

**TOWN OF IPSWICH
MASSACHUSETTS**

PLANNING BOARD

**RULES AND REGULATIONS GOVERNING
THE SUBDIVISION OF LAND
IN IPSWICH, MASSACHUSETTS**

ADOPTED NOVEMBER 4, 1993

(As amended through July 2013)

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**Rules and Regulations Governing
The Subdivision of Land
In Ipswich, Massachusetts**

This document is adopted under the Subdivision Control Law, Sections 81K to 81GG inclusive, Chapter 41 of the Massachusetts General Laws, including all amendments thereto.

SECTION I. PURPOSE, AUTHORITY AND DEFINITIONS

1.1 AUTHORITY

Under the authority vested in the Planning Board of the Town of Ipswich by Section 81-Q of Chapter 41 of the General Laws, said Board hereby adopts these rules and regulations governing the subdivision of land in the Town of Ipswich.

1.2 PURPOSE

The Ipswich Planning Board is authorized under the General Laws of Massachusetts to regulate the laying out and construction of ways in subdivisions to insure the safety, convenience and welfare of the present and future inhabitants of Ipswich. The Board shall exercise its authority with due regard for the protection of the community character and natural resources; provision of adequate access to all of the lots in the subdivision by ways that will be safe and convenient for travel; for lessening congestion in such ways and in the adjacent public ways; for reducing danger to life and limb in the operation of motor vehicles; for securing safety in the case of fire, flood, panic and other emergencies; for insuring compliance with applicable provisions of the Ipswich Zoning Bylaw and the Town of Ipswich General Wetlands Bylaw; for securing adequate provisions for water, sewerage, drainage, underground utility service, police and fire protection and other requirements where necessary in a subdivision; for coordinating the ways in a subdivision with each other and with the public ways in neighboring subdivisions.

In considering a proposed subdivision, the Planning Board shall solicit the opinions of other Town Boards, Committees, Commissions and Officials as they pertain to the activity of the subdivision. The Board may also solicit the opinion of technical experts employed by the Board for the purposes of providing specialized technical review to the Board.

1.3 DEFINITIONS

In constructing these Regulations, the definitions in Section 81-L of Chapter 41 of the General Laws shall apply. In addition, the following other terms and words are defined:

Applicant: a person applying for the approval of a plan under these regulations, including owner, agent representative or assigns of the owner. The applicant's agent and/or representative shall obtain and submit to the Board written authorization from the owner of record.

Base Flood Elevation: the level of flooding having a one percent chance of being equaled or exceeded in any given year, as designated on the Federal Insurance Rate Map (FIRM) or, in the absence of such designation, as may be determined based upon the best available information regarding flood hazards, including any available U.S. Geologic Survey, Soil Conservation Service, and/or the Corps of Engineers studies.

Bench Mark: a permanent physical mark of known elevation. All elevations shall be based on the National Geodetic Vertical Datum of 1929 (NGVD).

Board: The Town of Ipswich Planning Board. A quorum for a meeting or hearing is three members.

Cul-de-Sac: a local, dead-end street with a turnaround at the end. The maximum length of a cul-de-sac, as measured along the road centerline from its intersection with the side line of the nearest through street to the center point of the cul-de-sac turnaround, is established in §6.8 of these rules and regulations.

Drainage: the control of surface or subsurface water within the tract of land to be subdivided.

Drip Line: circular area defined by the outermost circumference of a tree's canopy.

Easement: a right in land acquired by public authority or other person to use or control property for a utility or other limited purpose.

Engineer or Surveyor: a person registered by the Commonwealth of Massachusetts to perform professional civil engineering or land surveying services in accordance with 250 CMR 3.00 - 6.00.

Lot: an area of land in one ownership with definite boundaries used, or available for use, as the site of one or more buildings. Areas endorsed by the Board upon a plan as "Not a Building Lot" or "not available for building purposes" shall not be considered lots.

Municipal Service: public utilities furnished by the town in which a subdivision is located, such as water, sewerage, and electricity. For the purposes of these regulations, private utilities including, but not limited to gas, and community antenna television cabling, shall be considered municipal services.

Owner: the owner of record as shown by the records of the Essex County South District Registry of Deeds or of the Land Court of the Commonwealth of Massachusetts.

Recorded: recorded in the Registry of Deeds for Essex County South District; if registered land is affected, filed with the recorder of the Land Court of the Commonwealth of Massachusetts.

