

The Centre of the Annapolis Valley

KENTVILLE



TOWN OF KENTVILLE

Planning and Development Department

SUBDIVISION BY-LAW AND REGULATIONS

Subdivision by-law Appendix 14.4 (c)
hydrants. The Town of Kentville
requests that hydrants be either
McAvity or Canada Valve.

(See Pg. 80)



2002

2002
TOWN OF KENTVILLE
SUBDIVISION BYLAW

PART 1 TITLE & APPLICATION

1. This Bylaw may be cited as the "**Subdivision Bylaw**" for the Town of Kentville and shall apply to all lands within the Town of Kentville.

PART 2 INTERPRETATION

2. In this Bylaw, the word "shall" is mandatory and not permissive. Words used in the present tense shall include the future. Words used in the singular number shall include the plural, and words used in the plural number shall include the singular unless otherwise indicated. All other words shall carry their customary meaning except those defined hereinafter.

PART 3 DEFINITIONS

3. (a) **Agreement** means a written contract between the subdivider and the Town which describes the responsibilities of each party with respect to the subdivision and servicing of land as outlined in this subdivision bylaw.
- (b) **Area of Land** means any lot or parcel as described by its boundaries.
- (c) **Council** means the Council of the Town of Kentville.
- (d) **Department of Environment** means the Nova Scotia Department of Environment and Labour.
- (e) **Department of Transportation** means the Nova Scotia Department of Transportation and Public Works.

- (f) **Development Officer** means the Development Officer appointed by Council pursuant to the Municipal Government Act of Nova Scotia and having the power and duty to administer this By-Law.
- (g) **Director, Planning and Development** means the Director of Planning and Development for the Town of Kentville.
- (h) **Engineer** means the Engineer of the Town of Kentville and includes a person acting under the supervision and direction of the Engineer.
- (i) **Engineering Design Plans** means plans stamped and signed by a professional Engineer showing lay-out and design of primary and secondary services.
- (j) **Land Use By-Law** means a Land Use By-Law for the Town of Kentville.
- (k) **Lot** means any parcel to be created by the filing of a Plan of Subdivision.
- (l) **Lot Frontage** means the horizontal distance between the side lot lines, such distance being measured perpendicularly to the line joining the middle of the front lot line with either the middle of the rear lot line or the apex of the triangle formed by the side lot lines and at a point therein equal in distance to the minimum applicable front yard. In the case of a corner lot with a daylighting triangle, the exterior lot lines (street lines) shall be deemed to extend to their hypothetical point of intersection for the purpose of calculating the frontage.
- (m) **Primary Service** includes sanitary sewer, storm sewer, water system and hydrants, water service pipe to the street line and the street constructed to the Specifications Standards as described in Appendix B, Municipal Services Standards and Specification of this Bylaw. **Amended March 2012)**
- (n) **Private On Site Sewage Disposal System** means all types of sewage disposal systems not directly connected to a municipal or approved central sewage system, including a privy and a septic tank with a disposal field, which is neither owned nor maintained by the Town.

- (o) **Registry of Deeds** means the office of the Registry of Deeds for the Registration District in which the area of land being subdivided is situated.
- (p) **Sanitary Sewer System** means a system which is owned and maintained by the Town and which consists of pipes or conduit receiving and carrying water borne wastes and includes any trunk sewers, pumping stations, and treatment plants.
- (q) **Secondary Service** includes concrete side-walks, sodding, graded area between curb and side-walk, streetlights, sign standards with street name signs and walkways.
- (r) **Storm Sewer System** means a system receiving, carrying and controlling storm water and surface run-off and which may include pipes, conduit, catchbasins, culverts, ditches, watercourses, roadways, and retention ponds.
- (s) **Street** means a street owned and maintained by the Town and includes the land area and improvements contained within the right-of-way boundaries of that street.
- (t) **Subdivider** means the owner or owners of the area of land proposed to be subdivided and includes anyone acting with his/her written consent.
- (u) **Subdivision** means the division of any land into two or more parcels, and includes a re-subdivision or a consolidation of two or more parcels.
- (v) **Town** means the Town of Kentville.
- (w) **Video** means a video recording of the underground sanitary sewer, storm sewer, and water pipes.
- (x) **Walkway** means land, other than land forming part of a street, to be conveyed to the Town to be used for public pedestrian traffic.
- (y) **Watercourse** means any lake, river, stream, ocean, or other body of water.
- (z) **Water System** means an assembly of pipes, fittings, control valves

and appurtenances, which conveys water to water service pipes and hydrants owned and maintained by a Public Water Utility.

PART 4 PRELIMINARY SUBDIVISION EXAMINATION (OPTIONAL FIRST STEP)

A. Procedure

- 4.1 Application for an evaluation of a preliminary plan of subdivision shall be made to the development officer in the form specified in Schedule “A” of this bylaw.
- 4.2 The Development Officer shall comply with the notification and appeal provisions of the *Municipal Government Act*.
- 4.3 The Development Officer shall forward a copy of the preliminary plan of subdivision to:
 - (a) in areas not served by a central sewer, the Department of the Environment to determine compliance with the *On Site Sewage Disposal System Regulations*, except where the proposed lot:
 - (i) is more than 9000 square meters (96,878.4 square feet);
 - (ii) has a width of 76 meters (249.3 feet) or more, and
 - (iii) is to be used for a purpose which does not require an on-site sewage disposal system;
 - (b) the Engineer, and
 - (c) Director of Parks and Recreation
 - (d) any other agency of the Province or the Town which the Development Officer deems necessary.
- 4.4 Any person or agency which has been forwarded a copy of the preliminary plan of subdivision pursuant to Section 4.3 shall forward a written report of their assessments or recommendations to the Development Officer.
- 4.5 The Development Officer shall inform the subdivider in writing of the results of the evaluation of the preliminary plan of subdivision.

B. Requirements

- 4.6 A subdivider proposing to subdivide an area of land may submit to the Development Officer four copies of a preliminary plan of subdivision drawn to scale showing:
- 4.6.1 the name of the owner of the area of land proposed to be subdivided;
 - 4.6.2 the names of all owners or the lot identifiers of all properties abutting the land being subdivided;
 - 4.6.3 the civic number of the main buildings on the area of land being subdivided;
 - 4.6.4 a location plan showing the approximate distance between the area of land being subdivided and the nearest prominent landmark;
 - 4.6.5 the shape, dimensions and area of the lots being created;
 - 4.6.6 each proposed lot being identified by a number except in cases where a parcel is being added to or subtracted from an existing area of land in which case the parcel shall be identified by a letter, and the new lot identified by the existing area of land identifier, where available, and the letter;
 - 4.6.7 no duplication of lot identifiers;
 - 4.6.8 the approximate location of railways and railway rights-of-way;
 - 4.6.9 the location of existing and proposed public streets;
 - 4.6.10 the name of existing and proposed public streets (and the public street number if applicable) as issued pursuant to the civic addressing system;
 - 4.6.11 the graphic representation of lots being created shown by solid lines, and the vanishing boundaries of existing areas of land being resubdivided, consolidated or both, shown as broken lines;
 - 4.6.12 the location of existing buildings within ten (10) meters (32.8 ft.) of a property line;
 - 4.6.13 the general location of watercourses and wetlands;
 - 4.6.14 the north point;

- 4.6.15 the scale, and;
- 4.6.16 any other information necessary to determine whether the subdivision conforms to this subdivision by-law.
- 4.7 Where the preliminary plan of subdivision is to be forwarded to the Department of the Environment, the following additional information, if required, by the Department of the Environment, shall be part of, or included with, the preliminary plan:
 - 4.7.1 the lot layout, including buildings, proposed on-site sewage disposal system, proposed driveway and water wells;
 - 4.7.2 the location of watercourses, wetlands, and other features that may influence the design of the system, including ditches, roads and driveways;
 - 4.7.3 the surface slopes and directions;
 - 4.7.4 an explanation of the extent, volume and type of usage to which the system will be subjected;
 - 4.7.5 an assessment report of the lot respecting its suitability to support an on site sewage disposal system, including the results of a soil evaluation test, except where the assessment report is to be prepared by the Department of the Environment; and
 - 4.7.6 any other information necessary to determine where the subdivision meets the On-Site Sewage Disposal Systems Regulations.

PART 5 TENTATIVE PLANS OF SUBDIVISION

A Procedure

- 5.1 Application for approval of a tentative plan of subdivision shall be made to the development officer in the form specified in Schedule "A" of this bylaw.
- 5.2 The Development Officer shall comply with the notification and approval provisions of the *Municipal Government Act*.

- 5.3 The Development Officer shall forward a copy of the tentative plan of subdivision to:
- 5.3.1 in areas not served by municipal sewer, the Department of the Environment,
to determine compliance with the On Site Sewage Disposal Systems Regulations, except where the proposed lot:
- (i) is more than 9000 square meters (96,878.4 square feet);
 - (ii) has a width of 76 meters (249.3) feet or more, and
 - (iii) is to be used for a purpose which does not require on on-site sewage disposal system.
- 5.3.2 in areas served by a municipal sewer, the Public Works Department
- 5.3.3 the authority having jurisdiction for public streets; and
- 5.3.4 any other agency of the Province or the Town which the Development Officer deems necessary.
- 5.4 Any agency which has been forwarded a copy of the tentative plan of subdivision pursuant to section 5.3 shall forward a written report of their assessments or recommendations to the Development Officer.
- 5.5 Approval of a tentative plan of subdivision may not be refused or withheld as a result of the assessment or recommendations made by the Department of the Environment, the Department of Transportation and Public Works, or of any other agency of the Province or the Town, unless the tentative plan of subdivision is clearly contrary to a law of the Province or regulation made pursuant to a law of the Province.
- 5.6 Where the Development Officer refuses to approve a tentative plan of subdivision, the Development Officer shall inform the subdivider of the reasons for the refusal in writing and advise the subdivider of the appeal provisions of section 284 of the *Municipal Government Act*.
- 5.7 The following information shall be stamped or written on any tentative plan of subdivision which is approved, together with any other information necessary for the tentative plan to proceed to the final plan stage:

- 5.7.1 "This tentative plan of subdivision is approved for lots _____ . Such approval lapses if the lots are not shown on a final plan of subdivision approved within two years of the date of the approval of the tentative plan";
- 5.7.2 the date of the approval of the tentative plan; and
- 5.7.3 "This tentative plan of subdivision shall not be filed in the Registry of Deeds as no subdivision takes effect until a final plan of subdivision is endorsed by the Development Officer and has been filed by him/her in the Registry of Deeds."

B. Requirements

- 5.8 A subdivider proposing to subdivide an area of land may submit to the Development Officer eight (8) copies of the tentative plan of the proposed subdivision meeting the requirements of Sections 5.9 and 5.10 of this by-law.
- 5.9 Tentative plans of subdivision submitted to the Development Officer shall be:
- 5.9.1 drawn to a scale or scales sufficient for clarity of all particulars on the tentative plan of subdivision,
- 5.9.2 based on a description of the property to be subdivided, preferably but not necessarily as surveyed, and
- 5.9.3 folded to approximately 8 x 12 inches (20 x 30 centimetres) with the face of the folded print being the title block which is located in the lower right-hand corner of the tentative plan of subdivision.
- 5.10 Tentative plans of subdivision shall show the following:
- 5.10.1 the name of the subdivision if any, and the name of the owner of the area of land;
- 5.10.2 the unique parcel identifier (PID) of all areas of land being subdivided;
- 5.10.3 the civic number of the main building(s) on the area of land being subdivided.
- 5.10.4 the names of all owners or the lot identifiers of all properties

- abutting the area of land proposed to be subdivided;
- 5.10.5 a location map, drawn to a scale not smaller than 1:20,000 (such scale to be shown on the map), preferably with the same orientation as the area of land;
- 5.10.6 the words "TENTATIVE PLAN" located above the title block;
- 5.10.7 a clear space for stamping measuring at least 6 inches wide x 6 inches high (15 centimetres x 15 centimetres);
- 5.10.8 the approximate dimensions of the area of land proposed to be subdivided;
- 5.10.9 the proposed dimensions and shape of lots;
- 5.10.10 the area of each lot including the approximate area of the remainder lot, if any;
- 5.10.11 each proposed lot individually identified without duplication of lot identifiers and where practicable, where a parcel is being added to or subtracted from an existing lot or where a lot shown on a plan of subdivision is being divided, the proposed lot or lots shall be identified by the existing lot identifier and a letter;
- 5.10.12 the approximate location of existing main buildings on the area of land proposed to be subdivided with the graphical location for all buildings within 9.8 feet (3 metres) either side of the boundaries of the proposed lot;
- 5.10.13 the boundaries of proposed lots shown by solid lines, and the vanishing boundaries of existing lots being re-subdivided, consolidated or both, shown as broken lines;
- 5.10.14 the scale to which the tentative plan of subdivision is drawn;
- 5.10.15 the width and location of railroads, and existing and proposed public streets, including intersections and turning circles;
- 5.10.16 the names of existing and proposed public streets;
- 5.10.17 a notation stating whether or not the lots for which approval is requested are serviced by central sewer and water systems;

- 5.10.18 the width, location and nature of any easements or rights-of-way on or affecting the area of land proposed to be subdivided;
 - 5.10.19 the north point;
 - 5.10.20 the date on which the tentative plan of subdivision was drawn and the date of any revisions;
 - 5.10.21 the location of any watercourse, prominent rock formation, area subject to flooding and any other prominent natural features which might affect the layout or provision of public streets and services to the area where the subdivision is to be located; and
 - 5.10.22 any other information which the Development Officer deems necessary to determine whether a tentative plan of subdivision conforms to this subdivision by-law.
- 5.11 Where the tentative plan of subdivision is to be forwarded to the Department of Environment, the following additional information, if required by the Department of the Environment, shall be part of or included with, the tentative plan;
- 5.11.1 The lot layout, including buildings, proposed on-site sewage disposal system, proposed driveway and water wells;
 - 5.11.2 The location of watercourses, wet lands and other features that may influence the design of the system, including ditches, roads and driveways;
 - 5.11.3 the surface slopes and directions;
 - 5.11.4 an explanation of the extent, volume and type of usage to which the system will be subjected;
 - 5.11.5 an assessment report of the lot respecting its suitability to support an on-site sewage disposal system, including the results of a soil evaluation test, except where the assessment report is to be prepared by the Department of the Environment; and
 - 5.11.6 any other information necessary to determine whether the subdivision meets the *On-Site Sewage Disposal Systems Regulations*.

- 5.12 In addition to meeting the requirements of Subsections 5.9, 5.10, and 5.11 of this PART, where the proposed lots front on a proposed public street, a tentative plan of subdivision shall:
- 5.12.1 show a boundary survey of the area of land proposed to be subdivided, excluding the remainder lot, certified and stamped by a Nova Scotia Land Surveyor in the manner required by *The Nova Scotia Land Surveyors Act* and the regulations made thereunder,
 - 5.12.2 be accompanied by four copies of a plan showing:
 - (a) contours at 2 metres (6.6 feet) intervals and drainage
 - (b) the width and location of existing and proposed public streets, including intersections and turning circles, and
 - (c) the location of existing and proposed central sewer and water systems and proposed connections thereto.
 - 5.12.3 be accompanied by four (4) copies of a plan showing the center line profiles of the proposed streets, and
 - 5.12.4 be accompanied by any other information that the Development Officer deems necessary to determine whether the plan and drawing referred to in Subsections 5.12.2 and 5.12.3 conform to this bylaw.
- 5.13 Where plans or drawings or centre-line profiles are prepared by or under the supervision of a professional engineer, they shall be signed and sealed by the professional engineer in accordance with *The Engineering Profession Act*.

PART 6 FINAL PLANS OF SUBDIVISION

A. Procedure

- 6.1 Application for approval of a final plan of subdivision shall be made to the development officer in the form specified in the form specified in Schedule "A" of this bylaw.
- 6.2 The Development Officer shall comply with the notification and approval

provisions of the *Municipal Government Act*.

6.3 The Development Officer shall forward a copy of the final plan of subdivision to:

6.3.1 in areas not served by a municipal sewer, the Department of the Environment to determine compliance with the On Site Sewage Disposal System Regulations, except where the proposed lot:

- (i) is more than 9000 square meters (96,878.4 square feet);
- (ii) has a width of 76 meters (249.3) feet;
- (iii) is to be used for a purpose which does not require an on-site sewage disposal system;

6.3.2 in areas served by a municipal sewer, the Public Works Department;

6.3.3 The authority having jurisdiction for public streets; and

6.3.4 any other agency of the Province of the municipality which the Development Officer deems necessary.

6.4 Any agency which has been forwarded a copy of the final plan of subdivision pursuant to Section 6.3 shall forward a written report of their assessments or recommendations to the Development Officer.

6.5 Approval of a final plan of subdivision may not be refused or withheld unless the final plan of subdivision is clearly contrary to a law of the Province or a bylaw of the Town made pursuant to a law of the Province, including any applicable dimensions for lot area and lot frontage contained in a land use bylaw of the Town.

6.6 Before approving a final plan of subdivision that adds or consolidates areas or parcels of land in different ownership, the Development Officer shall have received:

6.6.1 the executed deeds suitable for registering to effect the addition or consolidation;

6.6.2 the fees for registering the deeds; and

6.6.3 the affidavit of value including particulars of any exemption pursuant to

Part V of the *Municipal Government Act*; and

- 6.7 The Development Officer shall forward an approved copy of the final plan of subdivision to the subdivider and the surveyor.
- 6.8 Where the Development Officer refuses to approve a final plan of subdivision, the Development Officer shall inform the subdivider of the reasons for the refusal in writing and advise the subdivider of the appeal provisions of Section 284 of the *Municipal Government Act*.
- 6.9 A final plan of subdivision showing lots to be approved under circumstances described in subsection 287(3) of the *Municipal Government Act* by special note on the plan shall
- (a) identify such lots;
 - (b) state the names of the grantor and the grantee of such lots; and
 - (c) state the date, book and page number of the conveyance of such lots as recorded in the registry of deeds.
- 6.10 The following information shall be stamped or written and completed by the Development Officer on any final plan of subdivision which is approved:
- (a) "This final plan of subdivision is approved for Lots _____";
 - (b) where applicable,
 - "(i) _____ (is, are) suitable for the con-
(lot(s) approved and/or remainder)
struction or installation of an on-site sewage disposal system and
any conditions that apply are contained in a report dated _____
and available from the Department of Environment;
 - (ii) **IMPORTANT NOTICE**
_____ (has, have) been created for a
(lot(s) approved and/or remainder)
purpose which does not require an on-site sewage disposal system and
will not be eligible for a permit to install a system unless the requirements
of the Department of the Environment are met; or

(iii) _____ (is, are) served by an exist-
(lot(s) approved and/or remainder)
ing on-site system and should a replacement system become necessary
necessary in future, approval of the replacement system from the De-
partment of Environment is required;

- (c) where applicable,
- (i) a notation stating that access to the public street as shown has been approved for the lots created by this final plan and any conditions which apply are listed on the plan or are contained in a report dated _____, available from the authority having jurisdiction for public streets; and
 - (ii) where a lot which abuts a public street does not have an approved access point along the street, a notation stating that direct access to the street is not permitted.

B Requirements

6.11 Final plans of subdivision submitted to the Development Officer shall be:

- 6.11.1 drawn to a scale or scales sufficient for clarity of all particulars on the final plan of subdivision,
- 6.11.2 certified and stamped by a Nova Scotia Land Surveyor that the lots for which approval is requested have been surveyed in the manner required by *The Nova Scotia Land Surveyors Act* and the regulations made thereunder, except for a final plan of subdivision prepared pursuant to this bylaw, and
- 6.11.3 folded to approximately 8 inches by 12 inches (20 x 30 centimetres) with the face of the folded print being the title block which is located in the lower right-hand corner of the final plan of subdivision.

6.12 Final plans of subdivision shall show the following:

- 6.12.1 the words "Plan of Subdivision" located in the title block;
- 6.12.2 the name of the subdivision, if any, and the name of the owner of the area of land;
- 6.12.3 the unique parcel identifier (PID) of all areas of land being subdivided;

- 6.12.4 the civic number of the main building(s) on the area of land being subdivided;
- 6.12.5 a location map drawn to a scale not smaller than 1:20,000 (such scale to be shown on the map), preferably with the same orientation as the area of land;
- 6.12.6 if applicable, the book and page number of the deed to the area of land as recorded in the name of the owner in the Registry of Deeds’
- 6.12.7 length of the boundaries of all existing and proposed lots, streets, rights-of-way and easements including the length of arc, points of curvature and radius in the case of curved lines;
- 6.12.8 names of all owners or the lot identifiers of all properties abutting the proposed subdivision;
- 6.12.9 a clear space for stamping measuring at least 6 inches wide by 6 inches high (15 centimetres by 15 centimetres);
- 6.12.10 dimensions of the area of land proposed to be subdivided;
- 6.12.11 approximate location of existing main buildings on the area of land proposed to be subdivided with the graphical location for all buildings within 9.8 feet (3 metres) either side of the boundaries of the proposed lot;
- 6.12.12 the shape, dimensions and area of proposed lots, and the remainder lot, if any;
- 6.12.13 each proposed lot individually identified without duplication of lot identifiers and, where practicable, where a parcel is being added to or subtracted from an existing lot or where a lot shown on a plan of subdivision is being divided, the proposed lot or lots shall be identified by the existing lot identifier and a letter;
- 6.12.14 no duplication of lot identifiers;
- 6.12.15 the bearings or azimuths of the boundaries of proposed lots;
- 6.12.16 the width and location of railroads and existing and proposed public

- streets, including intersections and turning circles;
- 6.12.17 the boundaries of proposed lots shown by solid lines and the vanishing boundaries of existing lots being re-subdivided, consolidated or both, shown as broken lines;
- 6.12.18 the location of existing buildings within 10 metres (32.8 feet) of a property boundary;
- 6.12.19 the geographical and mathematical location of all buildings within 3 meters (9.8 feet) of a proposed boundary;
- 6.12.20 a notation stating whether or not the lots for which approval is requested are serviced by central sewer and water systems;
- 6.12.21 the width, location and nature of any easements or rights-of -way on or affecting the area of land proposed to be subdivided;
- 6.12.22 the date on which the final plan of subdivision was certified with all revisions to be identified, dated and initialed;
- 6.12.23 the north point;
- 6.12.24 the scale to which the final plan of subdivision is drawn;
- 6.12.25 the names of existing and proposed public streets; and
- 6.12.26 any other information which the Development Officer deems necessary to determine whether a final plan of subdivision conforms to this subdivision by-law.
- 6.13 Where the final plan of subdivision is to be forwarded to the Department of the Environment, the following additional information, if required by the Department of the Environment, shall be part of, or included with, the final plan;
 - 6.13.1 The lot layout, including buildings, proposed on-site sewage disposal system, proposed driveway and water wells;
 - 6.13.2 The location of watercourses, wet lands and other features that may influence the design of the system, including ditches, roads and driveways;

- 6.13.3 the surface slopes and directions;
- 6.13.4 an explanation of the extent, volume and type of usage to which the system will be subjected;
- 6.13.5 an assessment report of the lot respecting its suitability to support an on-site sewage disposal system, including the results of a soil evaluation test, except where the assessment report is to be prepared by the Department of the Environment; and
- 6.13.6 any other information necessary to determine whether the subdivision meets the *On-Site Sewage Disposal Systems Regulations*.

