backdrop.
- 34.07 In multi-unit buildings, wall mounted, flat fixed exterior tenant identification signs, and tenant directories may be installed in addition to the building identification sign. Wall mounted projecting signs may be used to identify doors and entrance ways if the viewplane from pedestrian approaches (.ie. from parking area to entry) does not provide a good view of the wall surface.
- 34.08 Civic number signs should be wall mounted and located in close proximity to the main entrance if this faces vehicular access, otherwise they should be located on a highly visible section of wall in the approach viewplane.
- 34.09 **Freestanding Identification Signs** should be designed and built in a style and materials compatible with architectural elements of the building, so that there is a visual connection between the building and the sign. Freestanding Identification Signs must be set back at least fifteen (15) feet from the property line.
- 34.10 **Freestanding Identification Signs** should be situated for viewing from vehicular approaches only. Low profile freestanding signs are permitted. The maximum height of freestanding signs is restricted to highest roof line of the building. Exceptions may be allowed where landscape features or extremely long approaches makes it otherwise impossible to see the building from a direct vehicular approach.
- 34.11 **Freestanding Identification Signs** for multi-unit buildings may include tenant directories.

- 34.12 **Freestanding Identification Signs** are to include the civic number instead of or in addition to an address on a wall mounted sign.
- 34.13 All building and property signage must comply with the Municipality's signage bylaws and regulations.
- 34.14 Signs are to be properly maintained in good condition at all times including operational lighting; repainting and refinishing due to weathering or wear and tear; and keeping sign structures and sign faces clean and legible. Damaged signs must be repaired or removed within a reasonable time frame.

35. Site Grading and Erosions and Sedimentation Standards

For developments where the Purchaser is required to grade the Property prior to the commencement of construction, the Purchaser is required to submit for approval by the Municipality and the Nova Scotia Department of the Environment a **Site Grading and Erosion and Sedimentation Control Plan**. The Standards for erosion and sedimentation control are taken from the Nova Scotia Department of the Environment publication: **Erosion and Sedimentation Control - Handbook for Construction Sites; Section 2.2 - Guidelines for Preparing Erosion and Sedimentation Control Plan**.

- 35.01 Undertakings involving land disturbance that could result in siltation of watercourses may require environmental assessment and be subject to the provisions of the **Environmental Assessment Act and the Environmental Protection Act**. Highway, utility, pipeline construction and other linear developments, residential subdivision and **Industrial Parks Development**, and mining exploration and development are all capable of causing gross sediment pollution if not properly planned and constructed. As such, they are typical undertakings assessed under the Acts and require an Erosion and Sedimentation Control Plan in order to be approved.
- 35.02 An acceptable plan usually consists of two parts:
 - (1) A narrative report describing the Development (including the scheduling or phasing of major construction activities), and explaining the methods, techniques, and procedures (including maintenance of control measures) to be followed.
 - (2) A map (or several maps of the same scale) or a base map with overlays, depicting the topography and natural features of the Property, the limits for clearing and grading, existing and anticipated erosion problems, and the location of suitable control

measures. The map should be an integral part of any site plan, grading plan or construction drawings.

- 35.03 Conservation practices for erosion and sediment control should meet or exceed guidelines and specifications contained in this handbook. Practices for which guidelines and specifications are not contained in the handbook may be approved for inclusion in the plan, based upon their merits as proposed for use in individual circumstances.
- 35.04 Even within a regional area, the conservation practices needed to control accelerated erosion and sedimentation vary from site to site. The degree of slope, nature and types of soil, drainage characteristics, proximity to property boundaries and watercourses, acreage disturbed, amount of cut and fill, and other factors all have a direct bearing on what combination of conservation practices will result in an adequate erosion and sedimentation control plan.
- 35.05 Great care must be taken in selecting the right control measure for each erosion site. Although erosion problems often share similar symptoms, their causes may differ significantly. For this reason, it is wise to avoid a blanket approach to correction; but to undertake, instead, a thorough site investigation. This will help to determine the exact nature of the problem and how to correct it. For example, erosion along a drainage ditch may be the result of high stream flow velocity; unstable bank conditions, concentrated overland runoff; or any combination of these. Unless the actual causes of a problem are adequately determined, the applied remedial measure may fail to correct it, and may even aggravate it.
- 35.06 The selection, design and implementation of effective erosion and sediment control measures requires a clear identification of existing problems as well as objectives of the control efforts. It is important to avoid an indiscriminate choice of measures, but rather to select those that appropriately meet the specific objectives required in correcting the specific problem causes.
- 35.07 A broad classification of erosion and sediment problems such as those presented below provides a basis for considering categories of problems and control strategies.