Registered Mail: registered or certified mail.

Register of Deeds: the register of deeds of the county or district in which the land in question, or the city or town in question, is situated, and, when appropriate, shall include the recorder of the Land Court.

Street:

Collector: a street used primarily to connect local streets to arterial streets. It carries moderate volumes of traffic. Less than 25% of the average daily traffic of a collector street is normally attributed to through traffic.

Court: a street which, by its location and design, serves as the sole means of access to no more than two residential lots, and which has no potential to serve additional lots.

Lane: A street which, by its location and design, serves as the sole means of access to no more than five residential lots, and which has no potential to serve additional lots.

Local: a street that provides direct access to abutting properties only and carries low volumes of traffic; this category includes cul-de-sacs and loop streets.

Minor arterial: a street used to provide movement between major arterials, collectors and other minor arterials. It carries relatively high volumes of traffic. At least 25% of the average daily traffic volume is normally attributed to through traffic.

Major arterial: a street of regional significance, with high volumes of traffic used primarily to carry traffic through the Town. It is not intended as a residential street.

Subdivision: the division of a tract of land into two or more lots, including re-subdivision, provided that such division shall not be deemed to constitute a subdivision under the subdivision Control Law (M.G.L. c. 41) if at the time it is made, every lot within the tract so divided has frontage on:

- a) a public way certified by the Town Clerk as being maintained and used as a public way;
- b) a way shown on a plan theretofore approved and endorsed in accordance with the Subdivision Control Law; or
- c) a way in existence prior to the date on which the subdivision control law was adopted by the Town, and meeting the standards of the Board as set forth in Section 3.3.

Subdivision Control: the power of regulating the subdivision of land granted by the Subdivision Control Law.

Way, Public: a way which in the reasonable judgment of the Board has sufficient width, suitable grades and adequate construction to provide for the needs of the vehicular traffic existing and/or resulting from the development of the abutting land and for the installation of municipal services to such land(s) and/or buildings located on or to be constructed on such land and which complies with one of the following criteria:

1. a way which the Town Clerk certifies is used as and maintained regularly and consistently as a public way by the Town to the same extent to which other public ways are maintained by the Town; or
2. a way shown on a plan previously approved and endorsed by the Board and recorded at the Registry of Deeds or in the Land Court; or
3. a way existing prior to the date on which subdivision control was adopted by the Town; or
4. a way shown on a plan of a subdivision recorded at the Registry of Deeds or at the Land Court prior to the date on which the subdivision control law was adopted by the Town.

Utilities: private or municipal services to be furnished within the subdivision including, without limitation, telephone, community access television, electric light and power, gas lines, sanitary sewers, storm drains, water mains and appurtenances.

Zoning Bylaw: the Protective Zoning Bylaw of the Town of Ipswich adopted under Article 36 of the Annual Town Meeting, May 2, 1977, and approved by the Attorney General August 18, 1977 and any and all duly adopted and approved amendments thereto.

SECTION II. GENERAL ADMINISTRATION

2.1 UNAPPROVED SUBDIVISION PROHIBITED

No subdivision of any land, improvement or sale of lots in a subdivision, or construction of streets or installation of municipal utilities therein shall be permitted unless and until a definitive plan of such subdivision has been submitted to and approved by the Board under the provisions of these regulations.

2.2 LIMITATION OF ONE DWELLING ON ANY LOT

No more than one building designed or available for use for dwelling purposes shall be erected or placed or converted to use as such on any lot in a subdivision, or elsewhere in the town, without the consent of the Board unless otherwise provided for in the Protective Zoning Bylaw. Such consent may be conditioned upon the providing of adequate ways furnishing access to each site for each such building, in the same manner as otherwise required for lots within a subdivision.

2.3 ADEQUATE ACCESS FROM PUBLIC WAY

2.3.1 Where the street system within a subdivision does not connect with or have, in the opinion of the Board, adequate access from a Town, County or State public way, the Board may require, as a condition of approval of a plan, that such adequate access be provided by the Applicant, and/or that the Applicant make physical improvements to and within such a way of access, from the boundary of the subdivision to the nearest public way capable of providing a safe flow of traffic to the subdivision. If determined necessary by the Board, the required improvements may include speed reduction measures that encourage motorists to travel within the posted speed limits of the public way(s).