PART 7 REQUIREMENTS FOR PRIMARY AND SECONDARY SERVICES

- 7.1 Where primary and secondary services are to be installed by the subdivider, the Development Officer shall endorse the final plan of subdivision only when the following has taken place:
 - (a) The subdivider has designed and constructed all primary and secondary services as shown on the final plan of subdivision, according to the Servicing Specification of the Town of Kentville being Appendix "B" of this Bylaw;
 - (b) The Town has accepted in writing the ownership of all primary and secondary services, other than natural watercourses;
 - (c) The subdivider has deposited with the Town duly executed Warranty Deed(s), acceptable to the Town, conveying title to all streets, walkways, easements and dedicated parkland at the time the final plan of subdivision is endorsed by the Development Officer;
- 7.2. The Subdivider shall provide as a prerequisite for acceptance by the Town of primary and secondary services the following:

- (a) a Maintenance Bond for 10% of actual costs for installation of primary and secondary services for one year from date of completion of primary and secondary services;
- (b) "As Built" reproducible drawings of primary and secondary services as per Town of Kentville's Municipal Services Specifications attached as Appendix "B" of this Bylaw;
- (c) copies of all T.V. Inspection reports done on the storm and sanitary sewer systems;
- (d) service lateral information including invert elevations at property line, service lengths, distance of lateral connections from the nearest manhole, and sufficient tie information for the ends of storm, sanitary and water systems at the property line;
- (e) copies of all air test reports conducted on sanitary and storm systems and test reports to confirm that the specified standards of material were achieved;
- (f) a Surveyor's Certificate stating that all primary and secondary services are within the proposed street right-of-ways, easement(s), and walkway(s);
- (g) a report by the Town Engineer or his designate stating that he has completed a visual inspection of the primary and secondary services and that any deficiencies have been rectified;
- (h) a certificate stamped and signed by a Professional Engineer of the Province of Nova Scotia stating that all primary and secondary services are constructed to the Town of Kentville's Municipal Services Standards and Specifications, as attached as Appendix "B" of this Bylaw.

OR

7.3 As an alternative to 7.1 and 7.2, where primary and secondary services are to be installed by the subdivider, the Development Officer shall endorse the final plan of subdivision only when the following has taken place;

- (a) the subdivider has installed and the Town has accepted in writing all primary services;

- (b) the subdivider has entered into an agreement with the Town stating that the subdivider shall construct all secondary services as shown on the final plan of subdivision;
- (c) the subdivider has deposited with the Town duly executed warranty deed(s), acceptable to the Town, conveying title to all streets, walkways, easements, and dedicated parkland at the time the final plan of subdivision is endorsed by the Development Officer;
- (d) the subdivider has supplied a One Year Maintenance Bond of 10% of actual cost for installation of primary services from date of substantial completion of primary services;
- (e) the subdivider has provided a Performance Bond of 120% of the estimated cost of the secondary services as determined by the Town in consultation with the subdivider;
- (f) "As Built" reproducible drawings of primary services as per the Town of Kentville's Municipal Services Standards and Specifications attached as Appendix "B" of this Bylaw have been provided by the subdivider;
- (g) the subdivider has provided copies of all T.V. inspections and air test reports completed on the sanitary and storm sewer systems;
- (h) the subdivider has provided all service lateral information including invert elevations at property line, service lengths, distances of lateral connections from the nearest manhole, and sufficient tie information for the sanitary, storm and water systems at the street line;
- (i) the subdivider has provided test reports to confirm that the specified standards of material were used;
- (j) the subdivider has provided a Surveyor's Certificate stating that all primary services are within the proposed street rights-of-way, easements(s), and walkway(s);
- (k) the subdivider has provided a certificate, stamped and signed by a Professional Engineer of the Province of Nova Scotia stating that all primary services are constructed to the Town of Kentville's Services Standards and Specification attached as Appendix "B" of this Bylaw;
- (l) that the Town has completed a visual inspection of the primary services by

the Town Engineer or his designate and rectification of construction deficiencies stated.

- 7.4 An agreement entered into between the Town and the subdivider pursuant to Section 7.3(b) shall be executed in duplicate, signed by the Mayor and the Clerk on behalf of the Town and by the subdivider prior to endorsement of approval by the Development Officer and shall contain terms with respect to:
- (a) commencement and completion dates for construction and installation of secondary services;
 - (b) the terms and conditions of any security posted in connection with this agreement;
 - (c) any other matter required by the provisions of this bylaw.
- 7.5 Upon completion of the secondary services, as per 7.4(a), the subdivider shall provide the following as a prerequisite for acceptance of these services:
- (a) Maintenance Bond for 10% of the actual cost for installation of the secondary services from date of substantial completion of secondary services;
 - (b) "As Built" reproducible drawings of secondary services. (Accomplished by revision of the primary "As Built" drawings);
 - (c) test reports to confirm that the specified standards of material were achieved;
 - (d) Surveyor's Certificate stating that all secondary services are within the proposed rights-of-way, easement(s), and walkway(s);
 - (e) a certificate, stamped and signed by a Professional Engineer of Nova Scotia stating that all secondary services are constructed to the Town of Kentville's Municipal Services Specifications attached as Appendix "B" of the Bylaw;
 - (f) a report by the Engineer or his designate stating that he has completed a visual inspection of the primary and secondary services and that any deficiencies as indicated have been rectified.

PART 8 GENERAL PROVISIONS

8.1

- (a) All lots to be approved on a final plan of subdivision shall abut a street.
- (b) All lots for which approval is requested shown on a final plan of subdivision and the remainder lot, if any, for which no approval is requested shall meet the requirements for minimum lot area and lot frontage contained in the Land Use By-Law.
- (c) Where a lot is not serviced by water and sewer, lot requirements must meet the *On Site Sewage Disposal Regulations*.
- (d) A proposed street shown on a final plan of subdivision shall have a minimum right-of-way of 15.24 metres (50 feet).
- (e) The approval of the Development Officer shall not be endorsed on a final plan of subdivision showing any proposed street until the deed to such street has been accepted by the Town.
- (f) All lots to be approved on a tentative or final plan of subdivision, and a remainder lot, if any, shall have minimum width and minimum depth of at least 6 metres (19.7 feet).

8.2

- (a) A street, unbroken by an intersection, shall not exceed 365.76 metres (1,200 feet) in length unless a minimum of one walkway is constructed, in which case the block shall not exceed 518.16 metres (1,700 feet) in length.
- (b) The minimum width of a walkway right-of-way shall be 4.57 metres (15 feet) excepting that where municipal sewer and water systems are to be constructed within the area designated for a walkway, then the minimum width of the walkway right-of-way shall be 6.10 metres (20 feet).

8.3

There shall be a maximum of four street approaches in an intersection.

8.4

Where a proposed street intersects a street, the minimum sight distance along the street shall be 65.53 metres (215 feet).

8.5

The distance between intersections shall not be less than 60.96 metres (200 feet), unless otherwise permitted by the Engineer in accordance with generally acceptable engineering practice.

- 8.6 Streets shall intersect at right angles or as nearly as possible to right angles.
- 8.7 All proposed intersecting streets must intersect at an angle of 70 to 90 degrees for a minimum distance of 30.48 metres (100 feet) from the intersection measured from the respective centre lines.
- 8.8 The length of a cul-de-sac shall not exceed 152.40 metres (500 feet) from an intersection to the turning circle, unless there exists an emergency exit of 4.57 metres (15 feet) wide to a street, in which case the length of the cul-de-sac shall not exceed 228.6 metres (750 feet).
- 8.9 Wherever possible, side lot lines shall be substantially at right angles to a public street, a radial to a curved public street.
- 8.10 Notwithstanding the minimum lot frontage requirement contained in the Land Use By-Law, where a lot fronts on a street which is not at right angles to the sides of the lot or is curved, the lot shall have the required minimum lot frontage measured at the minimum building line. The actual lot frontage measured at the street line shall not be less than 2/3 the minimum requirement contained in the Land Use By-Law.
- 8.11 Notwithstanding the minimum lot frontage requirement contained in the Land Use By-Law, where a parcel of land contains more than one main structure legally in existence prior to December 5, 1980 the Development Officer may approve a final plan of subdivision showing a separate lot for each main structure, provided:
- (a) The lot frontage and lot area for any parcel so created is not less than 80% of the required minimum as specified in the Land Use By-Law.
 - (b) A minimum yard setback of 1.5 metres (4.92 feet) can be established; and
 - (c) Each proposed lot
 - (i) is serviced by municipal sewage system, or
 - (ii) is approved by the Department of Health for the installation of an on-site sewage disposal system, and the Development Officer is notified in writing of such approval.
- 8.12 Notwithstanding the minimum lot area and lot frontage requirements contained in the Land Use By-Law, the Development Officer may approve a plan of subdivision altering the boundaries of two areas of land where:
- (a) no additional lots are created;
 - (b) each lot
 - (i) meets the minimum dimensions for lot frontage required by

- (ii) the Land Use By-Law, or
has not had its frontage, if any, reduced; and
 - (c) each lot
 - (i) meets the specification for lot area required by the Land Use By-Law, or
 - (ii) has not had its area reduced.

8.13 When the proposed lot is not surveyed, the final plan of subdivision prepared pursuant to section 8.12 shall

- (a) Be certified and stamped by a Nova Scotia Land Surveyor that the boundaries of the parcel proposed to be added to the existing area of land have been surveyed; said boundaries shall be shown as a heavy solid line, except the common boundary between the existing lots which shall be shown as a heavy broken line and certified as being the common boundary,
- (b) Notwithstanding subsection 6.11.2 other than the new boundaries which have been surveyed pursuant to clause 7.6.1 show the remaining boundaries of the resulting lot for which approval is requested described graphically as a lighter solid line, and
- (c) Have the following notation affixed to the plan adjacent to the certification required by *The Nova Scotia Land Surveyors Act* and regulations made thereunder, and such notation is signed by the surveyor:

"NOTE: The only boundaries shown on this plan which have been surveyed are the boundaries of Parcel _____. The common boundary between existing Lots _____ and _____, which is shown by a heavy broken line, is hereby certified as having been the common boundary.

The remaining boundaries of resulting Lot ____ shown on this plan are a graphic representation only and do not represent the accurate shape or position of the lot boundaries which are subject to a field survey."

8.14 Notwithstanding Section 8.1(b), the Development Officer may approve a maximum of two lots in accordance with Section 279 of the *Municipal Government Act*, provided all other requirements of this subdivision by-law.

8.15 Section 8.14 shall not vary the minimum dimensional requirements for lot area for

lots served or to be served by an on-site sewage disposal system.

- 8.16 Notwithstanding the minimum lot area and lot frontage requirements contained in the Land Use By-Law, where a development component of a permanent nature, such as a structure, driveway, well, or septic tank, is encroaching in or upon an immediately adjacent area of land, the Development Officer may approve a plan of subdivision where necessary and practical to remove the encroachment.
- 8.17 Where the lots created pursuant to section 8.16 are not surveyed, the provisions of section 8.13 shall apply
- 8.18. Cul-de-sacs or other dead end streets shall have a turn-a-round with a minimum radius of 13.72 metres (45 feet) from the centre of the cul-de-sac or dead end street.
- 8.19 (a) Where a street in an adjoining subdivision abuts the boundaries of a proposed subdivision, the street in the proposed subdivision shall, if reasonably feasible, be laid out in prolongation of the existing street, unless it would be in violation of this bylaw.
- (b) The grade of a proposed public street measured for at least 30.48 metres (100 feet) shall be a maximum of 8% and a minimum of 0.5%, unless the Engineer determines the topography dictates otherwise in accordance with generally acceptable engineering practice.
- 8.20 (a) An application to amend or repeal an endorsed plan of subdivision shall be in accordance with Section 271 (9) of the Municipal Government Act, hereto attached as Appendix "A" and shall satisfy the requirements of this Bylaw concerning approvals of final plans of subdivision.
- (b) The application to amend shall refer to the plan of subdivision as originally endorsed and such reference shall include the file number of the earlier subdivision plan filed at the Registry of Deeds.

PART 9 PARKLAND TRANSFERS

- 9.1 (a) At the time of endorsement of approval on the final plan of subdivision by the Development Officer, the subdivider shall reserve and convey to the Town free of encumbrances, for park, playground, or similar public purposes, an area of usable land to the Town equal to 5% of the area of land shown on the final plan of subdivision, exclusive of streets, walkways, and any remainder lot.

- (b) The subdivider may reserve and convey to the Town, under section 9.1(a) above, more than the required five percent.
 - (c) As an alternative to the requirements of Section 9.1(a) and pursuant to the Municipal Government Act, the Clerk may accept for park, playground, or similar public purpose, a sum of money equal to 5% of the assessed value of the new lots created, exclusive of streets, walkways and any remainder lot.
- 9.2 As a further alternative to Section 9.1(a), before endorsement of the final plan of subdivision a subdivider may offer to Council, and at Council's option the Clerk may accept an amount of usable land of equivalent value to that required under Section 9.1(a) outside the area of land to be subdivided and within the boundaries of the Town.
- 9.3 At the option of Council, a combination of 9.1(a) and 9.2 may be accepted by the Clerk, providing that it is equivalent in value to that required under Section 9.1(a).
- 9.4 Waiver
Sections 9.1, 9.2, and 9.3 of this bylaw do not apply where:
- (a) the subdivision is the consolidation of two or more lots; or
 - (b) the subdivision creates no more than 2 lots
 - (c) lot boundaries are changed but no new vacant lots are created; or
 - (d) the subdivision is of land zoned commercial or Industrial in the Town's Land Use Bylaw. **(Adopted February, 2003)**

PART 10 REQUIREMENT FOR ENDORSEMENT AND FILING OF FINAL PLANS OF SUBDIVISION

- 10.1
- (a) The Development Officer shall forward a copy of the endorsed final plan of subdivision to the subdivider.
 - (b) Pursuant to and in addition to Section 285 of the Municipal Government Act, the Development Officer shall give notice of the endorsement of approval on the final plan of subdivision to:
 - (i) the Council of the Town in which the land is located;
 - (ii) the Director, Planning and Development;

- (iii) the surveyor, and
- (iv) any other department or agency of the Province or the Town which has been requested to review the final plan of subdivision.

10.2 The following information shall be written or stamped on any final plan of subdivision which is endorsed:

- (a) "This final plan of subdivision is approved for lots _____;
- (b) where applicable
 - (i) _____ is/are suitable for the construction and installation of an on site sewage disposal system for (proposed use)_____

 and any conditions which apply are contained in a report dated _____ and are available from the Department of the Environment; or
 - (ii) **Important notice**
 Lot(s) _____ has/have been created for a purpose which does not require an on site sewage disposal system and will not be eligible for a permit to install a system unless the requirements of the Department of the Environment are met
- (c) Where applicable:
 - (i) A notation stating that access to the public street as shown has been approved for the lots created by this final plan and any conditions which apply are listed on the plan or are contained in a report dated _____ available from the authority having jurisdiction for public streets.
 - (ii) Where a lot which abuts a public street does not have an approved access point along the street, a notation stating that direct access to the street is not permitted.

10.3 Pursuant to Section 285 of the Municipal Government Act, hereto attached as Appendix "A", the Development Officer shall forward, by certified mail or hand

deliver, the endorsed final plan of subdivision to the office of the Registrar of Deeds for the registration district in which the land is located and pay the fees required.

- 10.4 In accordance with Section 285 of the Municipal Government Act, included in the attached Appendix "A", the Development Officer shall register a notice, in the form specified in Schedule "B", in the Registry of Deeds which indicates approval of the final plan of subdivision and shall forward to the Registrar of Deeds the fees required to be paid by the subdivider pursuant to Part 11 of these regulations.

PART 11 FEES FOR THE FILING OF A FINAL PLAN OF SUBDIVISION

- 11.1 The subdivider shall pay the fees contained in Schedule "C" for filing the endorsed final plan of subdivision and for certification of a copy of the plan by the Registrar of Deeds and for registering a notice of approval of the plan.
- 11.2 The fee referred to in subsection 11.1 shall be paid at the time of application for approval of the final plan of subdivision by cheque or money order made payable to the Registry of Deeds.
- 11.3 Where the final plan of subdivision does not receive endorsement of approval by the Development Officer, the subdivider shall be entitled to the return of the cheque or money referred to in subsection 11.2.
- 11.4 At the time of application for approval of a final plan of subdivision, the subdivider shall also pay a non-refundable processing fee of \$75.00 plus \$4.00 per lot.

PART 12 PLAN REPEAL

- 12.1 Where a plan of subdivision has been approved, the approval may be repealed for any or all of the lots created by the plan of subdivision.
- 12.2 Any person requesting a repeal shall submit to the Development Officer an application in the form specified in Schedule "C".
- 12.3 The notification and approval provisions of the Act which apply to the approval of a plan of subdivision shall also apply to a repeal.

- 12.4 When the Development Officer is satisfied that an application for repeal is complete, the Development Officer may forward a copy to any agency which provided an assessment or recommendations on the original plan of subdivision.
- 12.5 Where buildings have been erected on the subject lands after the date of the subdivision approval sought to be repealed, no repeal shall be granted which would cause these buildings to be in violation of any building code regulations, land use bylaw, or any sewage disposal regulations unless the violation can be rectified by the approval of a new plan or instrument of subdivision filed at the registry of deeds on the same day the repeal is filed.
- 12.6 Parts 1 to 11 of this Bylaw do not apply to the repeal of a plan of subdivision.
- 12.7 The Development Officer shall forward to the Registry of Deeds the repeal in the form specified in Schedule "D".
- 12.8 The Development Officer shall forward a copy of the repeal referred to in Section 12.7 to:
- (a) the subdivider, and
 - (b) any agency which provided an assessment or recommendations on the original plan or instrument of subdivision.
- 12.9 At the time of application the subdivider for the repeal of a subdivision the subdivider shall submit to the Development Officer
- (a) The fees contained in the *Cost and Fees Act*, and its regulations, for registering a repeal or a plan or instrument of subdivision; and
 - (b) a processing fee of \$75.00 plus \$4.00 per lot per application for repeal of a subdivision.
- 12.10 Where the Development Officer refuses to repeal a subdivision the Development Officer shall return the fees referred to in clause 12.9(a) to the subdivider.
- 12.11 Where the Development Officer refuses to repeal a subdivision, the development Officer shall give notice of the refusal to the subdivider and to all agencies which were forwarded the application for repeal.

SCHEDULE A
APPLICATION FOR SUBDIVISION APPROVAL

Please Print Clearly.



FOR OFFICE USE ONLY
FILE NO. _____

SUBDIVISION RELATED INFORMATION

NAME OF LAND OWNER(S) _____

ADDRESS OF LAND OWNER(S) _____ POSTAL CODE _____

SUBDIVISION NAME (IF DIFFERENT FROM OWNER) _____

DOCUMENTS TO BE RETURNED TO _____

CORRESPONDENCE TO BE DIRECTED TO _____

LAND TO BE SUBDIVIDED

LOCATION _____

TYPE OF ALLOCATION ☐ PRELIMINARY (OPTIONAL) ☐ TENTATIVE ☐ FINAL

TYPE OF DEVELOPMENT PROPOSED ☐ SINGLE FAMILY ☐ OTHER (SPECIFY) _____

APPROVAL REQUESTED FOR LOT(S) _____

WATER SERVICES

EXISTING PROPOSED

MUNICIPAL SYSTEM ☐ ☐
DRILLED WELL ☐ ☐
DUG WELL ☐ ☐

OTHER (SPECIFY) _____

SEWER SERVICES

EXISTING PROPOSED

MUNICIPAL SYSTEM ☐ ☐
ON-SITE ☐ ☐

OTHER (SPECIFY) _____

ACCESS

EXISTING PROPOSED

PUBLIC STREET ☐ ☐

OTHER (SPECIFY) _____

☐ REGISTRATION FEE SUBMITTED (PAYABLE TO THE REGISTRAR OF DEEDS TO ACCOMPANY ALL FINAL PLANS OF SUBDIVISION.)

☐ SUBDIVISION APPLICATION FEE SUBMITTED (PAYABLE TO THE TOWN OF KENTVILLE TO ACCOMPANY ALL FINAL PLANS OF SUBDIVISION.)

SIGNATURE OF APPLICANT _____ DATE _____

FOR OFFICE USE ONLY

TYPE OF APPROVAL

PLAN OF LEGAL SURVEY _____
NUMBER OF LOTS APPROVED BY:
SUBDIVISION _____
RESUBDIVISION OR CONSOLIDATION _____
TOTAL _____

ACCESS - APPROVED LOTS ONLY

	NO. OF LOTS
PUBLIC	_____
PRIVATE	_____
SCHEDULE 'B'	_____
WATER	_____
NONE	_____
TOTAL	_____

SERVICES - APPROVED LOTS ONLY

	NO. OF LOTS
PUBLIC SEWER & WATER	_____
PUBLIC SEWER ONLY	_____
PUBLIC SEWER WITH ON-SITE SEPTIC CLASS A, B & C, COMBINED	_____
PUBLIC SEWER WITH ON-SITE SEPTIC CLASS D	_____
TOTAL	_____



SUBDIVISION APPROVAL

FILE NUMBER



SCHEDULE B

[Back to Main Form](#)



*Notice of Approval for a Plan of Subdivision in Accordance with Section 285 of the
Municipal Government Act*

Name of Owner(s) :

Comments:

Location : KENTVILLE, NS, CANADA

Date of Approval : For Lot(s) :

Surveyor : Date of Plan :

Date :

Development Officer
Town of Kentville

Plan of Subdivision filed in the Registry of Deeds as Plan # _____

Dated this _____ day of _____, 20____

Schedule "C"

Fees for Registrar of Deeds

- (1) For filing, entering or registering an instrument, document or plan affecting real property. \$ 70.00

Where instruments, documents or plans are combined or attached together, or where several instrument types are combined together in one instrument or document, each plan, instrument or document type shall be considered to be separate and the fee shall be payable in relation to each.
- (2) Despite subsection (1), the fee for entering and registering each release of mortgage prior to February 1, 2002, shall be \$40 plus \$1 per page and on and after February 1, 2002, shall be \$70.
- (3) For certifying or furnishing number, date, time or any other information for each such document \$ 10.00
- (4) For searching any books, indexes or files per person per half day \$ 5.00
- (5) For each filed document when required by the registrar to be produced for inspection \$ 2.00
- (6) For supplying copies of recorded or filed documents, plans, etc. for each page copied by a copier - per page \$ 1.00
- (7) For entering and registering documents under the *Condominium Act*
Declarations \$100.00
plus per unit \$ 10.00
Any following documents - by-laws, etc \$ 35.00
Certifying any document under this Act \$ 25.00
- (8) For preparing foreclosure certificate or any other certificate of title required in any other action or proceeding in any court when required of the registrar by statute \$125.00
For bringing certificate up to date (within 12 months) \$ 25.00
- (9) For supplying of statistical information as authorized by the Attorney General per name \$ 1.00
- (10) All fees shall be paid at the time of registration or filing of the document referred to, or at the time of service.
- (11) Where in any enactment a fee or charge is prescribed for a search or service described herein and that fee or charge is in conflict herewith, the fee or charge set forth herein shall govern.
- (12) For copying any document in the paper-based personal property registry at the Registry of Deeds and sending it by mail or fax to the requesting party \$ 14.00
- (13) Notwithstanding Item (11), fees for the use of the electronic personal property registry shall be as specified in the regulations made pursuant to the *Personal Property Security Act*.

Schedule "D"
Repeal of A Plan of Subdivision

Name of Owner(s)

Name of Subdivision

Location

Date of Approval of the Subdivision

Being Registration # _____ at the Registry of Deeds.

THIS SUBDIVISION IS REPEALED

Entire Plan _____ or Only Lots # _____

Dated at _____ in the,

Province of Nova Scotia, this ----- day of -----, -----.

(Date)

(Year)

APPENDIX A –MUNICIPAL GOVERNMENT ACT EXCERPT – PART 9

268 (1) An application for subdivision approval shall

- (a) be made to the development officer; and
- (b) include a plan of subdivision prepared by a Nova Scotia land surveyor.

(2) Subdivision approval is not required for a subdivision

- (a) where all lots to be created, including the remainder lot, exceed ten hectares in area;
- (b) resulting from an expropriation;
- (c) resulting from an acquisition or disposition of land by Her Majesty the Queen in right of the Province or in right of Canada or by an agency of Her Majesty;
- (d) of a cemetery into burial lots;
- (e) resulting from an acquisition of land by a municipality for municipal purposes;
- (f) resulting from the disposal, by a municipality, of a street or part of a street;
- (g) of an abandoned railway right of way;
- (h) that is a consolidation of a part of an abandoned railway right of way with adjacent land;
- (i) resulting from a lease of land for twenty years or less, including any renewal provisions of the lease;
- (j) resulting from a devise of land by will executed on or before January 1, 2000.

(3) An affidavit of the person making a disposition or encumbrance of land that would create a subdivision that specifies the exemption from the requirement for approval and the facts that entitle the subdivision to the exemption is sufficient proof that approval of the subdivision is not required, unless the person to whom the disposition or encumbrance is made has notice to the contrary.