Problem Type	Erosion Problem	Sediment Problem
I	X	-
II	X	X
III	-	X

- 35.08 **An erosion problem** exists where damage attributable to erosion involves the direct loss of soil, which in turn can mean the loss of roadways, the undermining of structures, and other damage necessitating costly repair.

- 35.09 **A sediment problem** exists where there is damage associated with the deposition of eroded material at a downstream location; for example, clogging of culverts, filling of drainage ditches and stream channels, silting of ponds and reservoirs, and contamination of downstream waters by sediment-borne pollutants.
- 35.10 **Problem Type I** involves an erosion problem but no sediment problems. Such a situation may occur where locally-eroded sediments, even in substantial quantities, are transported and deposited relatively short distances downslope or within the construction boundaries, but do not move into a waterway system.
- 35.11 **Problem Type II** involves both an erosion problem and a sediment problem. This type of situation can result from substantial material being eroded and transported into downstream ditches and stream channels.
- 35.12 **Problem Type III** involves a sediment problem only. This type of situation may occur when the direct loss of soil is insufficient to create local damage at the erosion sources, but the accumulated sediment transported downstream creates depositional or water quality problems

36. Slate Bedrock Conditions

- 36.01 Purchasers are to be aware that a portion of the **northwestern sector of the Bayers Lake Business Park - Bayers Lake Area** is predominately slate bedrock. Excavation of this material as part of road building; installation of services; and other lot development will require a program of monitoring of pH, sulphate content, acidity and turbidity to streams receiving surface or subsurface drainage from such excavations. This monitoring is required to ensure the integrity of the waters relative to potability and environmental stability.
- 36.02 Purchasers are advised that the Municipality has developed a water quality monitoring program. Water quality sampling is undertaken at the major streams outfalls by the Municipality. The parameters included in the monitoring include pH, sulphate content, acidity and turbidity.
- 36.03 Purchasers are responsible for conducting similar monitoring programs as prescribed by the Nova Scotia Department of the Environment. Based on the results of the monitoring Purchasers are responsible for any environmental remediation as determined by the Nova Scotia Department of the Environment. Acceptance of this responsibility is a condition of the sale of the lot(s). A Purchaser will be required to immediately apply appropriate corrective measures should it be determined that drainage from the Purchaser's site adversely affects the water quality of receiving waters.

- 36.04 All slate exposed as a result of excavation by a Purchaser shall be drained and covered within three (3) months of exposure, as directed by the Municipality and to the satisfaction of the Nova Scotia Department of the Environment, unless the findings of stream monitoring indicates a pH of 4.3 or higher and a turbidity within the limits defined in the July 1986 issue of the Department's Pit and Quarry Guidelines. If monitoring indicates abnormal increases in the defined limits, corrective measures shall be undertaken by the Purchaser as directed by the Municipality and to the satisfaction of the Nova Scotia Department of the Environment. (See Appendix 1)

37. Elements of the site Grading and Erosion and Sedimentation Control Plan

For ungraded lots the Site Development Proposal is to include a Site Grading and Erosion and Sedimentation Control Plan that will include the following elements:

- 37.01 A general statement of the Development is to be included in the narrative section of the Plan including:
- Description of the overall Development.
 - Date that the Development is to begin and expected date that final stabilization will be completed.
 - The phasing (or staging) of land-disturbing activities and site stabilization to minimize the extent of exposed areas.
 - Description of erosion control program.
 - Description of sediment control program.
 - Description of stormwater management program.
- 37.02 The Plan is to include cross sections showing approximate elevational relationships between buildings, parking, yards, streets, and adjacent properties at key locations. Elevations, slopes, and gradients of major installations are to be identified, and the proposed alterations to the existing topography illustrated.
- 37.03 The topographic features are to be shown on a topographical map, which is also to include map scale and north arrow. Also, the map is to show:
- The location of the Development relative to highways, property boundaries, buildings, water supplies, and other identifiable landmarks or significant features.
 - Contours at an interval and scale that will adequately describe the area prior to, and following construction.

- Critical environmental areas located within, or in proximity of, the Development areas, such as streams, lakes, ponds, wetland areas, drainage ditches, flood plains and wells.
- Nature and extent of existing vegetation.