269 (1) Notwithstanding clause 268(1)(b), in a county or district municipality where so provided in the provincial subdivision regulations or a subdivision by-law, an application for subdivision approval may be made by instrument of subdivision rather than by a plan of subdivision.

(2) This Section applies only where the subdivision does not create a street or private road and results in

(a) each lot created being at least one hundred thousand square feet in area and having dimensions that would permit it to contain a two hundred and fifty foot diameter circle within its boundaries; or

(b) an increase in size of an existing lot by the addition of a part of an abutting lot, if the lot reduced in area complies after the subdivision with the frontage and area requirements set out in the provincial subdivision regulations or municipal subdivision by-law, as the case may be.

(3) An instrument of subdivision shall be in the form prescribed in the provincial subdivision regulations.

(4) Except as otherwise provided in this Act, the procedure and requirements for approval of a subdivision apply to subdivision by instrument and a reference to a plan of subdivision includes an instrument of subdivision.

(5) For greater certainty, no instrument of subdivision that adds or consolidates parcels or areas of land may be approved by a development officer until the development officer is provided with

(a) executed deeds suitable for registering to effect the addition or consolidation; and

(b) the fees for registering the deeds,

and the development officer shall register the deeds with the approved instrument.

270 (1) The Minister shall prescribe provincial subdivision regulations.

(2) Provincial subdivision regulations shall include

(a) procedures for preliminary evaluation and tentative and final approvals;

(b) requirements for preliminary evaluation and tentative and final approvals;

(c) the form of a notice of approval of subdivision;

(d) provisions for the repeal of a subdivision; and

(e) provisions for the referral of an application to a department or agency of the Province or of a municipality.

(3) Provincial subdivision regulations may include

(a) requirements for access to a lot;

- (b) requirements respecting the shape of a lot;
- (c) where they are not prescribed in a land-use by-law, requirements for minimum lot frontage and minimum lot area;
- (d) provisions allowing a waiver of any requirements of the regulations and the circumstances in which a waiver may be allowed;
- (e) the fee for the processing of applications for approval or repeal of a subdivision, including recording and filing fees;
- (f) procedures and requirements for concept plans;
- (g) procedures for the approval of, form of and requirements for approval and registration of instruments of subdivision in a county or district municipality;
- (h) requirements for private roads;
- (i) any other matter relating to the division of land.

(4) At least thirty days before prescribing or amending provincial subdivision regulations, the Minister shall

- (a) send a copy of the proposed regulations to the clerk of every municipality that will be affected by the regulations and invite written comments; and
- (b) place a notice in a newspaper circulating in the area that will be affected by the regulations stating where the proposed regulations may be inspected and invite written comments.

(5) Where, on the coming into force of this Act, a municipality has not adopted a subdivision by-law, the municipality is deemed to have adopted the provincial subdivision regulations applicable to the municipality as its subdivision by-law.

271 (1) A subdivision by-law applies to the whole of a municipality, but the by-law may contain different requirements for different parts of the municipality.

(2) A subdivision by-law shall include

- (a) any requirements prescribed by the provincial subdivision regulations applicable to the municipality unless
 - (i) the municipality adopts more stringent requirements, or
 - (ii) the municipal requirements implement the municipal planning strategy;
- (b) procedures for preliminary evaluation and tentative and final approvals;
- (c) requirements for preliminary evaluation and tentative and final approvals;

- (d) the form of a notice of approval of subdivision;
- (e) provisions for the repeal of a subdivision; and
- (f) provisions for the referral of an application to a department or agency of the Province or of the municipality.

(3) A subdivision by-law may include

- (a) requirements for access to a lot;
- (b) requirements respecting the shape of a lot;
- (c) where they are not prescribed in a land-use by-law, minimum lot frontage and minimum lot area;
- (d) provisions allowing a waiver of certain requirements of the by-law and the circumstances in which a waiver may be allowed;
- (e) procedures for the approval of, form of and requirements for approval and registration of instruments of subdivision in a county or district municipality;
- (f) the fee for the processing of applications for approval or repeal of a subdivision, including recording and filing fees;
- (g) requirements for the design and construction of streets, private roads, wastewater facilities, stormwater systems, water systems and other services;
- (h) requirements for the transfer to the municipality of useable land, or equivalent value, for park, playground and similar public purposes, provided that the land required to be transferred does not exceed
 - (i) five per cent of the area of the lots shown to be approved on the final plan of subdivision, or
 - (ii) ten per cent of the area of the lots shown to be approved on the final plan of subdivision, if the requirement and the reasons for it are provided for in a municipal planning strategy;
- (i) procedures and requirements for concept plan approval;
- (j) the identification of transportation reserves and requirements that lots be designed so as not to impede a transportation reserve;
- (k) regulate the width of streets or private road rights-of-way on which subdivisions are permitted.

(4) Where a municipal planning strategy so provides, a subdivision by-law may

(a) regulate or prohibit new municipal streets in all, or part, of the municipality where, in the opinion of the council, the streets would be premature;

(b) regulate or prohibit subdivisions on private roads in all, or part, of the municipality;

(c) limit the number of lots that may be created from an area of land in a calendar year.

(5) A subdivision by-law may require that prior to approval of a final plan of subdivision the applicant shall

(a) install water systems, wastewater facilities, stormwater systems and other services in the area of land being subdivided to the standards prescribed by the municipality;

(b) install trees for streets, bus bays, sidewalks and pathways; and

(c) lay out, construct, grade and pave, in whole or in part, any street in the area of land being subdivided to the standards prescribed by the municipality,

or in the alternative, enter into a bond or other security satisfactory to the municipality to

(d) install and provide the water systems, wastewater facilities, stormwater systems and other services in the area of land being subdivided to the standards prescribed by the municipality;

(e) install the trees along streets, bus bays, sidewalks and pathways required by the by-law; and

(f) lay out, construct, grade and pave, in whole or in part, any street in the area of land being subdivided to the standards prescribed by the municipality,

and in either case provide a bond or other security, satisfactory to the municipality, for the maintenance of the services for a maximum of two years from the date the services are accepted by the municipality as having been installed to the standards prescribed by the municipality.

(6) A subdivision by-law may require that an applicant have, or permit an applicant to have, a qualified professional certify to the municipality that the services have been designed and installed to the standards prescribed by the municipality, and the municipality may rely on the certificate so given.

(7) A subdivision by-law may authorize the municipality to require an applicant for subdivision approval to provide water systems, wastewater facilities, stormwater systems and other services, including streets, in the area of land being subdivided with a capacity exceeding the anticipated requirements of the applicant's subdivision, if the

municipality reimburses the applicant for any costs incurred with respect to the excess capacity.

(8) Any cost to a municipality pursuant to subsection (7) may, at the option of the council, be recovered by the municipality in the same manner as an infrastructure charge or in another manner.

(9) The procedure for the adoption, amendment, repeal, approval and publication of a subdivision by-law is the same as the procedure prescribed for planning documents.

272 (1) A council may, in the subdivision by-law, require a person applying for final approval of a subdivision to

(a) provide, at no cost to the municipality, easements for the drainage of stormwater in those circumstances specified in the subdivision by-law on the land that is proposed to be subdivided or outside that land;

(b) transfer to the municipality land, including easements, that may be necessary to operate and maintain stormwater systems;

(c) enter into an agreement to carry out a drainage plan or grading plan required by a subdivision by-law and to provide security satisfactory to the engineer to secure performance of the agreement.

(2) A subdivision by-law may

(a) specify standards and requirements for an easement required by the subdivision by-law;

(b) set standards and requirements respecting drainage master plans, drainage plans and grading plans;

(c) prescribe when drainage master plans, drainage plans and grading plans are required.

273 (1) In this Section, "equivalent value" includes cash or facilities, services or other value in kind, related to parks, playgrounds and similar public purposes or any combination thereof, determined by the municipality to be equivalent to the value of the land as determined by the assessor pursuant to this Section.

(2) Where a subdivision by-law provides for the transfer to the municipality of useable land, the applicant may provide land, equivalent value or a combination of land and equivalent value equal to the amount of the transfer required by the subdivision by-law.

(3) The subdivision by-law may specify the cases in which land only, equivalent value only, or land and equivalent value in a specified combination shall be transferred.

(4) Where equivalent value is to be provided in lieu of transferring land, the amount required shall be determined by an assessor based on the market value of the proposed lots excluding streets, easements and the residue of the land of the applicant, and this valuation may be appealed in the same manner as an assessment.

(5) Where cash is paid in lieu of transferring land, the council shall use the funds for the acquisition of, and capital improvements to, parks, playgrounds and similar public purposes and may use the interest on any funds not expended for those purposes for the operation and maintenance costs of parks, playgrounds and similar public purposes.

(6) A subdivision by-law may include a definition of useable land, which may specify a minimum area, minimum dimensions, location and a method of establishing a minimum quality of the land.

(7) Useable land does not include any streets or easements conveyed to the municipality.

(8) The area of useable land to be conveyed to the municipality is calculated on the area of the lots to be approved, as shown on the final plan of subdivision, excluding streets and the residue of the land of the applicant.

(9) A development officer shall accept any land offered by an applicant that meets the definition of useable land contained in the subdivision by-law.

(10) An applicant may, with the approval of the council, convey to the municipality an area of land in the municipality of equal value outside the area being subdivided, in lieu of land in the subdivision.

(11) An applicant may, with the approval of the council, provide a bond or other security acceptable to the council for the conveyance to the municipality of land in a future phase of the subdivision rather than conveying land from the approved phase of the subdivision or equivalent value.

(12) Any land conveyed to a municipality pursuant to this Section shall be

(a) free and clear of all encumbrances except an easement or right of way that does not materially interfere with the use and enjoyment of the land; and

(b) used for parks, playgrounds and similar public purposes.

(13) Where council determines that any land transferred pursuant to this Section might no longer be needed for parks, playgrounds or similar public purposes, the council may sell the land, after notifying the owners of lots in the subdivision with respect to which the land was conveyed to the municipality, by notice published in a newspaper circulating in the municipality at least fourteen days prior to the council meeting at which

a decision to sell will be made, and the proceeds shall be used for parks, playgrounds and similar public purposes.

274 (1) A municipal planning strategy may authorize the inclusion of provisions for infrastructure charges in a subdivision by-law.

(2) Infrastructure charges for

(a) new or expanded water systems;

(b) new or expanded wastewater facilities;

(c) new or expanded stormwater systems;

(d) new or expanded streets;

(e) upgrading intersections, new traffic signs and signals and new transit bus bays,

may be imposed in a subdivision by-law to recover all, or part, of the capital costs incurred, or anticipated to be incurred, by a municipality by reason of the subdivision and future development of land and infrastructure charges for land, planning, studies, engineering, surveying and legal costs incurred with respect to any of them.

(3) The subdivision by-law shall set out the infrastructure charge areas in which infrastructure charges are to be levied, the purposes for which infrastructure charges are to be levied and the amount of, or method of calculating, each infrastructure charge.

(4) Infrastructure charges may be set at different levels related to the proposed land use, zoning, lot size and number of lots in a subdivision and the anticipated servicing requirements for the infrastructure charge area.

(5) Infrastructure charges may not be imposed if an infrastructure charge has been paid with respect to the area of land, unless further subdivision of the land will impose additional costs on the municipality.

(6) An infrastructure charge may only be used for the purpose for which it is collected.

(7) Final approval of a subdivision shall not be granted unless the infrastructure charges are paid or the applicant has entered into an agreement with the municipality securing the payment of the infrastructure charges.

(8) Infrastructure charges are a first lien on the land being subdivided and may be collected in the same manner as taxes.

(9) A by-law in effect on the date this Act comes into force that provides for a trunk sewer tax imposed on each lot in a new or existing subdivision is deemed to be a by-law made pursuant to this Section.

275 (1) An applicant and a municipality may enter into an infrastructure charges agreement that may

- (a) provide for the payment of infrastructure charges in installments;
- (b) permit the applicant to provide certain services or extended services in lieu of the payment of all, or part, of the charge;
- (c) provide for security to ensure that the infrastructure charges are paid when due;
- (d) provide for any other matter necessary or desirable to effect the agreement.

(2) A subdivision by-law may prescribe the circumstances in which an infrastructure charges agreement may be entered into and the general terms that such an agreement shall contain.

276 An infrastructure charges agreement

- (a) is binding on the land that is subdivided;
- (b) shall be registered in the registry and shall be indexed as a conveyance to and from the owner of the land that is subdivided; and
- (c) is binding on each individual lot in a subdivision, to the extent specified in the agreement.

277 (1) Within fourteen days of receiving an application for subdivision approval, the development officer shall

- (a) determine if the application is complete; and
- (b) where the application is incomplete, notify the applicant in writing, advising what is required to complete the application.

(2) A completed application for subdivision approval that is neither approved nor refused within ninety days after it is received is deemed to be refused, unless the applicant and the development officer agree to an extension.

(3) The development officer shall inform the applicant of the reasons for a refusal in writing.

278 (1) An application for subdivision approval shall be approved if the proposed subdivision is in accordance with the enactments in effect at the time a complete application is received by the development officer.

(2) An application for subdivision approval shall be refused where

- (a) the proposed use of the lots being created is not permitted by the land-use by-law;

- (b) the proposed lots do not comply with a requirement of the land-use by-law, unless a variance has been granted with respect to the requirement;
- (c) the proposed lots would require an on-site sewage disposal system and the proposed lots do not comply with requirements established pursuant to the *Environment Act* for on-site sewage disposal systems, unless the owner has been granted an exemption from technical requirements by the Minister of the Environment, or a person designated by that Minister;
- (d) the development officer is made aware of a discrepancy among survey plans that, if either claimant were completely successful in a claim, would result in a lot that cannot be approved;
- (e) the proposed access to a street does not meet the requirements of the municipality or the Province;
- (f) the proposed subdivision does not meet the requirements of the subdivision by-law and no variance is granted; or
- (g) the proposed subdivision is inconsistent with a proposed subdivision by-law or a proposed amendment to a subdivision by-law, for a period of one hundred and fifty days from the publication of the first notice advertising the council's intention to adopt or amend the subdivision by-law.

279 Where a subdivision by-law specifies minimum lot dimensions or lot area and the by-law so provides, the development officer may approve a plan of subdivision that shows not more than two lots that do not meet these requirements, provided that the lot dimensions and area are not less than ninety per cent of the required minimums.

280 (1) No plan of subdivision may be approved by a development officer where

- (a) the plan shows a street to be owned by the municipality, unless the engineer has approved the design and construction standards of the street, and any intersection with a street, owned by the municipality;
- (b) the plan shows a proposed intersection with a street owned by the Province, unless the intersection has been approved by the Minister of Transportation and Public Works, or a person designated by that Minister; or
- (c) the Minister of Transportation and Public Works, or a person designated by that Minister, or the engineer advises that the probable volume of traffic from the development will create unsafe conditions for which no remedial arrangements have been made.

(2) The owners of lots shown on a plan of subdivision as abutting on a private right of way are deemed to have an easement over the private right of way for vehicular and pedestrian access to the lot and for the installation of electricity, telephone and other services to the lot.

(3) The new streets and new extensions of streets shown on a plan of subdivision, excluding roads that are shown on the plan as private roads, are vested absolutely in the municipality in which they are situate when the final approved plan is filed in the registry.

281 A development officer shall approve a plan of subdivision prepared to carry out a development agreement authorized by a municipal planning strategy and land-use by-law, notwithstanding that the plan does not comply with the subdivision by-law, if the plan complies with the terms of the agreement.

282 (1) No plan of subdivision that adds or consolidates parcels or areas of land may be approved by a development officer until the development officer is provided with

(a) executed deeds suitable for registering to effect the addition or consolidation; and

(b) the fees for registering the deeds.

(2) The development officer shall register the deeds with the approved plan.

283 Where a tentative plan of subdivision is approved pursuant to the subdivision by-law, a lot or lots shown on the approved tentative plan shall be approved at the final plan of subdivision stage, if

(a) the lots are substantially the same as shown on the tentative plan;

(b) any conditions on the approval of the tentative plan have been met;

(c) the services to be constructed have been constructed and accepted by the municipality or acceptable security has been provided to the municipality to ensure the construction of them; and

(d) the complete application for final subdivision plan approval is received within two years of the date of the approval of the tentative plan.

284 The refusal to approve a concept plan or tentative or final plan of subdivision may be appealed to the Board by the applicant in accordance with the procedure for an appeal to the Board set out in Part VIII.

285 (1) No final plan of subdivision shall be filed in the registry unless the plan has been approved by a development officer in accordance with this Part.

(2) A development officer, or a person acting for a development officer, shall forward the approved final plan of subdivision to be filed in the registry within seven days of its approval.

(3) At the same time as an approved final plan of subdivision is filed in the registry, a notice of the approved final plan of subdivision shall be registered in the registry.

(4) A notice of the approved final plan of subdivision shall be indexed as a conveyance from the person whose land is divided.

(5) Where an approved final plan of subdivision effects an addition or consolidation, the notice of the plan shall be indexed as a conveyance from the person whose land is divided and from the person whose land is enlarged as a result of the addition or consolidation.

286 Where a lot to be created by a plan of subdivision crosses a municipal boundary, an approval is required from each municipality in which the proposed lot is located.

287 (1) A subdivision of land takes effect when the plan of subdivision is filed in the registry.

(2) No deed, mortgage, lease or other instrument which would result in the subdivision of land for which subdivision approval is required has effect until the subdivision is approved and the plan is filed.

(3) A deed, mortgage, lease or other instrument, which purports to subdivide land and is executed before the approval and the filing of a plan of subdivision in the registry in accordance with this Part, is deemed

(a) to have been executed immediately after the filing of the plan of subdivision; and

(b) where the deed, mortgage, lease or other instrument has been registered in the registry, to have been duly registered at the time of the actual registration.

(4) Where two or more deeds, mortgages, leases or other instruments are deemed to have been executed at the same time, they are deemed to have been executed in the same order as they were actually executed.

(5) Where a deed, mortgage, lease or other instrument is made which results in the subdivision of land in accordance with a plan or instrument of subdivision duly approved and filed in the registry, the amendment of the plan or instrument does not restrict the right of the owner, mortgagee, lessee or other holder to execute other deeds, mortgages, leases or instruments in which the property is described as it is described in the original deed, mortgage, lease or other instrument.

288 (1) An approved final plan of subdivision may be amended, provided the amendment does not materially alter the boundaries of a lot created by the approved plan.

(2) The provisions of this Act that apply to an approved final plan of subdivision apply to an amended plan of subdivision, except the date of the approval of the amended plan is the same as that of the approved final plan of subdivision.

289 An instrument of subdivision approved pursuant to this Act or the former *Planning Act* may be amended or repealed in the same manner, and with the same effect, as an approved final plan of subdivision.

290 Nothing in this Act prevents an application for approval of or the approval of, a subdivision for which no approval is required.

291 (1) A failure to comply with

(a) this Act; or

(b) the former *Planning Act*,

or a regulation or by-law made thereunder does not affect the creation of a title or interest in real property conveyed, or purported to have been conveyed, by deed, lease, mortgage or other instrument before April 16, 1987.

(2) Subsection (1) does not affect the rights acquired by a person from a judgment or order of a court given or made in litigation or proceedings commenced before April 16, 1987.

292 A subdivision by-law adopted pursuant to a former *Planning Act* is a subdivision by-law within the meaning of this Act, to the extent that it is consistent with this Act.

APPENDIX B
MUNICIPAL SERVICES
STANDARDS & SPECIFICATIONS

APPENDIX B
2002 MUNICIPAL SERVICES STANDARDS AND SPECIFICATIONS

PART 1: **DRAWINGS**

- 1.1 All drawings submitted shall be drawn on proper drafting paper and shall contain:
- a) Plan view of recommended scale of 1:500 (1"=40') or 1:200 (1"=20'), 1:500 preferred.
 - b) Profile view to a vertical scale in the ratio of vertical to horizontal of 1:10.
 - c) Key plan.
 - d) Legend for plan and profile.
 - e) A north arrow.
 - f) Provisions for notes, revisions, dates, scale and drawing title.
 - g) All existing watercourses and their direction of flow.
 - h) Two points of known chainage on the centre line of street to be related to the N.S. Coordinate Survey System.
 - i) Survey monument number and elevation from which vertical elevations were derived.
 - j) Street lines and lot boundaries.
- 1.2 All drawings shall contain a plan and profile view of all proposed services (cross-sections and details as required).
- 1.3 All drawings shall contain a plan of proposed Subdivision lot grading as referred to in Part 13.
- 1.4 All drawings shall be stamped and signed by a Professional Engineer registered in the Province of Nova Scotia.
- 1.5 All Engineering drawings submitted shall be drawn on one of the following standard sheet sizes:
- AO 841 mm X 1189 mm (34" X 48")

- A1 594 mm X 841 mm (24" X 34")
- A2 420 mm X 594 mm (17" X 34")

1.6 All "As-constructed" drawings shall be prepared on dlar reproducible film, minimum 3 mm thickness, drawn to an appropriate scale and shall include:

- a) All items contained in Part 1, Section 1.1.
- b) Plan and profile view of all "as-constructed" service laterals, showing horizontal ties to manholes, hydrants, etc., plus invert elevations of service laterals at property line.
- c) Rock profile where applicable.
- d) A cross-section and details.
- e) The stamp and signature of a Professional Engineer Registered in the Province of Nova Scotia.

1.7 Developers are advised that the Town of Kentville is presently converting to digital mapping. Surveyed property information, where possible, should be submitted in a digital format.

PART 2: STREET SPECIFICATIONS

In all respects, the criteria set out by the Transportation Association of Canada shall service as the basic guidelines for road design in the Town of Kentville.

- 2.1 The Town of Kentville road classification and basic criteria shall be as follows:

<u>Designation</u>	<u>R-O-W</u>	<u>Min. Pavement Width</u>
Arterial	24 m - 45 m	10.5 m
Collector	15 m - 24 m	9.2 m
Local	15 m - 20 m	9.2 m
Cul-de-sac	Minimum radius of 13.72 m from centre to bulb to edge of R-O-W.	Minimum radius of 10.67 m from centre of bulb to face of curb.

- 2.2 The minimum width of a street right-of-way shall be 15.24 metres.(50').
- 2.3 All clearing and grubbing operations, including the removal of rock, shall be undertaken to the full extent of the street right-of-way. All rocks, trees, stumps and other organic matter removed during the clearing and grubbing operations shall be transported entirely from the site.
- 2.4 The proposed subgrade shall be graded with a 2% crown along the centre line. Subgrade elevation shall be established below the finished grade of the street using graded subbase material dimensions as set out in Section 2.8 of these Specifications. Where rock exists to the subgrade, it shall be fractured to 300 mm below subgrade and graded.
- 2.5 All slopes in cut and fill sections shall be constructed outside the street right-of-way and shall be a minimum of 2:1 horizontal to vertical or as otherwise required for less stable material. Rock cuts shall be a minimum of 1:4 or as otherwise required. All overhanging and/or loose rocks shall be removed and, in areas where a minimum of 1:4 cannot be obtained, slope protection shall be required.
- 2.6 In fill sections, all fill material shall be compacted in uniform layers of 300 mm and compacted to 95% standard proctor density. It shall be evenly distributed to ensure proper mixing of rocks and fill materials so that

proper compaction and consolidation can be achieved. Under no circumstances shall rock migration, creating voided areas, be permitted around underground structures or elsewhere. No rock fill exceeding 300 mm in any dimension shall be placed within the top 600 mm of subgrade elevation.

- 2.7 Under stable conditions, the base course gravel shall consists of Class "C" and Class "A" material in compacted minimum layers of 150 mm (total depth of Class "C" minimum of 300 mm) and 100 mm respectively, compacted to 98% standard proctor density, and graded with a 2% crown along the centre line of the proposed street. (Amended January 2008)
- 2.8 The required depth of base course gravels is directly dependent upon the conditions of the subgrade. Therefore, the specific design shall be determined by a Geotechnical Engineering Firm prior to placement and paving. In all cases however, the minimum depths of base courses shall be 300 mm, Class "C", and 100 mm, Class "A" gravels. (Amended January 2008)
- 2.9 The maximum allowable grade of any street shall be 8% (unless approved by the Engineer) with 4% being the maximum from 30 metres prior to the intersection of two centre lines. The minimum grade of any street shall be 0.5%.
- 2.10 All streets shall contain standard concrete curb and gutter and be paved with a minimum of 65 mm Type B-HF hot-mix asphalt as per Standard Drawing SD-1. The 38 mm seal coat of Type C-HF asphalt shall be placed by the at a later date. The area behind the curb extending to the street line shall be filled with material not exceeding 100 mm in any dimension and graded at 2% to the top of the curb. Asphalt design, placement, sampling and testing shall be in accordance with Department of Transportation Standard Specifications, Division 4, Section 4. (Amended January 2008)
- 2.11 All concrete surface structures shall be a minimum of 35 MPa, 6.5% air-entrained, 75 mm slump (except for mechanical extruders), cured with rite-cure application in accordance with A.S.T.M. Standard Specifications C-156 and C-309. Cold weather protection methods must be followed when air temperature is expected to fall below 5 degrees C. (Amended January 2008)
- 2.12 Sidewalks shall be incorporated into the construction of new arterial roadways as per the following:
- Arterial Roadways - Both Sides (Amended January 2008)
- 2.13 Class "A" and "C" gravel sampling and testing shall be in accordance with CSA Standards. (Amended January 2008)

- 2.14 Topsoil and seed shall be placed from the back of the curb to the street line at 2% to the top of curb. Where driveway openings exist in the curb and gutter topsoil shall not be placed in the driveway allowance but the area constructed to finished grade with class "A" gravel. Seeding shall be carried out in accordance with the criteria as set out in Part 11 of these Specifications and Standard Drawing SD-1. Sodding may be substituted for seed when requested by the developer or at times when seed germination is unlikely due to cold weather. **(Amended January 2008)**

PART 3: SANITARY SEWER SPECIFICATIONS

Sanitary sewer systems shall conform to the following specifications and design criteria.

3.1 The sanitary sewer system shall be designed utilizing the following standard criteria.

- a) design to be based on the peak dry weather flow;
- b) infiltration allowance = 12109 litres per day per hectare and a per capita flow of 340 litres per day;
- c) peaking factor to be determined using the Harmon formula -

Install Equation Editor and double-
click here to view equation.

- d) utilizing a gross density of 45 persons per gross hectare.
- e) where the proposed sewer system forms or may form part of a continuing system to provide sewer services to surrounding areas, the sewer line sizes shall be designed to accommodate these future flows.

3.2 The sanitary sewer main shall be installed along or near to the centre line of the street and at a minimum depth of two (2) metres.

3.3 The sanitary sewer main shall be PVC SDR 35 with locked-in rubber gasket joints. The minimum size of the main shall be 200 mm.

3.4 All pipe shall be laid at a uniform vertical grade and horizontal alignment in a compacted gravel bedding placed in an undisturbed or approved trench bottom, as per Standard Drawing SD-2. Gravel bedding along the sides of the pipe shall be installed and compacted in such a way as not to alter the alignment or grade of the pipe. Bedding shall extend to 300 mm above top of pipe for full trench width and be compacted to 95% standard proctor. Further backfilling shall be placed in layers to achieve a 95% standard proctor and shall be carried out in a manner which ensures that no rock migration will occur around manhole structures. When manhole or water main structures are located within 300 mm of each other, this area must be backfilled and compacted using Class "B" or 28 mm clear stone gravels.

- 3.5 All sanitary sewer mains shall have a minimum grade of one (1%) percent.
- 3.6 Sanitary sewer flow velocities shall be a minimum of 0.6 metres per second and a maximum of 4.5 metres per second.
- 3.7 All manholes shall be standard A.S.T.M. C-478-M and shall have a precast or cast-in-place base. Manhole diameter sizes shall be in conformance with Standard Drawing SD-3, maximum pipe size chart. All manholes shall be constructed using precast sections and "O" ring gaskets and topped with a 915 mm eccentric cone section. Where flat top capping rings are to be used, they shall conform to the 110 series loading requirement. Grade rings shall be a minimum of 150 mm thick with final adjustment being completed using poured in place concrete or an approved non-shrink grout. The standard MH frame and cover for roadways shall be I.M.P.R-10 and for easement areas shall be I.M.P.R-12S (5 sided bolts). All ring joints shall be grouted. Manhole ladders shall conform to Standard Drawing SD-4 or approved equal.
- 3.8 Manholes shall be installed at all changes in grade or alignment, at all intersections and at intervals not exceeding ninety (90) metres.
- 3.9 Internal drop precast manholes shall be sized to ensure minimum width of 1000 mm from inside edge of internal drop to the opposite inside wall of the manhole as per Standard Drawing SD-5.
- 3.10 Sanitary sewer service laterals shall be a minimum of 100 mm in size, connected to the main at an angle of 90 degrees, as per Standard Drawing SD-6. Connections to the main shall be performed using an in-line "Tee" or "Wye" fitting or saddle connector to main. For saddle connections cut hole using approved appropriate equipment and approved methods. All laterals shall enter the main at the spring line or above. Long radius 22 $\frac{1}{2}$ ° bends shall be used for installation of service laterals. Sanitary service laterals shall be SDR 35 PVC pipe with water tight plug or cap at termination point and a 48 mm X 96 mm marker stake at end of service extending to 600 mm above finished grade. Paint stub ends and caps RED. Paint exposed portion of stake RED with designation SAN in black. **(Amended January 2008)**
- 3.11 The sanitary service lateral shall be approved PVC SDR 28 with locked-in rubber gasket joints and laid at a minimum grade of 2%, graded uniformly to the main in a compacted gravel bedding and backfilled in accordance with Town of Kentville Standard Drawing SD-7.
- 3.12 Sanitary service laterals connected into manholes shall enter the manhole at the top of the benching. When service laterals enter manholes, a pipe

stub shall be incorporated to ensure a flexible joint within 450 mm of the outside wall of the manhole.

- 3.13 Pumping stations, where necessary, shall be designed and constructed in accordance with standard principles. Pumps shall be 3-phase, located in a wet-well or dry-well chamber and shall conform to the standards and specifications of existing pumps located within the Town of Kentville. Pumping station controls shall be equipped with radio telemetering equipment compatible to the Town's SCADA system.
- 3.14 Forcemains shall be ductile iron, complying with AWWA Specifications 151 Class 52 or series PVC 125 or greater. Installation, testing, etc, shall be in accordance with the Town of Kentville specifications for water mains.

PART 4: STORM SEWER SPECIFICATIONS

Storm sewer systems shall be designed to the following specifications and criteria.

4.1 The following frequencies shall be used for design of storm drainage systems in subdivisions:

- a) Where an underground drainage system is designed as a minor system, the design of the minor system shall be based on storm frequencies of:
 - (i) 1 in 5 years for all lands, except high value commercial and business areas designated by the Town of Kentville;
 - (ii) 1 in 10 years for high value business and commercial areas designated by the Town of Kentville;

unless greater capacity is required to conform with subsection (b).

- b) Where an underground system is designated according to subsection 4.1.a, the total capacity of the major and minor systems shall be based on a storm frequency of 1 in 100 years.
- c) Watercourses (including designated floodplains), drainage channels, and underground drainage systems that do not conform to subsection 4.1.a shall be designed on the basis of a storm frequency of 1 in 100 years.

4.2 The Town of Kentville will require the designer to indicate the design methodology used to obtain the storm water flows. Examples of techniques generally considered acceptable include:

- a) The Rational Method may be used for the calculation of peak runoff. This method should not be used to determine the size of, or hydrological effects of, storage facilities. It is usually not considered acceptable for watersheds larger than 1 square mile.
- b) Methods described in TR55 may be used to estimate flows for rural areas, and to estimate urbanization impacts and to determine effects of storage facilities.
- c) The ILLUDAS model may be used for the design of minor drainage systems and for preliminary evaluation of storage facilities.

Other methods may be used if appropriate justification is provided.

4.3 Subdivision storm systems shall accommodate the following runoff criteria:

a) Basis of design is as follows:

- i) Designs shall be based on the state of development expected to exist 20 years from the time of design or complete development of both the area under design and upstream areas.
- ii) The developer is responsible for downstream effects of his storm drainage system and therefore shall provide for a zero increase in peak runoff or alternatively provide increased downstream capacity in a manner acceptable to the Town of Kentville.

b) Design flows for ordinary residential, commercial, or industrial land uses shall be based on annual rainfall data. Where the area under design includes a significant portion of undeveloped land, design flow shall be the largest of flows estimated for winter and year-round conditions.

c) Design method criteria (runoff coefficients, times of concentration, etc) shall be clearly indicated in the calculations.

4.4 Piped storm drainage systems shall be designed to carry without surcharge, flows based on the requirements of subsection (4.1.a.i), and shall conform to the following:

a) The Manning formula will ordinarily be used for storm drainage pipe design.

b) Velocities at design flow in storm sewers should not be less than 1 metre per second. Where complete development of upstream areas is expected to be delayed, consideration shall be given to cleansing velocities in the initial period.

c) The storm sewer main shall have a minimum diameter of 300 mm and shall be C-76 concrete pipe, gasketed or R320 Polyethylene Pipe CSA Standard B 182.6-02. **(Amended January 2008)**

d) The storm sewer main shall be installed parallel to the centre line of the street and shall be offset from the sanitary sewer main by a minimum of 300 mm. The minimum depth of the storm sewer main will be 2 metres.

- e) All pipe shall be laid at a uniform vertical grade and horizontal alignment in a compacted gravel bedding placed in an undisturbed or approved trench bottom as per Standard Drawing SD-2. Gravel bedding along the sides of the pipe shall be installed and compacted in such a way as not to alter the alignment or grade of the pipe. Bedding shall extend to 300 mm above top of pipe for full trench width and be compacted to 95% standard proctor. Further backfill to be placed in layers to achieve a 95% standard proctor and shall be carried out in a manner which insures that no rock migration will occur around manhole structures. When manhole or watermain structures are located within 300 mm of each other, this area shall be backfilled and compacted using Class "B" or 28 mm clear stone gravels.
- f) Manholes shall be installed at all changes in grade or alignment, at all intersections and at intervals not exceeding ninety (90) metres.
- g) Internal drop precast manholes shall be sized to ensure a minimum width of 1000 mm from inside edge of internal drop to the opposite inside wall of the manhole.
- h) All manholes shall be standard A.S.T.M. C-478-M and shall have a precast or cast-in-place base. Manhole diameter sizes shall be in conformance with Standard Drawing SD-3, maximum pipe size chart. All manholes shall be constructed using precast sections and "O" ring gaskets and topped with a 915 mm eccentric cone section. Where flat top capping rings are to be used, they shall conform to the 110 series loading requirement. Grade rings shall be a minimum of 150 mm thick with final adjustment being completed using poured in place concrete or an approved non-shrink grout. The standard MH frame and cover for roadways shall be I.M.P. R-10, and for easement areas shall be I.M.P. R-125 (5 sided bolts). All ring joints shall be grouted. Manhole ladders shall conform to Standard Drawing SD-4 or approved equal.
- i) All catchbasins shall be located in the gutter line of the street with the front edge of the capping ring opening a minimum of 350 mm and a maximum of 500 mm from the face of the curb. The capping ring shall be 110 series highway loading and the frame and grating shall be I.M.P.S-361. All catchbasins shall be A.S.T.M. C-478-M precast concrete 1050 mm in diameter as per Standard Drawing SD-8.

- j) Catchbasins shall be installed in sufficient numbers so as to prevent flooding of the road surface with a maximum distance between catchbasins of 90 metres. Double catchbasins conforming to Standard Drawing SD-9 shall be installed at intersections where the preceding street grade exceeds 8%. Refer to Part 2, Item 2.9.
- k) All catchbasin lead pipes shall have a minimum diameter of 250 mm and shall be C-14 or C-76 gasketed concrete pipe. Catchbasin leads shall have a minimum bury of 1 metre and shall enter the closest storm manhole. The invert of catchbasin lead shall not exceed the invert out at the manhole by more than 1 metre. No catchbasin lead shall protrude into the manhole or catchbasin by more than 75 mm and shall be grouted and finished on the inside and outside of the structure. Catchbasin leads at the manhole shall incorporate a flexible joint within 450 mm of the outside wall of the manhole.

Where the connecting lead pipe to a manhole serves two or more catchbasins together, the minimum diameter of this connection lead pipe shall be 300 mm.

- l) The design of outfalls from piped storm drainage systems into watercourses shall take into consideration erosion control, public safety, and appearance.
- m) All foundation drains shall be connected to the storm sewer system unless otherwise approved by the Town Engineer.
- n) Storm sewer service laterals shall be a minimum of 100 mm in size, connected to the main at an angle of 90° as per Standard Drawing SD-6A. Connection to the main shall be by Daigle saddles (or equivalent) for 450 mm or less main I.D. size, and Crowle saddles (or equivalent) for main sizes greater than 450 mm. Ramneck shall be used as a gasket for installations requiring Crowle saddles. All connections into the storm main shall be done using an approved pipe cutter. All laterals shall enter the main at spring line or above. Long radius 22½° bends shall be used for installation of service laterals. Storm service laterals shall be PVC pipe with watertight plug or cap at termination point and a 48 mm X 96 mm marker stake at end of service extending to 600 mm above finished grade. Paint cap or stub end of pipe GREEN. Paint exposed portion of stake GREEN with designation STORM in BLACK. (Amended January 2008)
- o) The storm sewer lateral shall be approved PVC SDR 28 with locked-in rubber gasket joints and laid at a minimum grade of 2%,

graded uniformly to the main in a compacted gravel bedding and backfilled in accordance with Town of Kentville Standard Drawing SD-7.

- 4.5 For storms corresponding to the basis of design of the minor drainage system it is expected that roadways will remain free of water other than that accumulated between inlets. Storm drainage design shall provide that the depth of flow in a 1 in 100 year storm will not exceed 150 mm at the gutter. Provision shall be made to remove runoff into drainage channels, watercourses, and piped systems at low points and at intervals that will assure that this criteria is observed.
- 4.6 Culverts shall be installed subject to the following criteria:
- a) No culvert shall be less than 450 mm in diameter, or smaller than any upstream culvert.
 - b) Hydraulic capacity of culverts shall be determined by methods described in the manufacturer's literature or comparable references.
 - c) Culverts will generally be designed to carry peak design flow with a headwater depth not greater than the vertical dimension of the pipe. Upstream water levels associated with design headwater depth shall be determined in relationship to expected elevations of structures and ground surface.
 - d) Culvert outlet designs shall provide protection from downstream channel erosion.
 - e) Culvert inlet designs shall provide protection from erosion that could result in culvert failure.
 - f) The design shall take into account the effects of inlet gratings in restricting of flow into culverts.
 - g) Culverts shall be constructed of reinforced concrete pipe or Asphalt Coated Corrugated Steel Pipe or Plastic R320 Plus as specified by the Department of Transportation.
- 4.7 Where watercourses are included in the stormwater design proposal, 1 in 100 year flood plains shall be identified, based on expected post-development flows.
- 4.8 The capacity of a stormwater storage structure will usually be determined by the Storage-Induction method. Graphical methods from SCS report

TR55 may be used for preliminary analysis.

4.9 Overflow spillways shall be designed to meet the following conditions:

- a) Where a structure is designed to accommodate a design storm frequency less than 1 in 100 years, an emergency spillway, capable of discharging the 1 in 100 year overflow from the structure without damage to the structure, shall be installed.
- b) Where human life or high property values may be at risk if the structure fails, the capacity of the overflow spillway should be increased.
- c) The overflow spillway should discharge into a watercourse or major drainage system capable of handling the 1 in 100 year discharge from the structure.
- d) Explicit consideration shall be given to safety, nuisance and long-term maintenance implications of the proposed structure, and statements dealing with these factors should be included in the submitted documentation.

PART 5: WATER SYSTEM SPECIFICATIONS

Water distribution systems are to be designed to provide an adequate supply of water for domestic consumption and fire protection.

Water quality is monitored and maintained by the Kentville Water Commission, and the system must be designed such that the quality is maintained and distributed to customers at an adequate pressure to supply their needs.

5.1 The water system shall be designed using the following design criteria.

- a) Water distribution systems shall be designed to accommodate fire flow plus maximum daily demand.
- b) Fire flow demand shall be established in accordance with the latest requirements contained in the publication **Water Supply For Public Fire Protection** as prepared by the Fire Underwriter's Survey.
- c) Water distribution systems shall be designed to accommodate the following water demands:
 - i) Average daily demand = 400 litres per capita per day.
 - ii) Maximum daily demand = 600 litres per capita per day.
 - iii) Maximum hourly demand = 900 litres per capita per day.
- d) Water distribution systems shall be designed for a gross population density of 45 persons per hectare. In developments where population is anticipated to exceed 45 persons per hectare or in commercial or industrial development, the domestic demand shall be adjusted accordingly. The design population or assumed domestic demand must be clearly specified in the calculations submitted for review and approval.
- e) Water distribution systems shall be designed and sized such that during a fire flow condition, as specified in subsection 5.1.b., a residual pressure of 150 kPa is maintained at all points in the water system.
- f) Water distribution systems shall be designed to provide looping of water mains as frequently as road or easement layout permit. Additional looping may be required to increase the reliability of the system and is at the discretion of the Director of Engineering.

- g) The water distribution shall be sized as outlined in the above sections. However, in no instance shall the main be:
 - i) less than 150 mm in diameter for looped lines.
 - ii) less than 200 mm in diameter for dead-end lines.
- h) Upsizing of water mains to accommodate the water supply requirements of future off-site development may be required as instructed by the Director of Engineering and Works.
- i) All water mains shall be designed with a minimum cover of 1.5 metres or at a suitable depth to prevent freezing of either the water main or the services. In no instance is the depth of cover of the water main to exceed 2.5 metres.
- k) The location of the water mains and laterals in relation to other municipal service piping (storm and sanitary sewer) shall meet the requirements of the Nova Scotia Department of Health and Fitness and the Nova Scotia Department of the Environment.
- l) Water pressures within the system shall fall within the range of 200 to 550 Kpa, (29 to 80 psi). (Amended January 2008)
- m) Notwithstanding section 5.1.1, the Developer may be required to boost or reduce water pressure. Water booster stations shall be designed in consultation with the Director of Engineering and Works and shall be equipped with radio telemetry equipment compatible to the Town of Kentville's SCADA system. (Amended January 2008)

5.2 All connections to an existing water system shall be valved so that the system can be isolated by the valve at the start of the extension. The connection to any water system must be coordinated through the Kentville Water Commission.

5.3 The water main shall be installed along or near the centre line of the street.

5.4 All water main shall be constructed using either:

- i) Ductile iron, Class 52. Pipe shall be bell and spigot joint, externally coated with a bituminous compound and cement mortar lined and shall comply to the standards contained in Part 14.

- ii) PVC, SDR 18 pipe complying to the standards contained in Part 14. Tracer tape or trace wire must be installed along with the PVC pipe. (Amended January 2008)

- 5.5 All pipe shall be laid at a uniform vertical grade and horizontal alignment in a compacted gravel bedding placed in an undisturbed or approved trench bottom, as per Standard Drawing SD-2. Gravel bedding along the sides of the pipe shall be installed and compacted in such a way as not to alter the alignment or grade of the pipe. Bedding shall extend to 300 mm above top of pipe for full trench width and be compacted to 95% standard proctor. Further backfilling shall be placed in layers to achieve a 95% standard proctor and shall be carried out in a manner which ensures that no rock migration will occur around manhole structures. When manhole or watermain structures are located within 300 mm of each other, this area must be backfilled and compacted using Class "B" or 28 mm clear stone gravels.
- 5.6 Any change of direction in excess of the pipe joint deflection tolerance shall require a suitable fitting. Thrust blocks shall be provided at any change of direction. Thrust blocks shall be constructed with 20 MPa (3000 psi) concrete and shall conform to Standard Drawing SD-10.
- 5.7 All water system valves shall be mechanical joint, double disc, or resilient seat gate valves and shall conform to AWWA C500. All valves are to close clockwise and shall conform to Standard Drawing SD-11.
- 5.8 Valves shall be provided on water mains at the following locations:
 - a) Where required to adequately isolate sections of the water system as determined by the Director of Engineering and Works.
 - b) Four (4) valves per Cross section, one on each leg of the cross.
 - c) Three (3) valves per tee section, one on each leg.
 - d) One (1) valve per 400 metres of water main where there are no intersections.
- 5.9 All valves must be accessible through valve boxes or chambers. Valve boxes shall conform to AWWA C500 and to Standard Drawing SD-11,
- 5.10 Fire hydrants shall be provided at a maximum linear interval of 200 metres. Desirable hydrant locations include:
 - a) At high points of the water main profile, unless an automatic air

release valve is supplied.

- b) At low points of a water main profile.
- c) At intersections of roads.
- d) Near the middle of long blocks.
- e) At the end of dead end streets or cul-de-sacs.

5.11 Fire hydrant laterals shall have a minimum diameter of 150 mm and shall be provided with a gate valve. Hydrant installation shall conform to Standard Drawing SD-12.

5.12 Fire hydrants shall be McAvity M67 or Canada Valve, manufactured to in accordance with AWWA C502. **(Amended January 2008)**

5.13 Fire hydrants shall be equipped two standard 2" (63.5 mm) hose nozzles and one storz pumper nozzle with an outside diameter of 4 15/16" (125.41 mm). Thread type shall be approved by the Kentville Fire Chief. Hydrants shall be dry barrel type complete with drain holes and shall be fitted with a standard operating nut which will close the hydrant when rotated clockwise.

5.14 All water service connections between the corporation stop and the curb stop shall be a minimum of 19 mm diameter, type "k" copper, annealed, and shall be installed as per Standard Drawing SD-6A. All fittings shall be brass and conform to ASTM B62. All curb Stop Rods are to be Stainless Steel.

5.15 Testing, flushing, and disinfection of water mains shall be done as per the following:

- a) All services, hydrants, mains and other appurtenances shall be included in the system test.
- b) The test shall be conducted over a full two hour period maintaining a relatively constant pressure.
- c) The test pressure shall be conducted at a minimum pressure of the greater of 1050 kPa or 1 times the operating pressure at the lowest point of the system being tested.
- d) Allowable leakage shall be determined by using the following formula:

Install Equation Editor and double-click here to view equation.

L = allowable leakage (litres/hr)

S = length of main (metres)

D = diameter of pipe (mm)

$P^{0.5}$ = test pressure (kPa)

- e) After testing, disinfection of the water main shall be carried out. Disinfection shall take place by using a liquid hypochlorite. The chlorination procedure shall be to AWWA Standard C601 "continuous feed method" to obtain a concentration of 50 mg/l initially. A residual of 25 mg/l of chlorine is required after a 24 hour period.
- f) Upon completion of the chlorination, the system is to be neutralized and the lines shall be flushed until the measured chlorine residual is that which is common throughout the distribution system.
- g) Upon flushing of the main, one sample for each 150 metres of main shall be submitted to the Department of Health and Fitness for bacteriological testing. Should any pathological tests result in any coliform counts what so ever, further sampling and testing shall be carried out, and if necessary, the chlorination process repeated.

PART 6: PIPE TESTING

The following criteria shall apply respecting the testing of the sanitary and storm sewer systems.

- 6.1 The testing of the sanitary sewer system shall be undertaken only after all components of the system, including the service laterals, have been installed.
- 6.2 All testing shall be conducted in the presence of the Town Engineer or his designate.
- 6.3 The testing shall be undertaken using approved air test method. The air testing shall be conducted at three and one-half (3.5) psi (24.1 kPa) and after the initial stabilization period, shall be maintained, with no decrease, for a period of five (5) minutes.
- 6.4 A television inspection and report shall be required for both the sanitary and storm sewer mains and shall be performed prior to street paving or primary acceptance. A visual inspection shall be carried out on all manholes, catchbasins, etc., by the Engineer of his designate.
- 6.5 A mandril test shall be performed on all PVC pipe prior to street paving and/or primary acceptance. Testing shall be in accordance with manufacturers specifications.