37.04 Information on the soils presented in the narrative and shown on the map is to be provided. This information is to include:

- Adequate description of each soil, including type, texture, slope, depth, drainage, and structure (as described in the Nova Scotia Soil Survey Reports).
- Surface area of each soil. (Soils data is readily available in those areas for which modern soil surveys are either completed or in progress. In the absence of a soil survey, a mechanical analysis of the soil should be made to the depth of the planned disturbance. Alternatively, an on-site evaluation should be made by a qualified soil scientist.)

37.05 The Stormwater Management Program is to be described in the narrative and the location of facilities shown on the map. The description of the Stormwater Management Program is to include:

- The anticipated amount of runoff from the area and the upstream watershed; runoff-producing factors considered and methods of calculation.
- Analysis of problems posed by storm runoff on downstream areas.
- Analysis of local drainage factors which may contribute to on-site or off-site problems.
- Description of the permanent measures and facilities designed to cope with the problem(s).

37.06 The proposed alterations of the area are to be shown on the map and are to include:

- Boundary limits and acreage of the Development.
- Limits of clearing and grading.
- Areas of cuts and fills and proposed side slopes.
- Location for roads (including stream crossings), buildings, storm sewers, and other structures.
- Location and protection of stockpiles of excess fill or topsoil.

37.07 The temporary erosion and sedimentation control measures (vegetative and mechanical) to be used during active construction are to be included in the narrative and shown on the map and are to include:

- Purpose of control measures.
- Types of measures and facilities and expected length of service.
- Location of measures and facilities.
- Dimensional details of the facilities.
- Design considerations and calculations (if applicable).

37.08 The permanent erosion and sedimentation control measures for long-term protection are to be included in the narrative and shown on the map including:

- Purpose of control measures.
- Types of measure and facilities.
- Location of measures and facilities.
- Dimensional details of facilities.
- Design considerations and calculations.
- Landscaping or vegetative details such as seeding, sodding or mulching.

37.09 The maintenance program for the control facilities is to be described in the narrative and is to include:

- Inspection program, including frequency and schedule.
- Resodding or reseeding of vegetated areas.
- Repair or reconstruction measures.
- Method and frequency of removal and disposal of sediment from the control facilities or the Development area.
- Method for disposing of temporary structural measures after they have served their purposes.

37.10 The **Site Grading and Erosion and Sedimentation Control Plan** is to be submitted with and as part of the **Site Development Proposal**. Appropriate elements of the Plan are also to be featured on the **Site Development and Landscaping Plan**. Final grade elevations and natural landscaping features are examples of elements of the **Site Grading and Erosion and Sedimentation Control Plan** that ought to be shown on the **Site Development and Landscaping Plan**.

38. Exterior Lighting Standards

The following standards for exterior lighting are not mandatory. However, they represent considerable research into how exterior lighting can contribute to the visual appearance and safety and security of a Development.

- 38.01 All lighting installations which are visible to the exterior of the Development ought to be designed for calculated aesthetic effect, to enhance the appearance and presentation of both building and property.
- 38.02 Special attention should be given to walkway and landscape lighting of the Development, as well as accent lighting of the building. Whenever possible concealed light sources should be considered for use.
- 38.03 Exterior lighting applications should be systematized by colour source. High-pressure sodium colour sources should be used for area lighting of roadways and parking areas as well as for general security lighting functions. A white source such as metal halide or deluxe white mercury should be utilized for externally illuminated signage feature landscape lighting, and avert lighting in general. Signage that is internally lit should utilize conventional fluorescent signage lighting.
- 38.04 Driveways should be designed to meet the following recommended illumination criteria:
 - Average Luminance 0.8 cd/sq.m
 - Average to Minimum Luminance Uniformity 3 to 1
 - Maximum to Minimum Luminance Uniformity 5 to 1
 - Veiling to Average Luminance Ratio 0.4 to 1
 - Average Illumination 10 lux
 - Average to Minimum Illumination Uniformity 4 to 1
- 38.05 The lighting for parking areas should be designed in accordance with the Illuminating Society of North America Standard RP-20, with particular reference to the following minimum requirements:
 - Average Illumination 6 lux
 - Average to Minimum Illumination Ratio 6 lux
- 38.06 Luminaries employed for traffic areas should be of the “decorative” classification. Only fixtures which provide absolute cut-off (vertical cut-off at 90 degrees above nadir) should be utilized.
- 38.07 Poles and luminaries should be of matching finish, proportions, and profile such that the final assembly gives the impression of an integrated product with high design merit. Poles and fixtures should be of natural aluminum finish, anodized aluminum finish, or durandoic paint finish. Neutral finishes which integrate well with the natural environment are generally to be preferred. Fixtures employed in parking areas should be identical to, or natural variants of, those installed to illuminate driveways.
- 38.08 A careful balance should be maintained between the various lighting functions and sources employed on-site. To this end the design of feature landscape, artifact, monument, or similar lighting should be in the