PART 7: WALKWAY SPECIFICATIONS

- 7.1 The minimum width of a walkway right-of-way shall be 4.57 metres. Where municipal sewer or water systems are to be constructed within the walkway right-of-way, the minimum width shall be 6.10 metres.
- 7.2 As much as possible, the constructed portion of the walkway shall be centrally located within the right-of-way.
- 7.3 Where possible, all manholes and water appurtenances shall be to the sides of the 1.8 metre asphalt walkway.
- 7.4 Where possible, and with consideration of Item 7.10, the total width of the right-of-way shall be graded in such a way as to control surface and watercourse drainage within the walkway right-of-way and adjacent properties. This can be accomplished using culverts, drains, swales and/or catchbasins.
- 7.5 The walkway shall be constructed as follows:
- a) 150 mm Class "A" gravel base, 2.4 metres wide and compacted to 95% standard proctor density; and **(Amended January 2008)**
 - b) 50 mm thickness, hot-mix asphalt, 1.8 metre wide.
- 7.6 The maximum grade for a walkway shall not exceed fifteen (15%) percent. Where site topography dictates grades of more than fifteen (15%) percent, concrete steps of uniform rise and run and handrails shall be installed, unless otherwise approved by the Town of Kentville Parks and Recreation Committee. These structures shall be designed in consultation with the Director of Parks and Recreation.
- 7.7 All walkways in residential and commercial areas shall be fenced on both sides for the entire length of the walkway right-of-way, unless otherwise approved by the Parks and Recreation Committee. Fencing shall be chain link fencing of minimum height of 1.2 metres and shall conform to Standard Drawing SD-13. Fencing materials shall meet the requirements of Part 14.10.
- 7.8 Both sides of any asphalt walkway shall be topsoiled and seeded from the edge of the walkway to the edge of the right-of-way (fence), if feasible.
- 7.9 All reset structures within the walkway easement shall be adjusted to 6 mm of finish grade.

- 7.10 All walkways shall be constructed at the time of the installation of the services and streets. Natural vegetation of the area shall be preserved during walkway construction, where possible. Mature trees and shrubbery shall remain and clearing and grubbing shall be restricted to the construction area.
- 7.11 Walkways shall be oriented so as to make use of the existing street lighting, where possible.

PART 8: SIDEWALK SPECIFICATIONS

- 8.1 The minimum width of all sidewalks shall be 1.5 metres unless otherwise approved by the Town Engineer.
- 8.2 The sidewalk shall be separated from the back of the street curb by a minimum of 900 mm median and minimum of 300 mm median between back of sidewalk and edge of right-of-way, as per Town of Kentville Standard Drawing SD-14.
- 8.3 Pedestrian ramps shall be installed at all intersections having a minimum of 1200 mm low back curb and a 300 mm taper on both ends.
- 8.4 The year of construction shall be stamped in concrete sidewalks at all intersections using block lettering of 75 mm in height.
- 8.5 Sidewalks shall be constructed of 35 MPa (4350 psi) concrete 6% air-entrained, and 75 mm slump. (Amended January 2008)
- 8.6 Gravel base shall be 150 mm Class "A" gravel compacted to 98% standard proctor density and shall extend 150 mm outside of each edge of the concrete sidewalk. (Amended January 2008)
- 8.7 Sidewalk slabs for residential sidewalks shall be a minimum of 100 mm thick; and shall be 150 mm thick at all residential driveway locations.
- 8.8 Sidewalk slabs servicing commercial driveways shall be 150 mm reinforced concrete.
- 8.9 The sidewalk slab shall be a continuous pour with control joints of one quarter the slab thickness at every 1500 mm along the length of the sidewalks. Control joints shall be done either by a double edger or a concrete saw.
Construction joints of mastic fibrous material extending totally through the concrete slab shall be as follows:
- a) where fresh concrete is to be poured against previously poured concrete;
 - b) where sidewalk abuts curbs; and
 - c) around all structures abutting the sidewalks (poles, catchbasins, etc.).
 - d) an expansion joint at a distance of no more than 15m (50ft) in a continuous pour.

- 8.10 All concrete sampling and testing shall be in accordance with CAN3-A23.1.

PART 9: CURB AND GUTTER SPECIFICATIONS

- 9.1 Concrete curb and gutter construction shall conform to the following specifications and as per Standard Draw SD-15.
- 9.2 Curb and gutter shall be constructed of 35 MPa (5000 psi) concrete, 6% air-entrained and 75 mm slump. Slump shall be decreased when mechanical extruders are used. (Amended January 2008)
- 9.3 Gravel base shall be Class "A" gravel, evenly graded, compacted to 98% standard proctor density, and extending 150 mm outside the face of the gutter and the back of the curb. (Amended January 2008)
- 9.4 Residential driveway openings shall be 3.75 metres wide for "single" driveways and 5 metres wide for "double" driveways, with a 300 mm taper on each end.
- 9.5 Commercial driveway opening widths shall conform to the same specifications. The maximum width of a commercial driveway opening shall not exceed 9 metres.
- 9.6 Pedestrian ramps shall be installed at all intersections constructed with a 1200 mm low profile curb and a 300 mm taper on either end.
- 9.7 Concrete curb and gutter shall be a continuous pour with control joints of one quarter the thickness every 3000 mm. Control joints shall be installed using steel template plates or by saw cutting.
- Construction joints of mastic fibrous material extending through the thickness of the curb and gutter shall be located as follows:
- a) where fresh concrete is poured against previously poured concrete;
 - b) where sidewalk and driveway ramps abut the curb and gutter;
 - c) within 750 mm of the outside edges of catchbasin frames.
- 9.8 Where concrete sidewalk abuts concrete curb and gutter, the control joints of the curb and gutter shall match alternate sidewalk control joints.
- 9.9 All concrete sampling and testing shall be in accordance with CAN3-A23.1.

PART 10: **EASEMENTS**

- 10.1 Service mains installed outside of the street right-of-way shall be facilitated through the provision of an easement having a minimum width of 4.5 metres.
- 10.2 Where service mains installed outside of the street right-of-way are located within an easement or right-of-way that is also to serve as a walkway, the minimum width of the easement shall be 6 metres. Refer to Part 7 of these Specifications.
- 10.3 For service main easements without walkways, the total width and length of the easement shall be graded in such a way as to control watercourse and surface drainage, place topsoil and seed or sod to the Town of Kentville's specification.
- 10.4 All manholes, and water chambers and valve, shall be adjusted to 6 mm of finish grade.

PART 11: TOPSOIL, SEEDING AND SODDING SPECIFICATIONS

- 11.1 Excavated and/or fill areas shall be evenly graded and compacted to 100 mm below finished grade.
- 11.2 Topsoil shall be medium loam capable of supporting good agricultural growth and have a pH of 5.5 to 7.5 and minimum thickness when placed of 100 mm.
- 11.3 Land lime and fertilizer shall be applied using separate applications and evenly cultivated throughout the depth of the topsoil at the following application rate.
- a) Lime 50 kg/100 sq.m; and
 - b) Fertilizer 5 kg/100 sq.m
- 11.4 Topsoil shall be compacted to finished grade, then the top 25 mm shall be loosened by raking or cultivating. Where sod is used, topsoil should be placed to within 12 mm of finished grade.
- 11.5 Seed shall be Canada #1 Grade, applied with a mechanical spreader at a rate of 2 kg per 100 square metres. The area covered shall be rolled and water applied to promote germination and growth.
- 11.6 Sods shall be nursery sods of not less than 40% Kentucky Blue Grass, free of weeds, and with no surface soil visible when mowed to height of 50 mm.
- 11.7 Sods shall be placed with staggered joints perpendicular to slope in a close knitted pattern. There shall be no open areas and sods shall match evenly into existing conditions. In addition, when:
- a) sodding on slopes greater than 1:1, the sods shall be secured with wooden pegs; and
 - b) sodding on slopes greater than 1:3, the sods shall be secured with poultry mesh in strips from top to bottom of slopes and then pegged.
- 11.8 Sods shall be rolled to consolidate and remove irregularities in grade.
- 11.9 Sods shall be watered within four (4) hours of placement, to obtain moisture penetration into top 100 mm of topsoil.

PART 12: EROSION CONTROL MEASURES FOR THE DEVELOPMENT OF LAND DRAINING DIRECTLY INTO A BODY OF WATER

- 12.1 Erosion and sediment control measures for all development that takes place on lands that drain directly into lakes, streams, rivers or any existing watercourse must be approved by the Town Engineer.
- 12.2 Site design shall make optimum use of existing topography and vegetation and shall minimize cut and fill operations. The site should be designed to minimize/prevent surface water flows across the construction site or from the construction site directly to adjacent watercourses.
- 12.3 The construction, maintenance and use of buffers and other surface water flow control measures adjacent to all existing watercourses shall be incorporated into the design and development of lands adjacent to watercourses.
- 12.4 Stormwater management systems shall be an integral part of the overall site design and development. Measures such as temporary diversionary channels and earthen cofferdams are to be used to prevent upstream surface water from traversing construction sites.
- 12.5 Diversionary channels constructed in erodible or silt forming materials shall be stabilized with protective rock, plastic sheeting or other approved materials before any flow is diverted.
- 12.6 During site construction, on-site surface water shall be directed to settling ponds or sediment traps prior to entering an existing watercourse. Settling ponds shall be constructed to provide storage generally to a size of one-sixteenth (1/16) acre for every acre of exposed construction area.
- 12.7 Site disturbance for street construction shall be kept to an absolute minimum by minimizing clearing and grubbing operations and cut and fill situations. Diversionary channels directing water to sediment traps or settling ponds shall be constructed prior to cut and fill operations and shall contain filter trap measures such as straw bales.
- 12.8 Street construction at any given time shall be limited to 350 metres for streets parallel to the contours and 150 metres for streets perpendicular to the contours and brought to base course gravelling before new street construction may begin.
- 12.9 All surplus excavated material shall be removed from the construction site within one (1) week of the time of excavation.

- 12.10 Excavated material required for backfilling shall be neatly piled and covered with polyethylene or other suitable material be to approved by the Town Engineer.
- 12.11 Immediately following the excavation, backfilling, grading and construction of streets and services, base course gravelling shall be undertaken. Hydroseeding of slopes of more than 2:1 shall be undertaken within one (1) week of base course gravelling.
- 12.12 In the dewatering of excavated areas, water shall not be discharged directly into existing watercourses. Dewatering of excavated areas shall be undertaken in a manner designed to remove suspended silt.
- 12.13 During the initial site development process and subsequent residential lot development, due care and attention shall be given to keeping the site clear and free of deposited mud material and dust to prevent silt build-up in the storm sewer system.

Development of land draining directly into a body of water may be subject to more extensive erosion and sediment control measures as a result of the Town zoning bylaw, or other bylaws, or as a result of provincial legislation or regulations, specifically under the control of the Department of Environment.

For examples of more extensive erosion control measures, refer to the **Province of Nova Scotia Erosion and Sediment Control Manual and Guidelines for Use of Construction Sites**.

PART 13: SUBDIVISION LOT GRADING

The intent of this section is require the developer to predict direction of water flow and associated volumes, and to ensure that minimum grading standards are employed in lot drainage design. Responsibility to construct the required grades on each lot rests with the lot builder.

- 13.1 All side yards shall conduct water to the street or the rear lot line at a minimum slope of 1.5%.
- 13.2 No building line grade shall be lower than the street grades designed.
- 13.3 Proposed subdivision lot grading plans shall conform to Standard Drawing SD-16, and shall indicate:
 - a) Building line grade at the mid point of the lot.
 - b) Final corner lot grades.
 - c) Side yard drainage swales and direction of flow.
 - d) Minimum underside of footing elevation.
 - e) Location and slope of driveway.
 - f) Location of all storm and sanitary laterals, indicating invert elevation at the street line.

PART 14: MATERIAL REFERENCE STANDARDS

The following standards shall apply to all materials incorporated into work:

14.1 Earthwork Materials

- a) Selected Backfill: common material from site excavation, free from: stumps, trees, roots, sod, organic; rocks, boulders, and masonry larger than 200 mm in any dimension; and any other deleterious materials.
- b) Borrow: well graded material from contractor's own sources meeting the specification for Selected Backfill
- c) Sand: hard, granular, sharp material, well graded from coarse to fine, free of impurities, chemicals or organic mater, and graded as follows:

<u>Sieve Size</u>	<u>% Passing</u>
5 mm	100
0.16mm	0-5

- d) Clear Stone: crushed and screened, hard, durable stone, free from clay and organic matter, and graded as follows:
 - .1 Clear Stone, 28 mm:

<u>Sieve Size</u>	<u>% Passing</u>
28 mm	95-100
14 mm	25- 60
5 mm	0- 10

- .2 Clear Stone, 84 mm:

<u>Sieve Size</u>	<u>% Passing</u>
84 mm	100
56 mm	0

- e) Gravels: to division 3 of Province of Nova Scotia Department of Transportation Standard Specification, Metric Edition.

.1 Class A: (Amended January 2008)

<u>Sieve Size</u>	<u>% Passing</u>
20 mm	100 (Amended January 2008)
14 mm	50-85
5 mm	20-50 (Amended January 2008)
0.160 mm	0-10
0.08 mm	0-5

.2 Class C

<u>Sieve size</u>	<u>% Passing</u>
56 mm	100
28 mm	60-80
5 mm	25-45
0.160 mm	1-10

.3 Class E:

<u>Sieve Size</u>	<u>% Passing</u>
112 mm	100
14 mm	not more than 50
0.08	mm not more than 10

- f) Riprap: durable field or quarry stone with rough surfaces and angular shape, minimum thickness not less than one-third of length or width, and conforming to weights or sizes indicated. Rounded stone or boulders will not be accepted.
- g) Lumber: sound, construction grade, spruce or fir.

14.2 Concrete Materials

- a) Portland Cement: to CAN3-A5-M
Type 10 normal.
- b) Aggregate: to CAN3-A23.1-M.
- c) Water: to CAN3-A23.1-M.

- d) Admixtures:
 - .1 Air Entraining: to CAN3-A266.1-M
 - .2 Chemical: to CAN3-A266.2 M
- e) Reinforcement:
 - .1 Bars: to CSA G30.12-M, billet steel, grade 400, deformed.
 - .2 Welded Steel Wire Fabric: to CSA G30 .5-M.
 - .3 Bar Supports and Spacers: to CAN3-A23.1-M
- f) Formwork:
 - .1 Forms: to CAN3-A23.1-M, plywood and lumber, clean and free of loose knots or splits.
 - .2 Form Ties: to CAN3-A23.1-M, removable or snap off metal ties, fixed or adjustment length, free of devices leaving holes larger than 25 mm diameter and 10 mm deep in concrete surface.
 - .3 Release Agent: non-staining natural organic chemicals of sprayable consistency which prevent adhesion of concrete to forms.
- g) Curing Compound: to ASTM C309, Type 2.
- h) Waterstops: Ribbed, extruded P.V.C. of type and size indicated.
- i) Non-shrink Grout: pre-mixed, dry pack or pourable, containing non-metallic aggregate, plasticizing agents and cement, minimum compressive strength of 45 MPa at 28 days.

14.3

Asphaltic Materials

To the Province of Nova Scotia Department of Transportation
Standard Specification - Metric Edition, Division 4.

14.4 Asphaltic Concrete

Asphaltic Concrete Mix: to Province of Nova Scotia Department of Transportation Standard Specifications - Metric Edition, Division 4, Section 4, and type indicated.

14.5 Waterline Materials

a) Ductile-iron Pipe and Fittings

- .1 Pipe: to AWWA C151, cement mortar lined.
- .2 Fittings: to AWWA C110, cement mortar lined, minimum pressure rating 1035 kPa.
- .3 Cement Mortar Lining: to AWWA C104.
- .4 Joints: Mechanical or push-on to AWWA C111; flanged where indicated, to AWWA C110 with Class 125 flanged ends to ANSI B16.1.

b) Polyvinyl Chloride Pipe and Fittings

- .1 Pipe and Joints: to CSA B137. 3-M cast-iron outside diameter, gasketed bell-end joint.
- .2 Fittings:
 - .i Grey or ductile-iron: to AWWA C110, cement mortar lined, minimum pressure rating 1035 kPa.
 - .ii Cement mortar lining: to AWWA C104.
 - .iii Joints, mechanical or push on: to AWWA C111.

c) Hydrants

- .1 Dry barrel type: to AWWA C502 and as follows:
 - .i Depth of bury: as indicated.
 - .ii Barrel: two piece with safety break-away flange and stem.

- .iii Main valve: compression type, 134 mm minimum diameter.
- .iv Inlet connection: mechanical joint, 150 mm minimum diameter.
- .v Nozzles: two hose and one storz pumper, with threads to standard of Kentville Fire Department.
- .vi Direction of opening: counterclockwise.
- .vii Operating nut: 32 mm square.
- .viii Colour: to standard of Kentville Fire Department.
- .ix Plugs: any drain holes in the seat are to be plugged. (Amended January 2008)

d) Gate Valves

- .1 Buried: to AWWA C500, minimum pressure rating 1035 kPa or AWWA C509 up to 300 mm, minimum working pressure rating 1380 kPa and as follows:
 - .i Body: cast-iron with mechanical joint ends.
 - .ii Mechanism (AWWA C500): bronze mounted, solid wedge or double disc gates, non-rising spindle and O-ring seals.
 - .iii Mechanism (AWWA C509): wedge disc with resilient rubber seat ring and machined seating surface, non-rising spindle, and O-ring seals.
 - .iv Direction of opening: counterclockwise.
 - .v Operating Nut: 50 mm square.
 - .vi Provide centring disc.

e) Valve Boxes

.1 Valve Boxes: to AWWA C500 and as follows:

- .i Cast-iron, slide type, adjustable for depth of pipe below finished grade.
- .ii Covers marked "Sewer".
- .iii Lugged to prevent turning and rolling of cover and cover notch to suit.

f) Fittings

- .i Copper tubing: to ASTM B88, type K annealed, minimum pressure rating 1035 kPa.
- .ii Joints: compression type, minimum pressure rating 1035 kPa.
- .iii Corporation stop: brass to ASTM B62, compression type, inlet threads to AWWA C800.
- .iv Curb stop and drain: brass to ASTM B 62, compression type joints and O-ring seal.
- .v Service clamp: bronze body, confined O-ring seal cemented in place, and straps suitable for connecting main. Outlet tapped and threaded to AWWA C800.
- .vi Service box: adjustable type, cast-iron bottom section, cast-iron lid with recessed pentagon nut and internal stem to suit depth of bury. Service box to have appropriate foot piece. To come with stainless steel rod.

g) Thrust Blocks and Anchors

.1 Thrust Blocks and anchors: 20 MPa concrete.

h) Insulation

.1 Insulation: to CGSB 51-GP-20-M, Type 4, expanded polystyrene.

i) Disinfectant

.1 Sodium Hypochlorite or calcium hypochlorite: to AWWA B300.

.2 Liquid Chlorine: to AWWA B301.

j) Marker Stake

.1 Timber, 40mm x 90mm

k) Water Service Saddles

.1 Saddles are to be Robar 2506 epoxy coated, with double straps. (Amended January 2008)

14.6 Sanitary Sewer Materials

a) Polyvinyl Chloride Pipe and Fittings

.1 Pipe and Fittings: Type PSM Polyvinyl Chloride.

- .i For diameter 150 mm and under: CSA B182.1-M. For diameter 200mm and over: CSA B182.2-M.
- .ii Joints: bell and spigot with rubber gasket recommended by pipe manufacturer.

b) Service Saddles

.1 PVC main: PVC strap-on saddle, tee or wye, with gasket, all stainless steel strap and O-ring in branch end.

14.7 Storm Sewer and Culverts

a) Concrete Pipe and Fittings

.1 Pipe and Fittings:

- .i Non-reinforced: to ASTM C14-M or CSA A257.1-M.
- .ii Joints: bell and spigot with flexible rubber gaskets to CSA A257 .3-M.

b) Service Saddles

.1 Concrete main: cast-iron or PVC with gasket, all stainless steel strap, or bolt on, and O-ring in branch end.

14.8 Precast Manholes and Catchbasins

a) Precast Bases and Sections

- .1 Precast concrete bases and Sections: to ASTM, C478-M.

b) Gaskets

- .1 O-rings: to CSA A257.3M.
- .2 Bituminous Compound: to CGSB 56-GP-4.

c) Metal Castings

- .1 Frames, covers and gratings: to ASTM A48, grey cast iron, factory coated.

d) Insulation

- .1 Rigid insulation: to CGSB 51-GP-20-M, Type 4, expanded polystyrene.

e) Concrete

- .1 Cast-in-place base: to Section 03300, min. 20 MPa at 28 days, air entrained, 80 mm slump, water/cement ratio: 0.50 maximum.
- .2 Grade Adjustments: cast-in-place to Section 03300, min. 30 MPa at 28 days, air entrained, 25 mm slump. Water/cement ratio: .45 max.

f) Grout

- .1 Mortar mix consisting of 1 part cement, 1 part lime, 4 \square -5 parts sand, and water.

14.9

Pressure Sewers

a) Ductile-Iron Pipe and Fittings

- .1 Pipe: to AWWA C151, cement mortar lined.
 - .i Fittings: to AWWA C110, cement mortar lined, minimum pressure rating 1035 kPa.
 - .ii Cement Mortar Lining: to AWWA C104.
 - .iii Joints: mechanical or push-on to AWWA C111; flanged to AWWA C110 with Class 125 flanged ends to ANSI B16.1.

b) Polyvinyl Chloride Pipe and Fittings

- .1 Pipe and Joints: CSA B137.3-M, cast-iron outside diameter, gasketed bell-end joint.
- .2 Fittings:
 - .i Grey or ductile-iron: to AWWA C110, cement mortar lined, minimum pressure rating 1035 kPa.
 - .ii Cement mortar lining: to AWWA C104
 - .iii Joints, mechanical or push on: to AWWA C111.

c) Gate Valves

- .1 Buried: to AWWA C500, minimum pressure rating 1035 kPa or AWWA C509 up to 300 mm, minimum pressure rating 1380 kPa and as follows:
 - .i Body: cast-iron with mechanical joint ends.
 - .ii Mechanism (AWWA C509): wedge disk with resilient rubber seat ring and machined seating surface, non-rising spindle, and "O" ring seals.
 - .iii Mechanism (AWWA C500): bronze mounted, solid wedge or double disc gates, non-rising spindle, "O" ring seals.
 - .iv Direction of opening: counter-clockwise.

- .v Operating Nut: 50 mm square.
- .vi Provide centring disc.

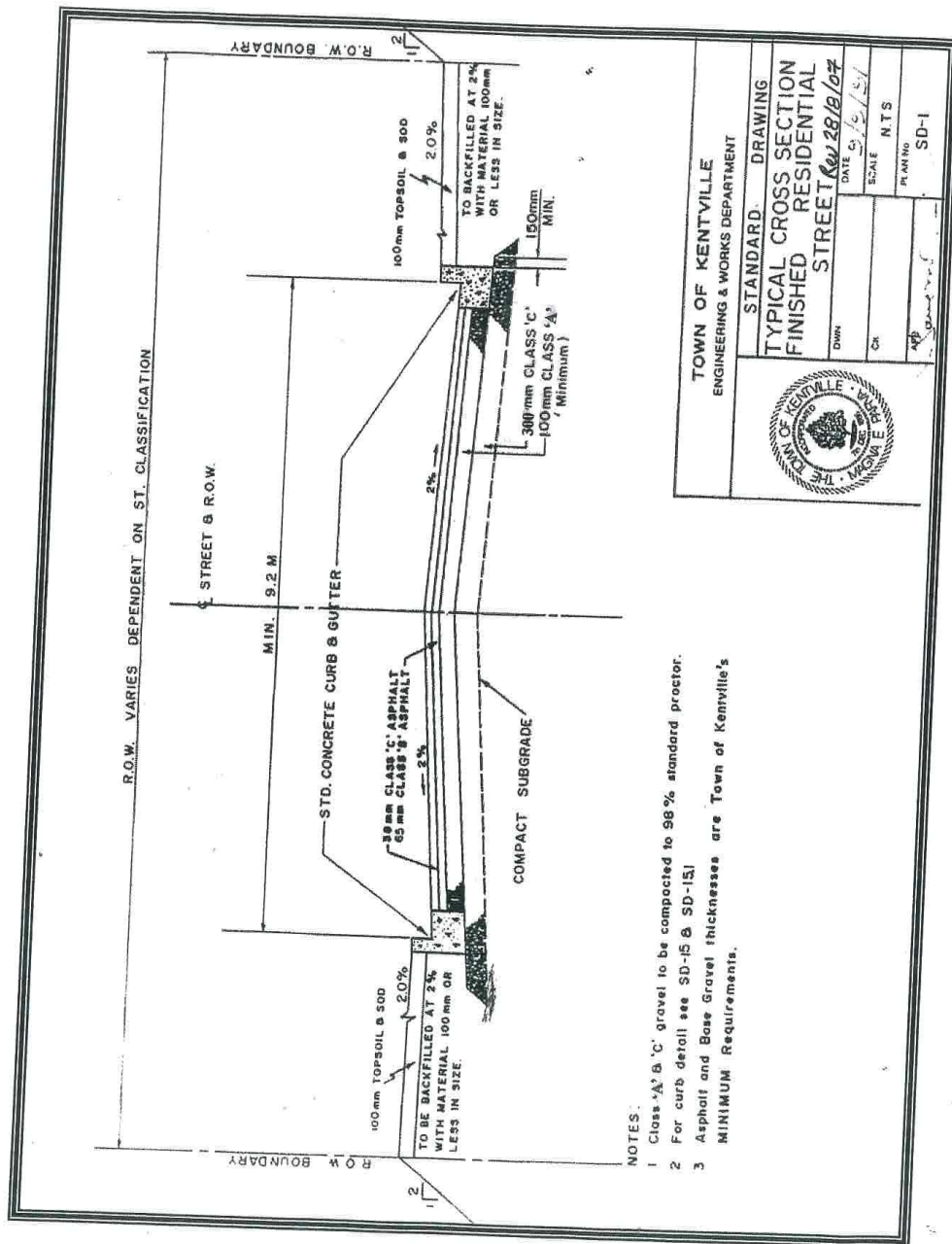
14.10 Fencing Materials

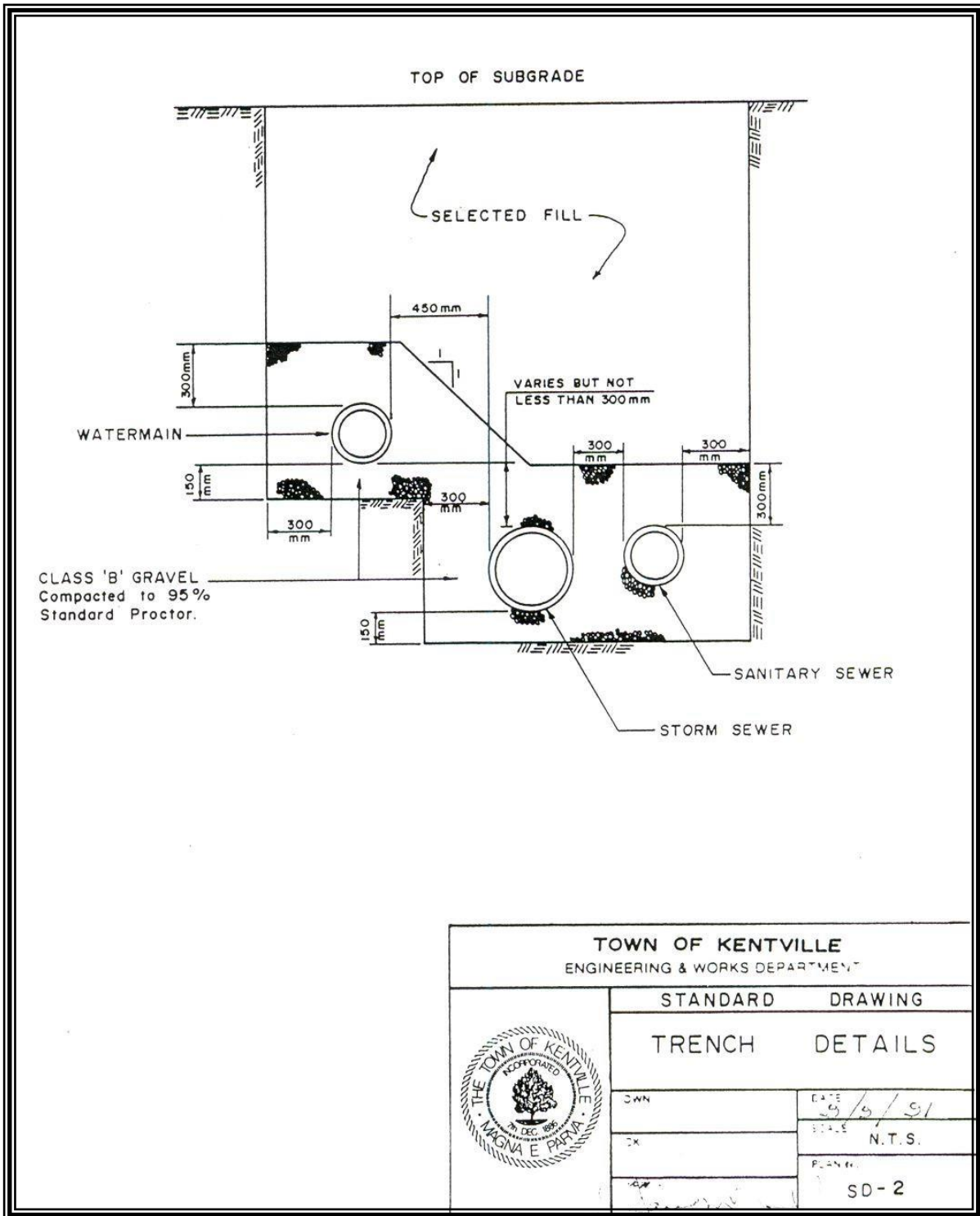
- .1 Chain link fence, Posts, Rails, and Fittings: to CAN2-138.1-M and CAN2-138.2-M Galvanized steel. Dimensions to the following:
 - .a Fence Height: 1.2 metres
 - .b Line Posts: 2 metres long, 48.3 mm outer diameter.
 - .c End and Corner Posts: 2.3 metres long, 73.0 mm outer diameter.
 - .d Rails: 33.4 mm outer diameter.

PART 15: ELECTRICAL REQUIREMENTS

Electrical servicing of subdivisions in the Town of Kentville is provided by Nova Scotia Power Corporation.

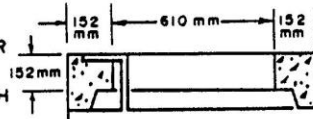
DRAWINGS





FRAME AND COVER TO BE I.M.P.
R-15 TYPE WITH SOLID COVER

FLAUNCHED TO MANHOLE WITH
NON SHRINK GROUT.



MAXIMUM PIPE SIZE CHART

	1050 mm Manhole 114 mm Wall	1200 mm Manhole 127 mm Wall	1500 mm Manhole 152 mm Wall	1800 mm Manhole 186 mm Wall	2100 mm Manhole 222 mm Wall	2400 mm Manhole 250 mm Wall
Max. Pipe O.D.	475 mm O.D.	730 mm O.D.	1050 mm O.D.	1200 mm O.D.	1500 mm O.D.	1800 mm O.D.
Straight thru 45° Deflection	375 mm R.C. Pipe	600 mm R.C. Pipe	900 mm R.C. Pipe	1050 mm R.C. Pipe	1200 mm R.C. Pipe	1500 mm R.C. Pipe
Max. Pipe O.D.	475 mm O.D.	730 mm O.D.	900 mm O.D.	1050 mm O.D.	1500 mm O.D.	1800 mm O.D.
90° Deflection	375 mm R.C. Pipe	450 mm R.C. Pipe	750 mm R.C. Pipe	750 mm R.C. Pipe	900 mm R.C. Pipe	1050 mm R.C. Pipe

ADAPTOR
3615
(ON REQUEST)

MIN. LENGTH
686 mm Section
457 mm

114 mm 686 mm 114 mm

3616
FLAT TOP 100 SERIES

USE CONE ONLY WITH
MINIMUM 1.5 M. CLEAR
ABOVE BENCHING.

METAL LADDER
(See dwg. SD-8)

152 mm
152 mm or
305 mm
915 mm

3613
3612
3638
3634
3631
3630
3629
3637
3636
3621
3620

CEMENT GROUT

STUB FOR FUTURE CONNECTION
A.C. COUPLING OR CONCRETE
BELL FLUSH WITH OUTSIDE OF
BASE.
REMOVABLE WATERTIGHT PLUG
(FOR FUTURE CONNECTION)

30 MPa CONCRETE
BASE CAST IN PLACE
OR PREFABRICATED.

UNDISTURBED GROUND OR
COMPACTED BACKFILL (152
mm GRANULAR WITH PRECAST
BASE)

NOTE:

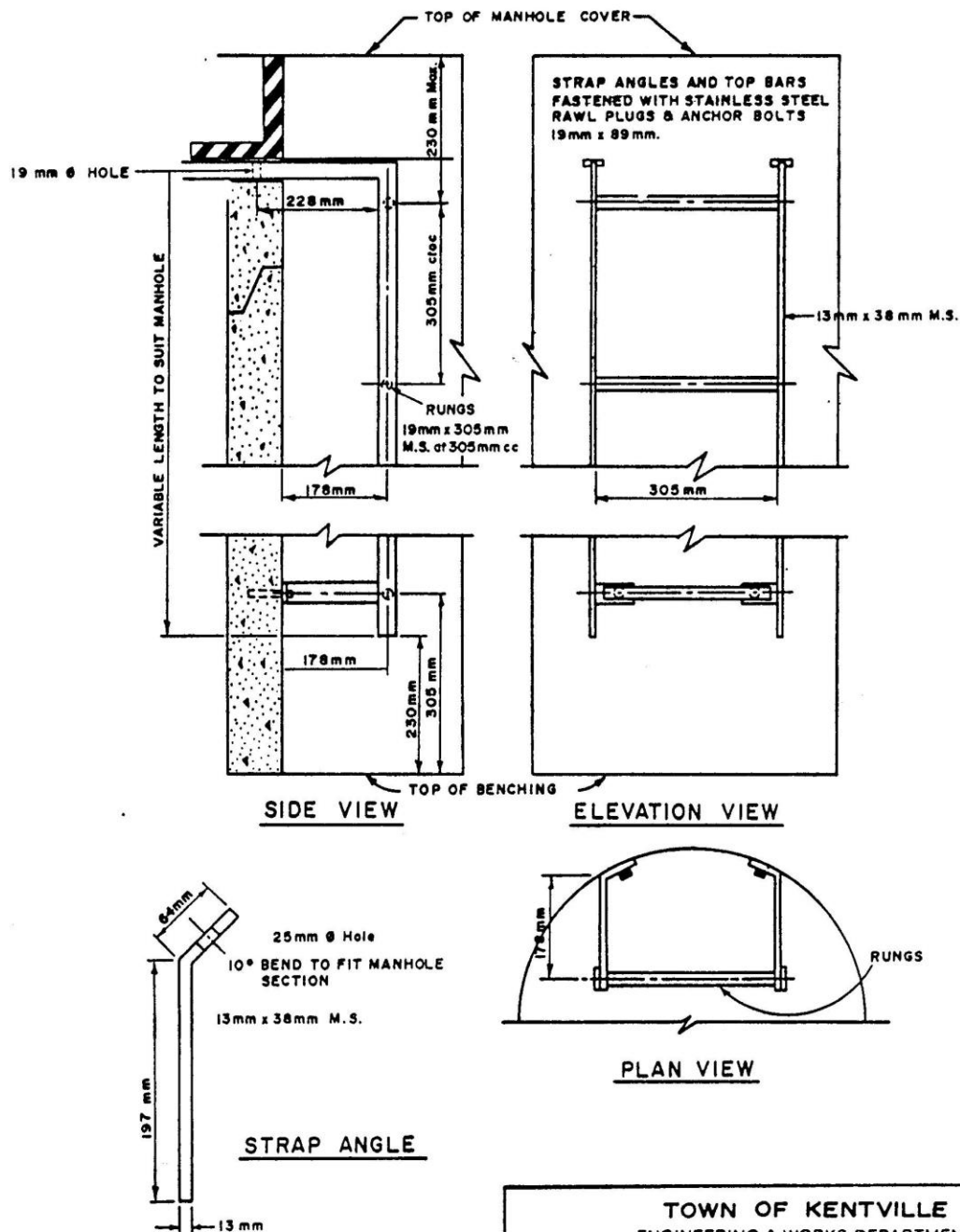
- 1) RUBBER GASKET JOINTS FOR ALL
SANITARY MANHOLES.
- 2) BOTTOM RUNG OF LADDER- 305mm
FROM BASE.
- 3) FLAT TOP CAPPING RING TO BE MEET
110 SERIES LOADING REQUIREMENT

TOWN OF KENTVILLE
ENGINEERING & WORKS DEPARTMENT



STANDARD DRAWING
STANDARD 1050mm MANHOLE
SECTION

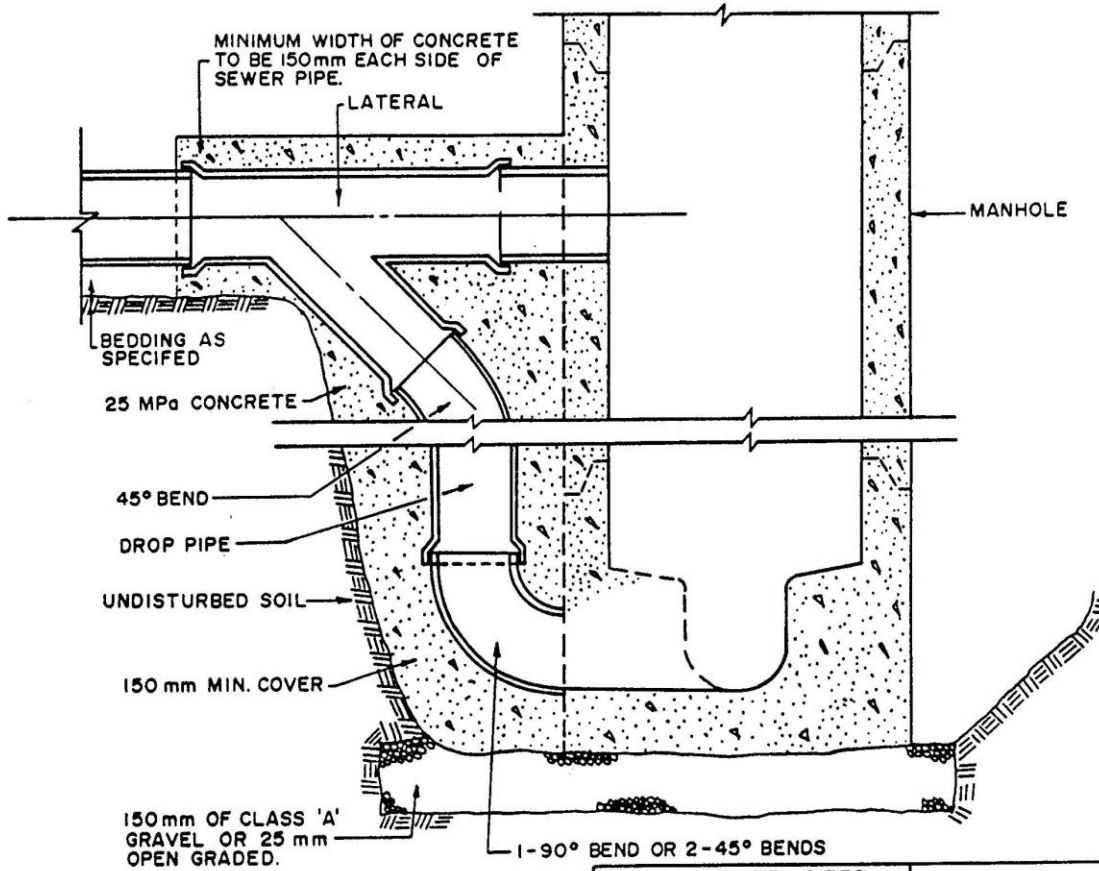
OWN	DATE 5/9/91
CK	SCALE N.T.S.
APP	PLAN NO SD-3



NOTES:

1. ALL JOINTS TO BE FILLET WELDED.
2. LADDERS UP TO 2.5 m REQUIRE STRAPS AT BOTTOM ONLY.
3. LADDERS OVER 2.5 m REQUIRE AN ADDITIONAL INTERMEDIATE STRAP.
4. ALL LADDERS TO BE HOT-DIPPED GALVANIZED AND CONFORM TO CSA HZ.2 & G.16.4.

TOWN OF KENTVILLE ENGINEERING & WORKS DEPARTMENT		
	STANDARD DRAWING STANDARD MANHOLE LADDER	
	OWN	DATE 9/9/91
	CK	SCALE N.T.S.
	PLAN NO SD-4	



NOTES:

DROP PIPE TO BE USED IN ALL MANHOLES WHERE DIFFERENCE IN INVERT ELEVATIONS EXCEED 1 METER OR AS PIPE SIZE PERMITS.

OBVERT OF DROP PIPE TO BE THE SAME ELEVATION AS OBVERT OF OUTLET PIPE.

SEWER PIPE SIZES FOR DROP CONNECTION	DROP PIPE SIZES
200 mm	200 mm
250 mm	250 mm
300 mm	250 mm
375 mm - 450 mm	300 mm
525 mm - 600 mm	375 mm
675 mm - 750 mm	450 mm
825 mm	525 mm
900 mm	600 mm
1050 mm	750 mm
1200 mm	900 mm
1500 mm	1050 mm

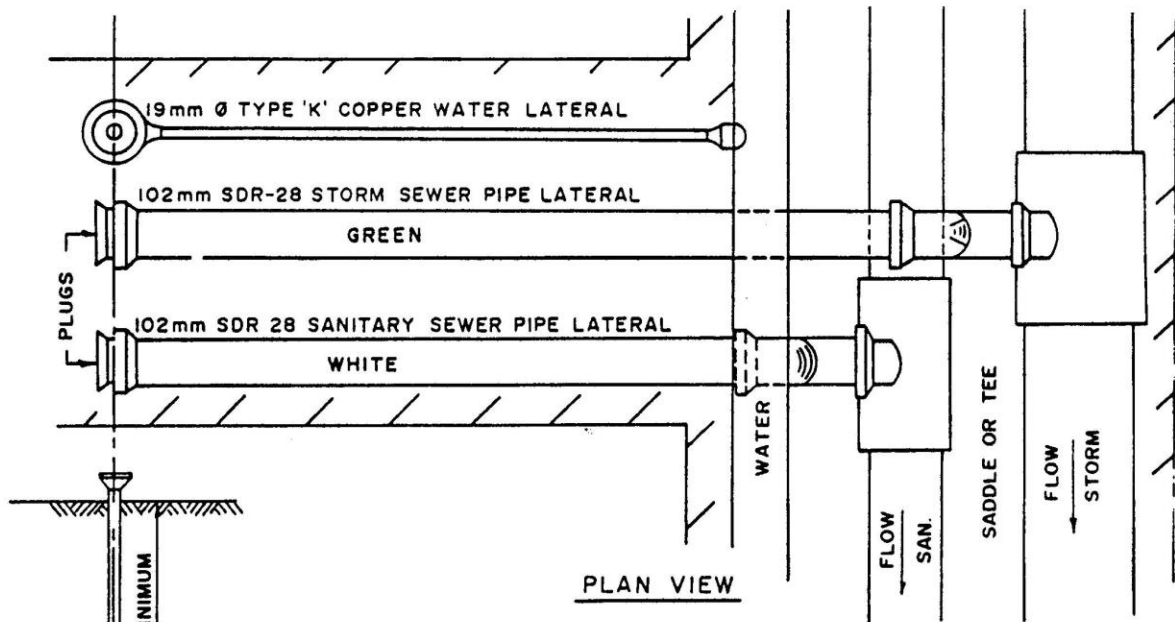
TOWN OF KENTVILLE
ENGINEERING & WORKS DEPARTMENT

STANDARD DRAWING

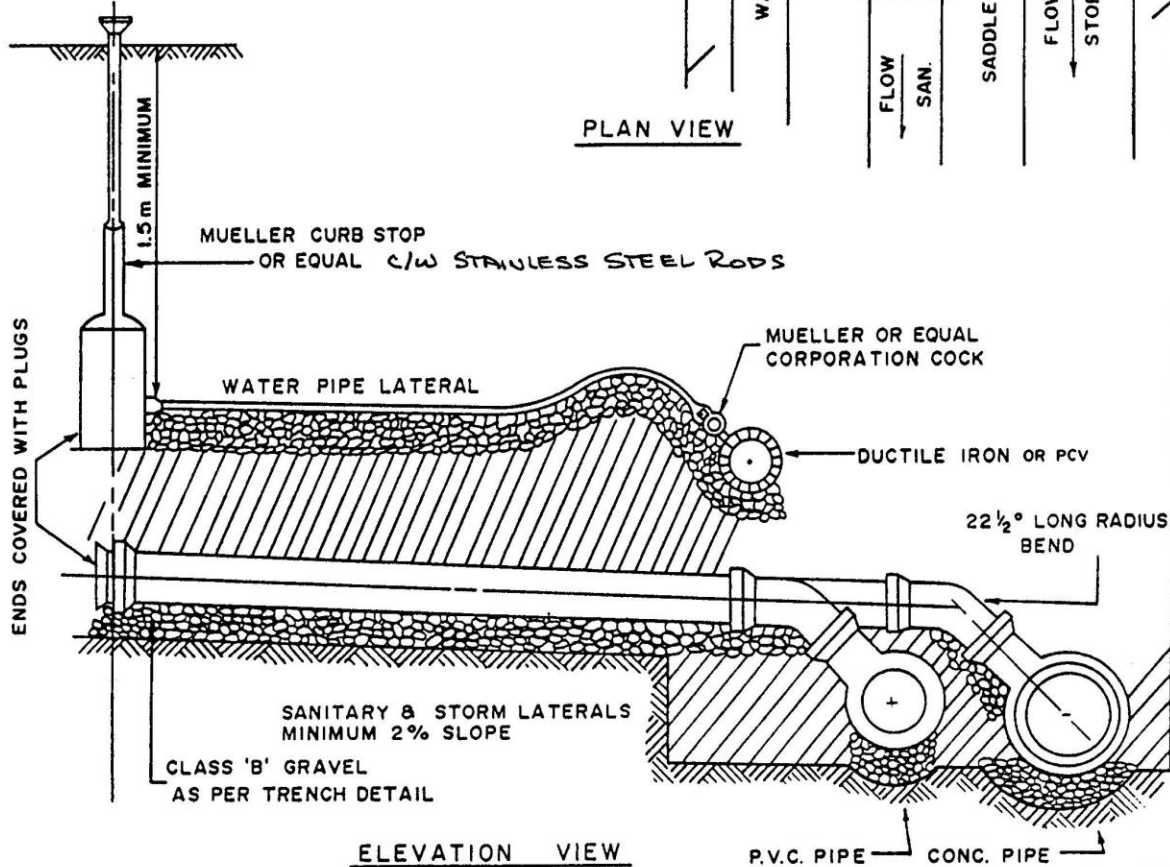
DROP MANHOLE



DWN	DATE 8/9/91
CK	SCALE N.T.S.
APR	PLAN NO SD-51



PLAN VIEW



ELEVATION VIEW

NOTES:

1. Laterals Should extend 1m passed property line when sidewalk is proposed.
2. Only 22½° Long radius bends shall be used.
3. A 48mm x 96mm marker stake shall be placed at end of service extending to 600mm above finished grade.
4. Laterals to be: San.- SDR-28 white, Stm.- SDR-28 green.