order of five (5) to ten (10) times the luminance of the surrounding area, and shall be restricted to 10% of the field of view.

38.09 The lighting of signage should be designed in conformance with Illuminating Engineering Society of North America Standard RP-19. With respect to internally-lit installations this would include observance of the following minimum criterion:

Average Luminance 515 cd/sq.m

38.10 With reference to externally illuminated signage, the following minimum criteria would apply:

Average Illuminance 200 to 400 lux

Average Luminance 44 to 89 cd/sq. m.

38.11 Luminance selection and placement of externally illuminated signage should take into consideration the physical size and location of the sign and related environmental factors. Control of glare and spill light should be given high priority.

38.12 All light sources shall be located and shielded to minimize light trespass to abutting properties. In this regard, significant attention should be paid to avoiding luminous sources visible to adjoining roadways or tenants, including building fenestration which will emit internal building illumination at night. In addition to the discomfort glare associated with light trespass, closed circuit television security systems of neighbouring tenants may be compromised.

39. Development Permit and Building Permit Requirements

39.01 Once a **Site Development Proposal** has been approved for a building site in the Park, the Purchaser is required to make a “bona fide” application for and be granted a **Development Permit** and a **Building Permit** prior to the commencement of construction.

39.02 Under the provisions of the Municipal Land Use Bylaw, the application for a **Development Permit** is to be accompanied by a site plan properly drawn to scale, carrying the stamp of a professional engineer registered in the Province of Nova Scotia and showing the following:

- Accurate dimensions of the site and the location of all proposed buildings;
- Identification, location, and gradients of all parking areas, including driveways and exits to parking areas; manoeuvring areas for vehicles; service areas; visitor parking; and loading areas;

- The location and details of proposed landscaping;
- The existing and proposed geodetic elevations of the lot and the floor levels related to the site;
- Method of surface and underground drainage proposed for the site;
- Identification and location of any significant natural features of the site;
- Detailed plans for retaining walls and the control of slopes; and
- Any additional information relating to the site, buildings, or adjoining properties as may be required by the Development Officer to determine if the proposal conforms to the provisions of this and other municipal bylaws and regulations.

39.03 Detailed building plans are to be submitted in making application for a **Building Permit**. These plans are to comply with the provisions of these **Standards**.

39.04 With application for a building permit, the applicant is required to submit to the Building Inspector two detailed set of plans showing:

- The construction to be used and the occupancy and type of building to be erected;
- The location of the proposed building on the lot, which would include front, side and rear property line clearances and setbacks;
- Servicing of the lot including water, sewer and sprinkler system, electrical systems and communication systems; and
- Drainage of the lot along with landscaping, paving, and parking facilities; and driveway access showing proposed width and slopes.

39.05 The following requirements are also to be noted:

- The application, plans and specifications filed by the applicant for a building permit shall be examined by the Building Inspector and if it appears to the Building Inspector that such plans and specifications are in conformity with the requirements of these bylaws and all other laws or ordinances applicable thereof, the Building Inspector shall issue a permit for the excavation and footings only of the said building. Upon the filing, with the Building Inspector, of a certificate of a Provincial Land Surveyor certifying to the Building Inspector that the footings as located are in agreement with the application as filed, the Building Inspector shall issue a building permit; and
- No building permit shall be granted for commercial or industrial buildings where the municipal sewer and water services are not available, unless the Municipality certifies that the proposed sewer and water services as described in the application for the permit are satisfactory and that the land upon which the building is to be erected will permit the proper functioning of the proposed sewer and water services.