TOWN OF KENTVILLE
ENGINEERING & WORKS DEPARTMENT

STANDARD DRAWING

TYPICAL LATERAL
CONNECTIONS



OWN

CK

DATE

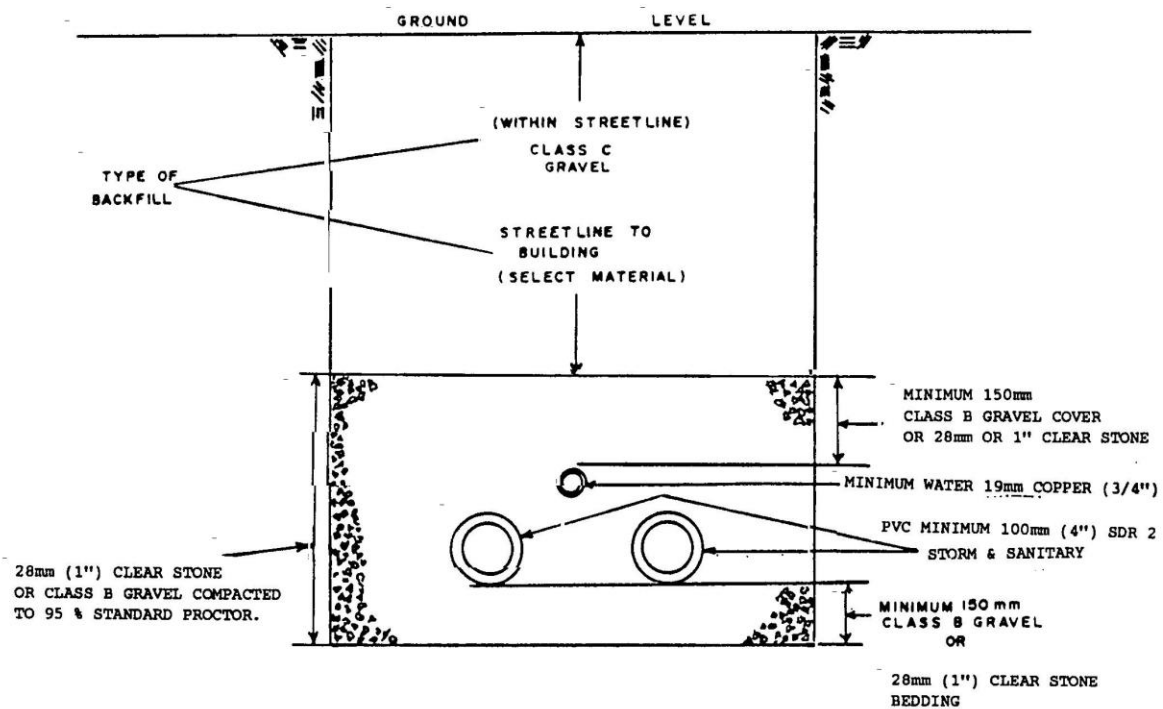
SCALE

PLAN NO

3/9/91

N.T.S.

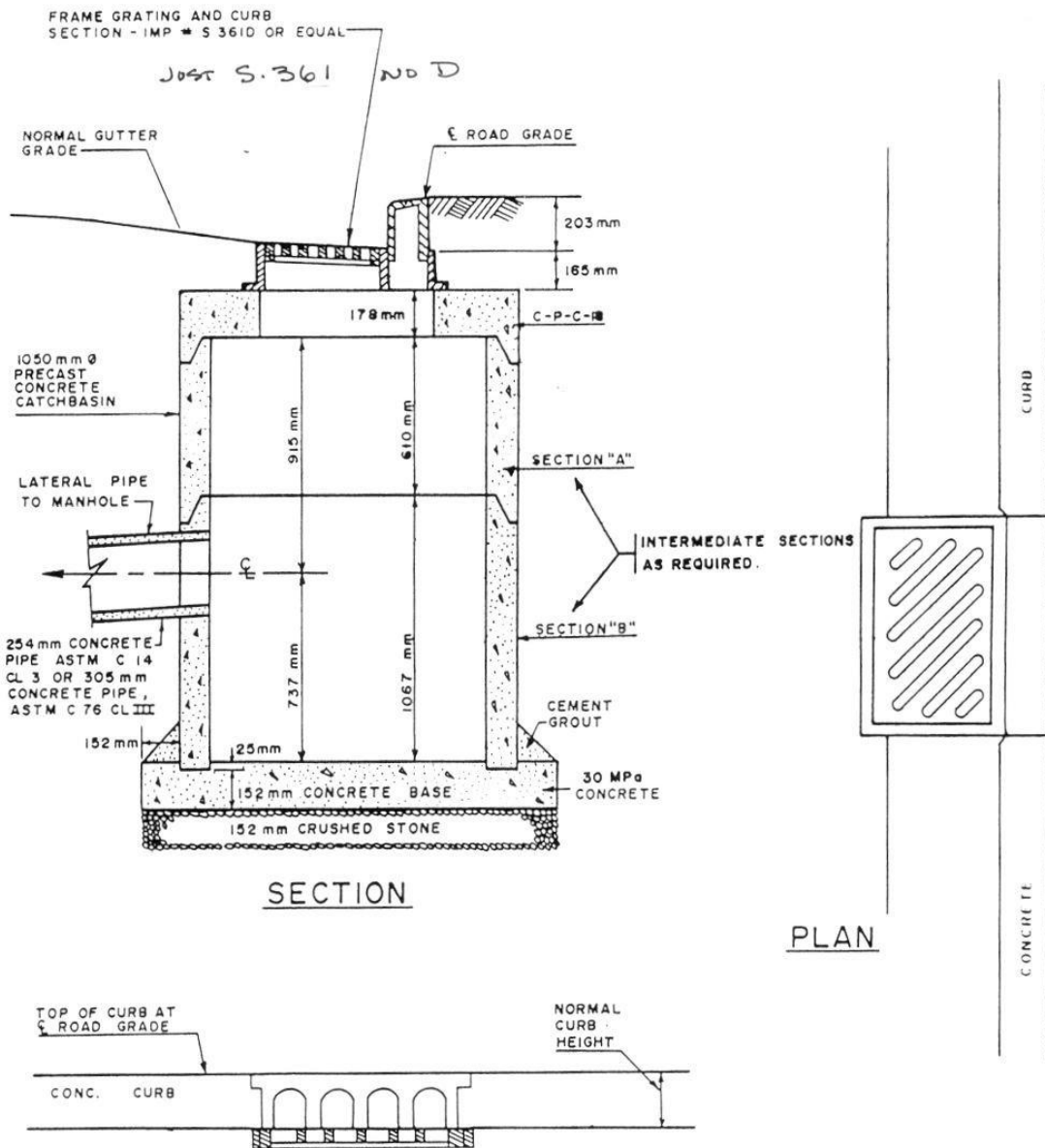
SD - 6A



NOTE:

STORM AND SANITARY LATERALS
TO BE A MINIMUM OF 2% GRADE.

TOWN OF KENTVILLE ENGINEERING & WORKS DEPARTMENT	
	STANDARD DRAWING
	SERVICE LATERAL DETAILS
	DWN _____ DATE <u>9/19/91</u>
	CK _____ SCALE <u>N.T.S.</u>
APP. <u>Jauch</u>	PLAN No. <u>SD-7</u>



ELEVATION-CURB AT CATCHBASIN

NOTES:

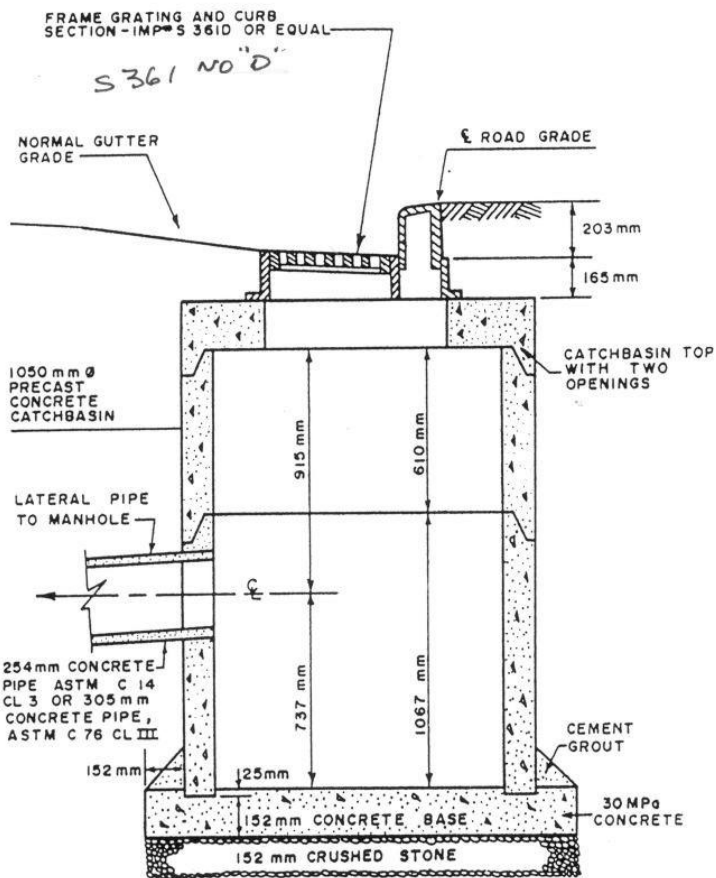
1. Catchbasin capping rings to meet IIO series loading requirement.
2. Backfill material around catchbasins to be select backfill material compacted to 95% standard proctor.

TOWN OF KENTVILLE
ENGINEERING & WORKS DEPARTMENT



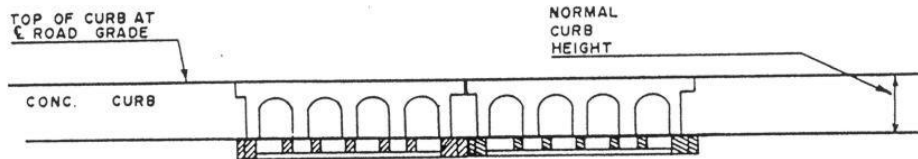
STANDARD DRAWING TYPICAL 1050 mm CATCHBASIN

OWN	DATE
CK	SCALE N.T.S.
APP	PLAN NO
	SD-8



SECTION

PLAN



ELEVATION-CURB AT CATCHBASIN

NOTES:

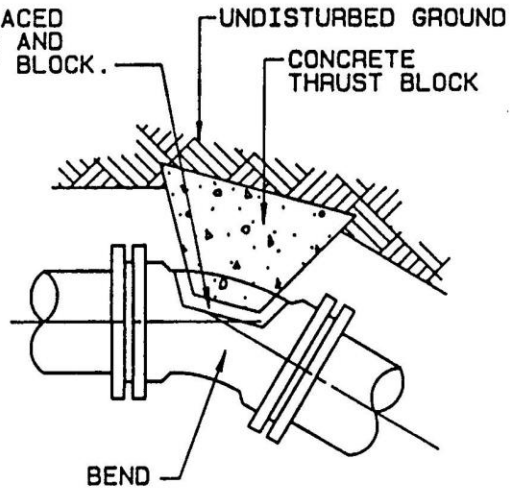
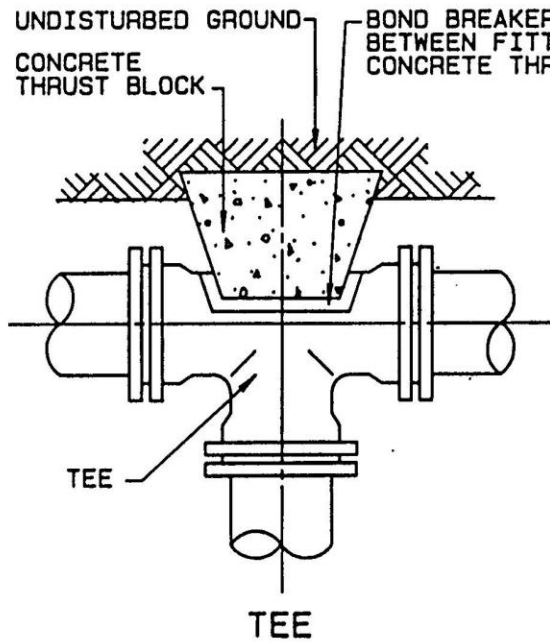
1. CONCRETE FINISHING MUST BE INSTALLED FROM THE OUTSIDE EDGE OF THE CATCHBASIN TOP TO THE INSIDE EDGE OF THE FRAME TO ENSURE THAT ALL DRAINAGE WATER ENTERS THE BODY OF THE CATCHBASIN.

TOWN OF KENTVILLE
ENGINEERING & WORKS DEPARTMENT

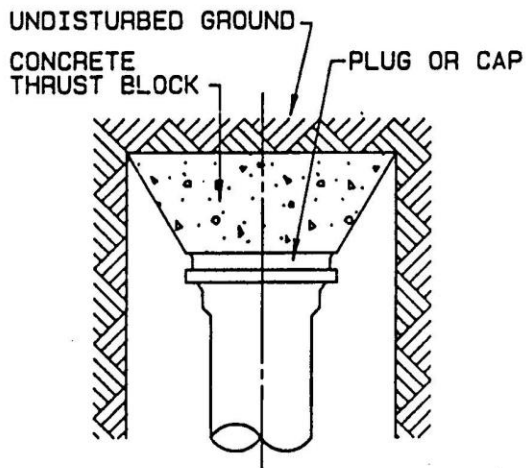


STANDARD DRAWING
TYPICAL 1050 mm
DOUBLE CATCHBASIN

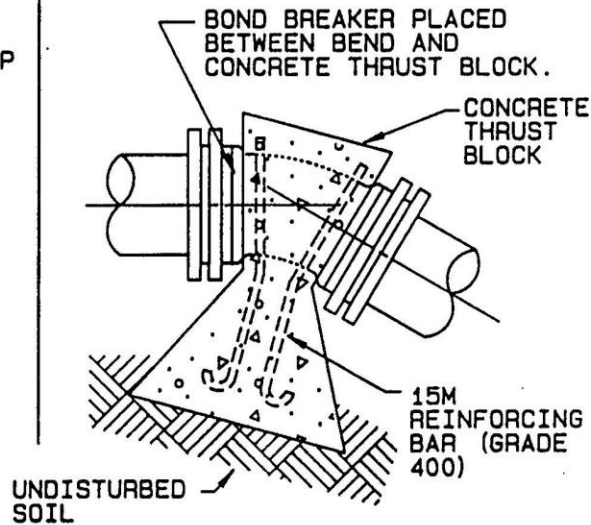
OWN	DATE 9/9/91
CK	SCALE N.T.S.
	PLAN No. SD-9



HORIZONTAL BENDS



BLANK END



VERTICAL BENDS

TOWN OF KENTVILLE ENGINEERING & WORKS DEPARTMENT	
STANDARD DRAWING	
THRUST BLOCK DETAILS	
OWN	DATE 3/9/91
CK	SCALE
APP	PLAN NO.
SD-10	



MINIMUM CONTACT AREAS FOR CONCRETE THRUST BLOCKS

PIPE DIAM mm	AREA (m²) FOR SOIL SUPPORTING CAPACITY OF 100 kPa					
	CAP or PLUG	TEE	90° BEND	45° BEND	22.5° BEND	11.25° BEND
100	0.25	0.25	0.32	0.20	0.18	0.18
150	0.48	0.48	0.84	0.40	0.24	0.18
200	0.80	0.80	1.12	0.64	0.32	0.18
250	1.28	1.28	1.78	0.96	0.48	0.24
300	1.78	1.78	2.58	1.44	0.72	0.40

MINIMUM DISTANCE FROM FITTING TO UNDISTURBED GROUND

PIPE DIAMETER (mm)	mm
100	450
150	450
200	450
250	600
300	750

VERTICAL THRUST BLOCKS THRUST COMPENSATED FOR BY MASS OF CONCRETE (m³)

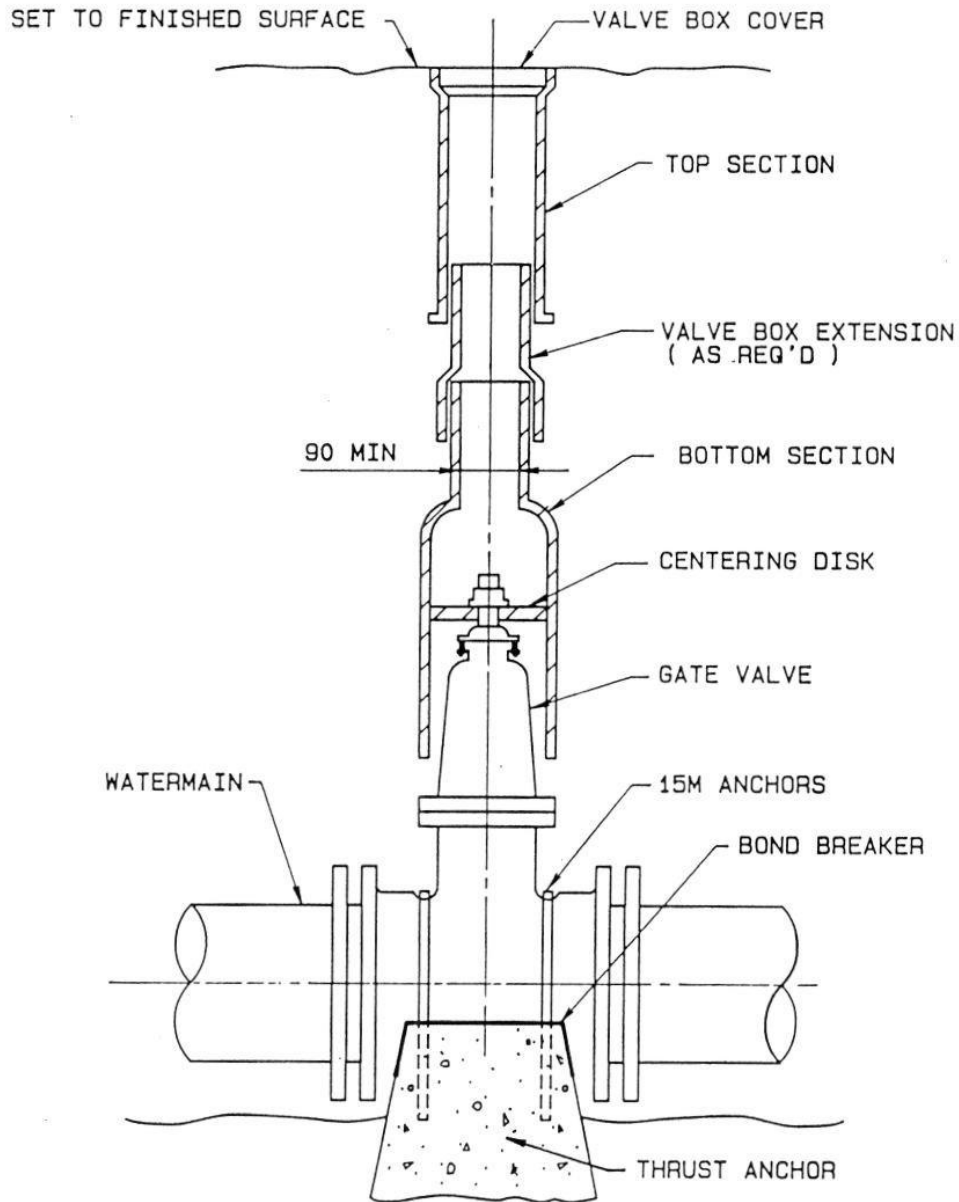
PIPE DIAM (mm)	45° BEND	22.5° BEND	11.25° BEND
100	.40	.20	.20
150	.80	.40	.40
200	1.40	.70	.70
250	2.10	1.10	1.10
300	3.00	1.50	1.50

NOTES:

1. SEE SD-10 FOR THRUST BLOCK CONFIGURATIONS.
2. THESE TABLES ARE BASED ON SOIL SUPPORTING CAPACITIES OF 100 kPa AND AN INTERNAL PIPE PRESSURE OF 1035 kPa. WHERE DIFFERENT SUPPORTING CAPACITIES OR INTERNAL PRESSURES ARE ENCOUNTERED, CONTACT AREAS SHOULD BE CALCULATED ACCORDINGLY. SAFE SUPPORTING CAPACITY SHOULD BE DETERMINED BY THE DESIGN ENGINEER, AND SHOULD INCLUDE AN APPROPRIATE FACTOR OF SAFETY.

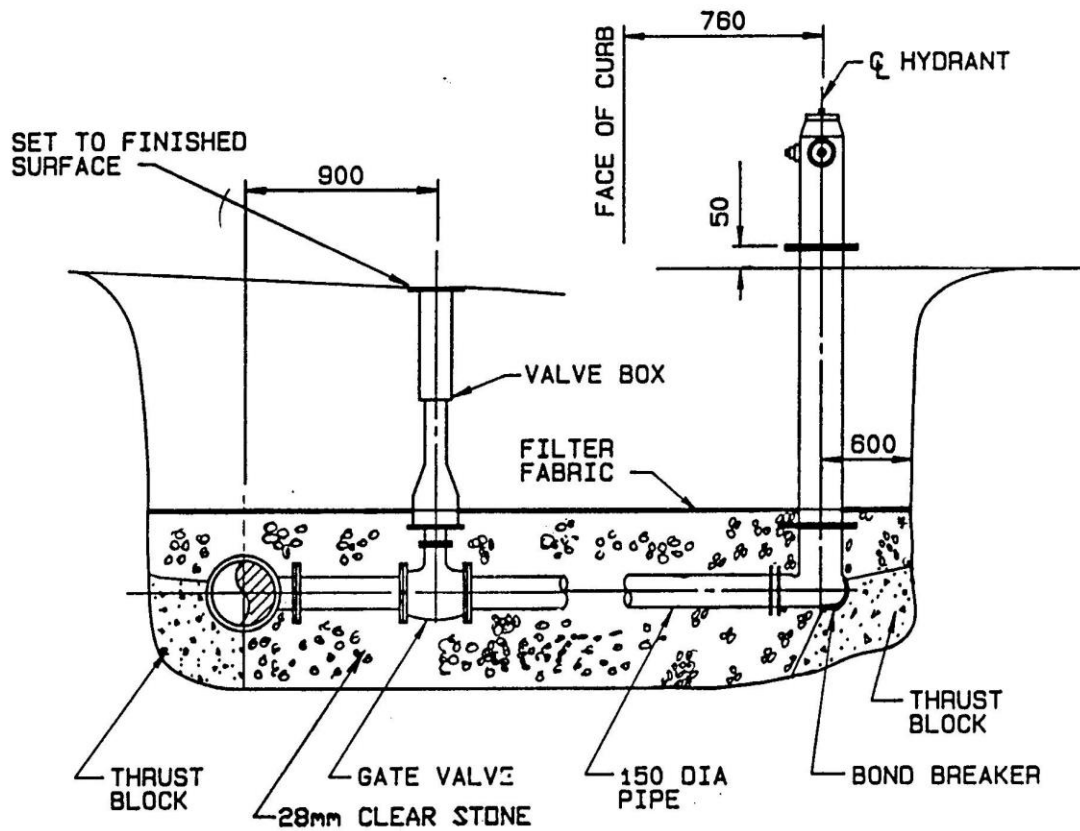
TOWN OF KENTVILLE ENGINEERING & WORKS DEPARTMENT	
STANDARD DRAWING	
THRUST BLOCK REQUIREMENTS	
DWN	DATE 9/9/91
CK	SCALE
APP	PLAN NO. SD-10.1





TOWN OF KENTVILLE	
ENGINEERING & WORKS DEPARTMENT	
STANDARD DRAWING	
GATE VALVE AND VALVE BOX	
DWN	DATE 9/9/91
CK	SCALE
APP	PLAN NO.
	SD-II

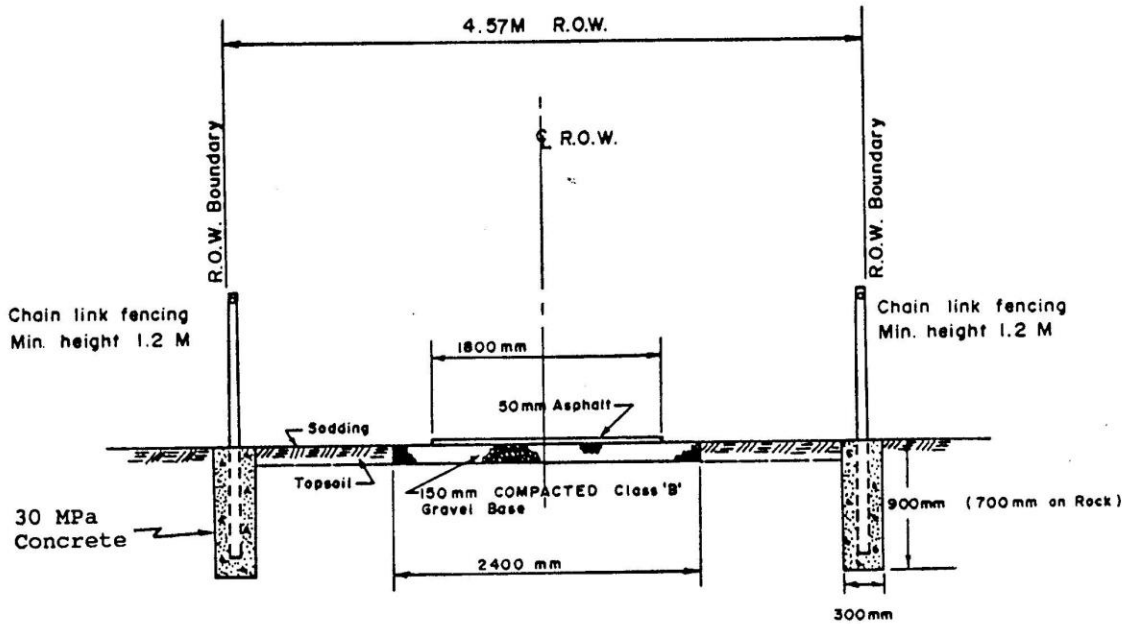




NOTE:
SEE STD. DET. No'S SD-10
AND SD-11 FOR THRUST
BLOCK DETAILS.

TOWN OF KENTVILLE ENGINEERING & WORKS DEPARTMENT	
STANDARD DRAWING	
FIRE HYDRANT	
DWN	DATE 9/9/91
CK	SCALE
APP	PLAN NO.
SD-12	





TOWN OF KENTVILLE
ENGINEERING & WORKS DEPARTMENT

STANDARD DRAWING

**TYPICAL WALKWAY
CROSS-SECTION**



OWN.

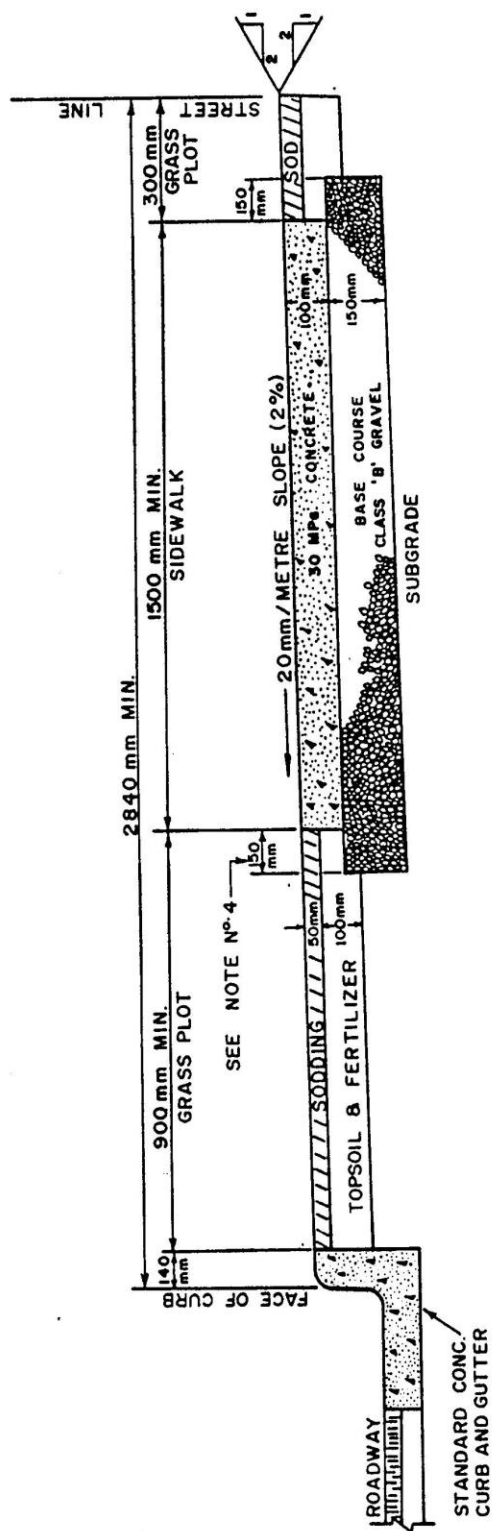
DATE 9/9/91

CK.

SCALE 1 : 50

PLAN No.

SD-13



NOTES:

1. Normal thickness of concrete sidewalk to be 100 mm.
2. Thickness of concrete sidewalk through driveway area to be 150 mm.
3. 150 mm x 150 mm G.A.W.V.A. to be used in all commercial type driveways.
4. The base course shall extend 150 mm minimum on each edge of the sidewalk structure.
5. Base course gravel to be compacted to 98% standard proctor.

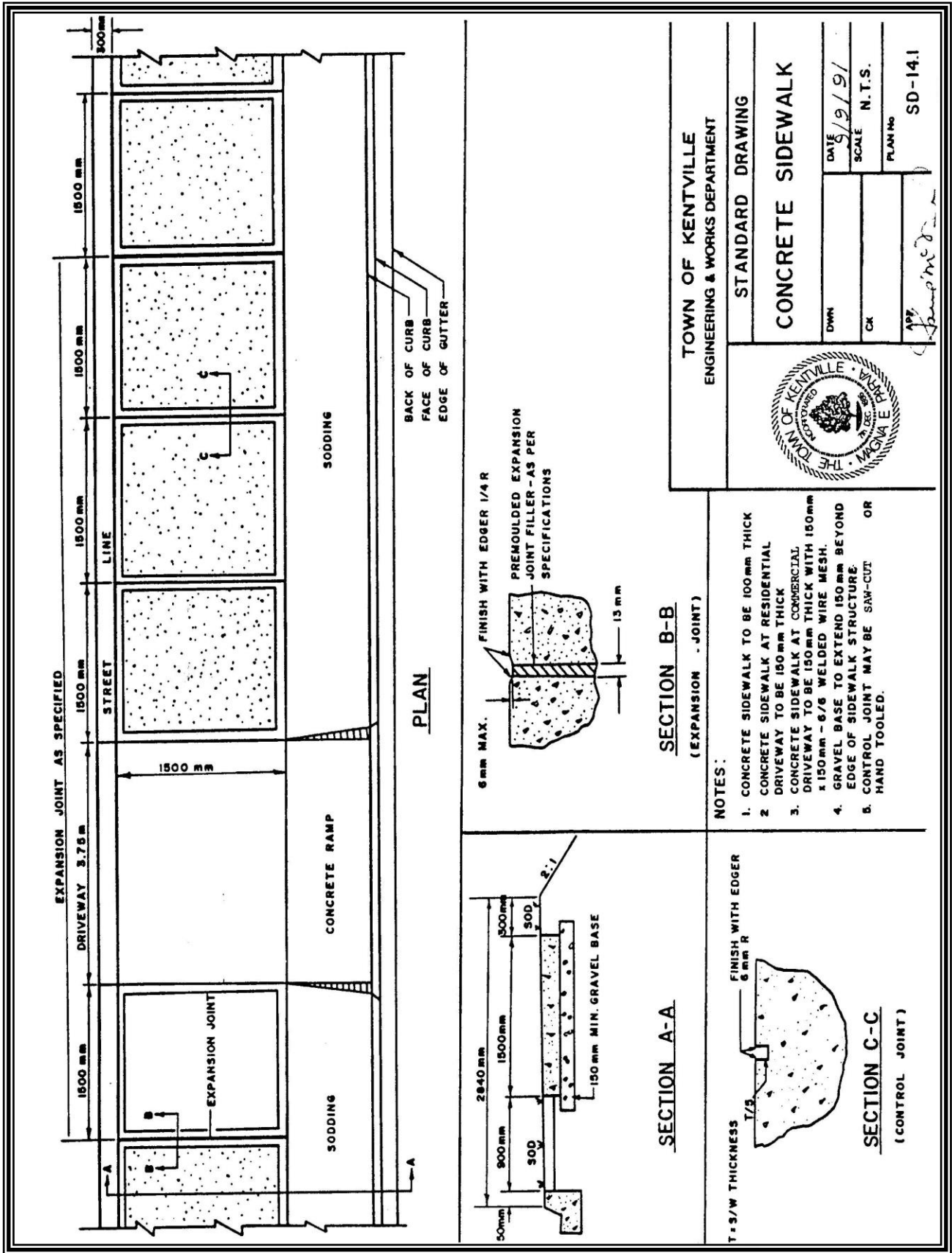
TOWN OF KENTVILLE
ENGINEERING & WORKS DEPARTMENT

STANDARD DRAWING

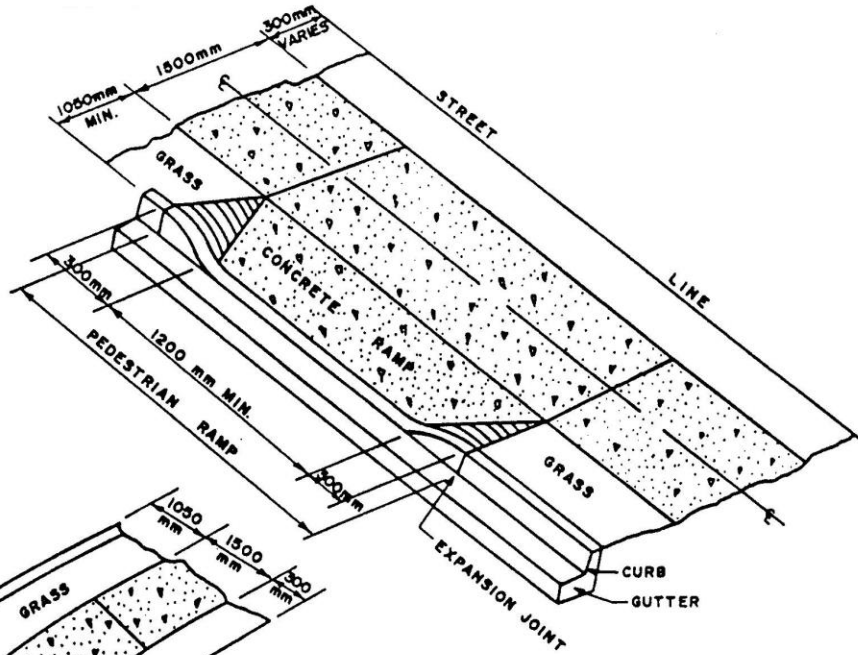
TYPICAL 1500 mm SIDEWALK
CROSS-SECTION



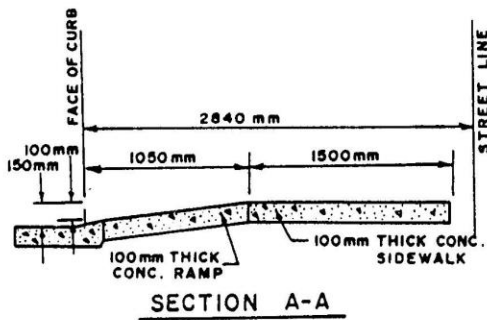
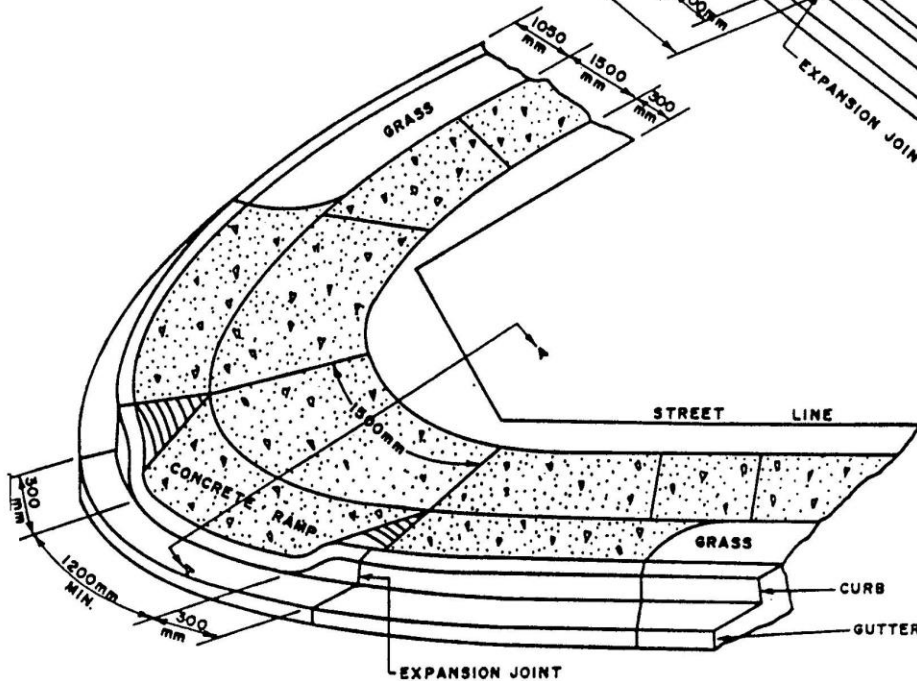
DATE 5/9/51
SCALE N.T.S.
PK. No. 90-14



MID BLOCK VIEW



CORNER BLOCK VIEW



SECTION A-A

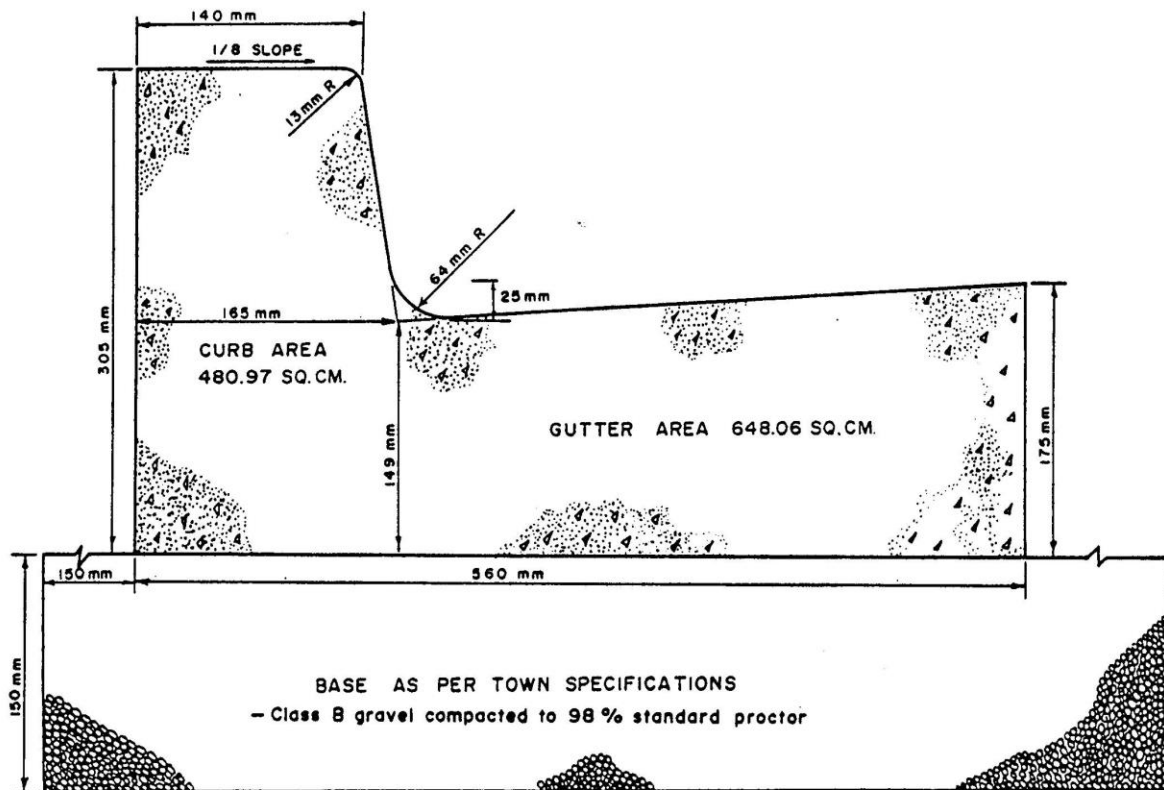
TOWN OF KENTVILLE
ENGINEERING & WORKS DEPARTMENT

STANDARD DRAWING

PEDESTRIAN RAMP

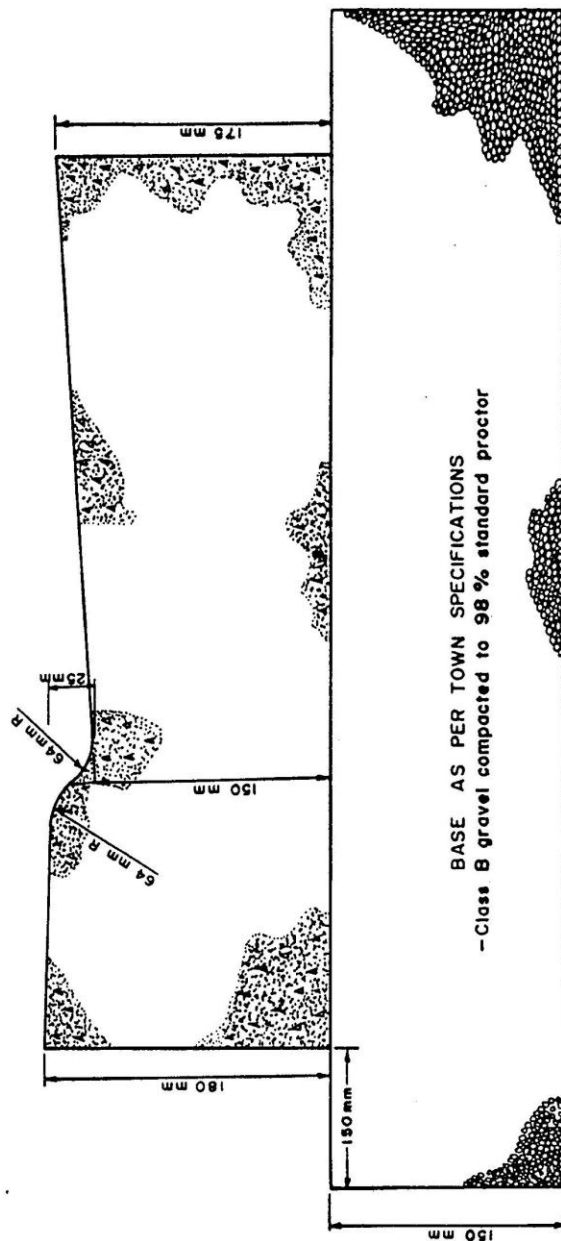
OWN.	DATE 9/9/91
CK	SCALE N.T.S.
AAP	PLAN No SD14.3







TYPICAL X-SECTION

TOWN OF KENTVILLE ENGINEERING & WORKS DEPARTMENT	
STANDARD DRAWING	
CONCRETE CURB & GUTTER	
CROSS SECTION DETAIL	
DWN	DATE 9/9/91
CK	SCALE N.T.S.
APP	SD-15



BASE AS PER TOWN SPECIFICATIONS
-Class B gravel compacted to 98 % standard proctor

TYPICAL X-SECTION

TOWN OF KENTVILLE ENGINEERING & WORKS DEPARTMENT		STANDARD	DRAWING
		CONCRETE	GUTTER
		-X-SECTION AT DRIVEWAY RAMP-	
		DATE	5/9/51
		SCALE	N.T.S.
		PLAN IN	SD - 15.1

148.00 Proposed Lot Grading

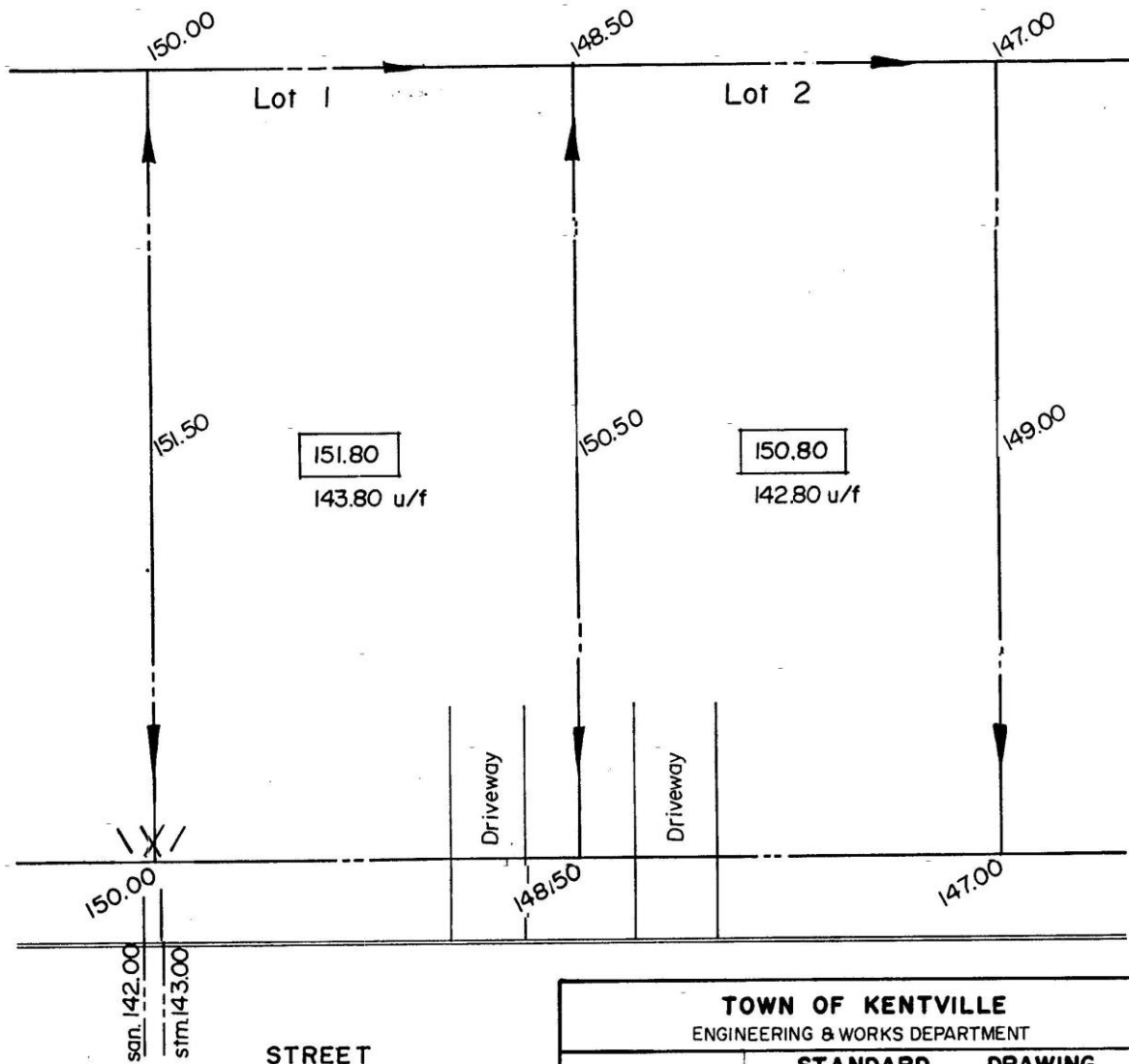
150.00 Building Line Grade Elevation

143.00 u/f Minimum Underside of Footing Elevation

stm. 143.00 Storm Sewer Lateral Invert

san. 142.00 Sanitary Sewer Lateral Invert

Swale and Drainage Direction



TOWN OF KENTVILLE

ENGINEERING & WORKS DEPARTMENT

STANDARD DRAWING

SUBDIVISION LOT GRADING PLAN

DWN

DATE 9/9/91

CK

SCALE

APP

PLAN NO.

SD-16



English Equivalents to Metric Distances

Metric (mm)	English (in.)	Metric (m)	English (ft.)
5	0.20	1.2	3.94
6	0.24	1.8	5.91
12	0.47	2	6.56
14	0.55	2.4	7.87
25	0.98	4.5	14.76
28	1.10	6	19.69
32	1.26	9	29.53
33.4	1.31	15.24	50.00
38	1.50	30	98.43
48	1.89	90	295.28
48.3	1.90	150	492.13
50	1.97	350	1148.29
56	2.20		
65	2.56		
73	2.87		
75	2.95		
80	3.15		
84	3.31		
96	3.78		
100	3.94		
134	5.28		
150	5.91		
200	7.87		
250	9.84		
300	11.81		
350	13.78		
400	15.75		
450	17.72		
500	19.69		
600	23.62		
750	29.53		
900	35.43		
915	36.02		
1000	39.37		
1050	41.34		
1200	47.24		
1500	59.06		
3000	118.11		