- 39.06 Following approval of the plans by the Building Inspector and the Development Officer, the Building Inspector shall issue a **Permit for Excavation and Footings** for the building. Upon the filing with the Building Inspector of a certificate of a Provincial Land Surveyor certifying to the Municipality that the footings as located are in agreement with the application as filed, the Building Inspector shall issue a **Building Permit**.
- 39.07 Upon completion of the building and at various stages during its construction inspections are conducted by the Building Inspector. Once the Building Inspector determines that the building has been constructed in accordance with the submitted plans and all applicable laws, bylaws and regulations, the Building Inspector will issue an **Occupancy Permit**.

Appendix 1 Guidelines for Development on Slates in Nova Scotia

1.0 General

1.1 Introduction

Halifax Formation slates occur throughout many areas of Nova Scotia. Physical disturbance results in both air and water reacting with any sulphide rich pyritic slates to produce sulfuric acid. The acid in turn dissolves metals (mercury, arsenic, lead, iron, aluminum, etc.) which are transported by site runoff to surface waters. Acid runoff from disturbed slate areas has resulted in documented fish kills, as well as severely degraded water quality and aquatic habitat in receiving streams. Once started, acid generation is a very persistent reaction which may continue for 20-50 years or longer.

1.2 Objective

The objective of these Guidelines¹ is to protect aquatic habitat and water resources by promoting methods to reduce or eliminate acid water generation and heavy metal release from projects proposed on lands underlain by mineralized slates, or in areas where mineralized slates are deposited. **This can best be accomplished through proper site selection, or implementation of alternate design and construction techniques which minimize disturbance of mineralized slates.**

1.3 Authority

The **Nova Scotia Environmental Protection Act**, RSNS 1989, c.150, Section 23(2) administered by the Nova Scotia Department of Environment, states: **“No person ... shall remove any material from the environment, the removal of which causes or tends to cause pollution, without a permit from the Minister.”**

The federal **Fisheries Act** (1970), Section 36 (3) administered by Environment Canada states: **“No person shall deposit or permit the deposit of a deleterious substance of any type in water frequented by fish or in any place under any conditions where such deleterious substance or any other deleterious substance that results from the deposit of such deleterious substance may enter any such water.”**

¹ These Guidelines were prepared in April 1991, by the Nova Scotia Department of the Environment and Environment Canada

Runoff from the excavation, disposal and use of mineralized slate has been demonstrated to result in significant environmental damage, thus operations involving the excavation and disposal of mineralized slate are subject to the authorities indicated above.

1.4 Application

These Guidelines apply to all development on or disposal of mineralized slates in Nova Scotia where a total volume greater than 1,000^{m³} of slates (approximately a large house foundation) is to be disturbed.

Where several small developments within the same area are proposed, this will be considered a special situation, and government environmental agencies will determine if the Guidelines apply.

Federal agencies proposing to disturb slates should contact Environment Canada for consultation and requirements. Provincial agencies or private parties should contract the Nova Scotia Department of the Environment.

1.5 Assessment

New developments on sites underlain by Halifax Formation Slates should be sampled and assessed, and a Development Strategy and schedule submitted and approved by the environmental agency prior to any construction activity and/or involvement in a specific tender. Factors to be considered are addressed in Sections 2-4.

2.0 Construction Developments

2.1 General

Where mineralized slate disturbance **is considered necessary, and is approved** by environmental agencies, appropriate mitigation measures, treatment facilities and monitoring may be required both at the area of excavation and at the slate disposal area. These are discussed in the following sections. Site sampling and evaluation are discussed in **Section 5: Site Sampling and Evaluation Procedures**.

2.2 Slate Disturbance

In certain instances, project design may necessitate limited disturbance or excavation of mineralized slate bedrock. Specific measures associated with such work are indicated below:

- (a) Removal of vegetation and soil immediately overlying mineralized slate bedrock shall be confined to the minimum area necessary to satisfy construction and operational requirements.
- (b) Where slate is exposed surface runoff shall be diverted away from such areas.
- (c) Exposure to air and/or water should be limited by:
 - (i) Covering temporarily exposed slates with fabrics or other material that will prevent precipitation from contracting slates.
 - (ii) Sealing and stabilizing exposed slate surface(s) to minimize infiltration (permeabilities less than 10^6 cm/sec are recommended, and time of exposure should be limited to hours or days).
- (d) The volume of disturbed mineralized slate should be minimized in all cases. Mechanical methods are to be used. Under special situations blasting may be considered and approved, but then disturbed volumes shall be calculated using an additional 6m laterally and 2m vertically.
- (e) Runoff water from disturbed areas should be directed to centralized collection point(s) before leaving the property. Monitoring is required (Section 2.5. Treatment may be required (Section 2.3).
- (f) Excavated mineralized slate shall undergo immediate disposal at a site, and in a method previously approved by environmental agencies (Section 2.4). On-site storage of mineralized slates is not permitted.
- (g) All related construction activities should be scheduled to minimize exposure of mineralized slates.
- (h) Mineralized slate shall not be used for construction purposes unless an exemption is obtained from environmental agencies.
- (i) Alternate methods of managing disturbed slates may be considered by environmental agencies who acknowledge that research and experience may suggest modifications to currently accepted practices.

2.3 Treatment of Site Runoff

In the event that slate disturbance and associated acid drainage result in site runoff with a pH of 4.0 or less, or degradation in the water quality of fish bearing streams occur, treatment must be provided. Treatment of acid drainage will involve pH control and removal of any associated heavy metals. Criteria to be met will be designated by environmental agencies based on site characteristics, and ambient water quality.

In design of the treatment program and facility, ultimate reclamation and /or disposal of any accumulated sludge must be addressed.

2.4 Disposal of Excavated Mineralized Slates

Where mineralized slate has been excavated, proper disposal of the slate is required at a site, and in a method previously approved by environmental agencies.

- (a) For land based disposal, an approved location is required which meets the following criteria:
 - i. Site should not be located near sensitive aquatic habitat.
 - ii. Runoff is to be directed to a centralized collection point(s) and monitored.
 - iii. The period of exposure of deposited mineralized slates is to be minimized as per site development strategy.
 - iv. Isolation from ground, surface and rainwater/snow is required. Disposal surface is to be contoured to prevent ponding.
 - v. An area with a soil of high pH buffering capacity and low permeability (i.e. less than 10⁻⁶ cm/sec) is preferred.
 - vi. Treatment of site runoff before release may be required.
- (b) Marine disposal or infill of mineralized slates will be considered, as in sea water reaction rates are inhibited and there is extensive buffering capacity. Such disposal would require a formal application to Environment Canada for a permit under the Ocean Dumping Control Act.

2.5 Monitoring

Proponents/contractors/landowners of developments on mineralized slate shall, in accordance with schedules and instructions from environmental agencies, collect samples of, and analyze site runoff, pit waters, site effluents, and ground waters for pH, arsenic, iron, sulphate, copper, aluminum, total acidity, alkalinity and conductivity (see also Section 5).

- (a) Monitoring of surface and/or groundwater shall take place for the duration of construction/disposal activities and continue for at least two years following completion of such activities.
- (b) If acid drainage is identified, monitoring shall continue until background levels are approached and government agencies determine treatment is no longer required.
- (c) Upon detection of any environmental problem, the proponent/contractor/landowner shall immediately notify the appropriate

environmental agency and be prepared to initiate an approved work or treatment program.

3.0 Pit and Quarry Operations

3.1 General

This portion of the Guidelines is supplementary to the Nova Scotia Pit and Quarry Guidelines (1988). Slate may be quarried only from approved sites which have shown a limited and acceptable degree of mineralization.

4.0 Responsibilities

4.1 General

The proponent/contractor/landowner shall bear the full responsibility for providing all works and equipment necessary to monitor and mitigate any pollution problems associated with, or resulting from the slate disturbance.

Responsibility for construction or quarrying activities shall end with the approved conclusion of the monitoring programs (See Section 2.5).

4.2 Financial Guarantees

Should slate disturbance occur, the environmental impact and potential remedial costs may be more than the cost of the original facility. Thus, environmental agencies may require financial guarantees of proponents/contractors/landowners planning to disturb mineralized slate. Guarantees must be posted prior to site work and will be required in full or in part until termination of all monitoring programs or until otherwise released by the approved agency.

Financial guarantees may be required as follows:

\$25,000/1,000 m³ or \$25,000/ha disturbed, whichever is greater.

A similar guarantee may also be requested for the slate disposal site

5.0 Site Sampling and Evaluation Procedures

New developments on sites underlain by Halifax Formation Slates should be sampled and assessed, and a development strategy and schedule must be submitted and approved by the environmental agency **prior to** any construction

activity and/or involvement in a specific tender. Factors to be considered are addressed in Sections 2-4.

For new or renewed quarry development, documentation from the environmental agency indicating acceptability of the site must accompany any tender bid involving slates. Alternately the quarry must be on an approved list maintained by the Nova Scotia Department of the Environment.

5.1 Small Projects

For all projects greater than 1,000 m³ and less than 10,000 m³ of calculated slate disturbance, where mineralized slates are found during site development, and for all quarries, the following information is required;

- (a) Conceptual site plan indicating property lines; proposed site services; existing and proposed runoff channels; nearby stream, slope of land; volume, area and depth of proposed excavation/disposal; locations and depths of samples; adjacent residences and water supplies; and proposed schedule of construction.
- (b) Degree of mineralization of slates and quality of surrounding environs as per Section 3.

5.2 Large Projects

For all projects greater than 10,000 m³ or where mineralized slates are found during site development. The following additional information is required.

- (a) Scaled site plan, and detailed support information of items listed in 2.1 (a), plus profiles of proposed facilities and services indicating existing surface/slate elevations, and depths planned for excavation/disposal.
- (b) Assessment of groundwater elevation and direction of flow.
- (c) All samples must be collected by a qualified consultant or engineer and reflect sampling criteria outlined below.
- (d) Any cost incurred in collecting and analyzing samples will be the responsibility of the proponent/contractor/landowner

5.3 Bedrock and Overburden

(a) Collection

Two collection methods are acceptable. Site specifics may make one method preferable over another and environmental agencies may recommend one

method over another. The intent of both methods is to ensure that the various units of slate and their chemical characteristics are identified. A reduced sampling density may be considered for sites greater than three hectares.

- (1) Slate samples shall be collected at a minimum of two sites for each hectare or part hectare scheduled for disruption. Samples shall be taken at 0.5 metre intervals for the first 2.0 metres depth of slate, and thereafter at 1.0 metre intervals to the depth of the proposed excavation. Slate bedded may necessitate angled boring or other slight modification to the above procedure.
- (2) Dig a trench across proposed work area perpendicular to bedding of slate. Trench depth shall be to unweathered slate. Slate samples shall be collected every 10-15m along the trench with a minimum of two samples per unit identified.

(b) Analysis

- (1) Each sample is to be analyzed for total sulphur, and sulphide. Samples may be analyzed for net acid production as determined by the B.C. Research - Confirmation Test (Duncan 1972). Results shall be expressed as kg H₂SO₄/Tonne. The normal analyses for total sulphur includes both sulphate and sulfide sulphur. At levels of concern in the slate, sulphate is usually an insignificant portion of the total. However, at low percentages sulphate can introduce a significant error. Sample procedures exist for removal of soluble sulphate prior to the normal sulphur analyses.

(c) Evaluation

- (1) Rocks which have a sulphide content of less than 1.4% (12.51 kg H₂SO₄/tonne.) are normally considered acceptable for use.
- (2) If sulphide content is equal to or greater than 0.4% and acid producing values exceed acid consuming, the sample is considered acid producing, and shall not be quarried or used as construction material.
- (3) The normal criteria for site evaluation will be that the arithmetic mean and the majority of the samples must meet the standards mentioned in 3.2 (c) 1 and 2. Any localized areas of serious contamination may require special consideration.

5.4 Water

(a) Collection

- (1) Water samples shall be collected just upstream of, from any standing water in, and just downstream of a pit, or proposed development site.

- (2) Grab samples can be collected by hand.
- (3) Samples should be placed in containers and handled in a fashion consistent with the **American Public Health Association (APHA)** procedures.

(b) Analysis

- (1) All water samples will be analyzed for pH, arsenic, iron, sulphate, copper, aluminum, total acidity, alkalinity and **conductivity in accordance with APHA procedures.**

(c) Evaluation

- (1) Analytical results will be evaluated against normally accepted water quality criteria for the protection of aquatic life and other pertinent down stream water uses.

Schedule A – Province of Nova Scotia Regulations Respecting the Disposal of Sulphide Bearing Materials

Effective: April 11, 1995

The Governor in Council on the report and recommendation of the Minister of the Environment dated March 14, 1995, pursuant to Section 66 of Chapter 1 of the Statutes of Nova Scotia, 1994-95, the Environment Act, is pleased to make regulations respecting the disposal of sulphide bearing materials in the form set forth in Schedule “A” attached to and forming part of the report and recommendation, the regulations to be effective on, from and after April 11, 1995. (95-296)

Certified to be a true copy of an Order of His Honour the Lieutenant Governor of Nova Scotia in Council made April 11, 1995.