2.3.2 Where the physical condition or width of a public way from which a subdivision has its access is considered by the Board to be inadequate to carry the traffic expected to be generated by such subdivision, the Board may require the Applicant to dedicate a strip of land for the purpose of widening the abutting public way to a width at least commensurate with that required within the subdivision, and to make physical improvements to and within such public way to the same standards required within the subdivision. Any such dedication of land for the purpose of widening the way and any such work performed within such public way shall be made only with permission of the governmental agency having jurisdiction over such way, and all costs of any such widening or construction shall be borne by the Applicant.

2.4 EFFECT OF PRIOR RECORDING

The recording of a plan of subdivision within the Town at the Registry of Deeds or the Land Court prior to the effective date of the Subdivision Control Law in the Town of Ipswich (February 18, 1954) shall not exempt the land within such subdivision from the application and operation of these Rules and Regulations except as specifically exempted in M.G.L c.41, Section 81.

2.5 FAILURE TO COMPLY; WAIVERS

2.5.1 Failure to Comply: Failure substantially to comply with the provisions of these Rules and Regulations Governing the Subdivision of Land in Ipswich, Massachusetts, shall be reason for denial of a subdivision filed thereunder.

2.5.2 Waivers: The Board may waive strict compliance with any of these regulations if it deems such waiver to be in the public interest and if written record is kept of each such waiver and the reasons for it. In approving waivers, the Board may require such conditions as will, in its judgment, secure substantially the objectives of the standard(s) or requirement(s) waived.

2.6 INTERPRETATION, CONFLICT AND SEPARABILITY

2.6.1 The provisions of these regulations shall be held to be the minimum requirements for the promotion of the public health, safety and general welfare.

2.6.2 These regulations are not intended to interfere with, abrogate or annul any other Bylaw, regulation, statute, or other provision of law. If any provision of these regulations imposes restrictions different from those imposed by any other provision of these regulations or any other regulation, Bylaw or other provision of law, whichever provision is more restrictive or imposes a higher standard shall apply.

2.6.3 If any part or provision of these regulations, or if application of any part or provision of these regulations to any particular circumstances, is adjudged to be invalid by any court of competent jurisdiction, such judgment shall not affect or impair the validity of the remainder of these regulations or the application of the remainder of these regulations as a whole to other circumstances.

2.7 RESERVATION AND APPEALS

Upon adoption of these regulations, the Rules and Regulations Governing the Subdivision of Land in Ipswich, Massachusetts adopted on May 8, 1979, as amended, are hereby repealed (except to such section(s) expressly described in M.G.L. c.41, Section 81.)

2.8 AMENDMENTS

The Board may from time to time amend these regulations. Public hearings on all proposed amendments shall be held by the Board in the manner described in M.G.L. c. 41, Section 81-Q.

SECTION III. APPROVAL UNDER SUBDIVISION CONTROL LAW NOT REQUIRED

3.1 SUBMISSION

Any person who wishes to cause to be recorded in the Registry of Deeds or to be filed with the Land Court a plan of land and who believes that the plan does not require approval under the Subdivision Control Law shall:

3.1.1 Submit to the Board the plan accompanied by an application for Endorsement of Plan Believed not to Require Approval Form A (see Appendix) and by the necessary evidence to show that the plan does not require approval.

3.1.2 File, by delivery or registered mail, postage prepaid, a notice with the Town Clerk stating the date of submission for such determination and accompanied by a copy of said application and plan. If the notice is given by delivery, the Town Clerk shall, if requested, give a written receipt thereof.

3.1.3 Submit with the application an original drawing of the plan, in a form described in Section 3.2 with four (4) contact prints; one print shall be retained in the files of the Board, one print each shall be submitted by the Board to the Town Clerk and the Town Assessor and Building Inspector.

3.1.4 A filing fee shall be submitted to cover administration costs. Such filing fee shall be One Hundred Dollars (\$100.00) plus \$100 for each new lot or parcel created.

3.2 CONTENTS OF PLANS

The plan shall be legibly drawn in accordance with the rules and regulations of the Register of Deeds or Land Court Manual of Instructions, as amended, and shall bear the original seal and signature of the professional land surveyor preparing the plan and shall contain the following information:

3.2.1 A title block, in the lower right corner, identifying the location of the land shown, the name of the owner of record and address, date and scale of the plan, and the name and address of the firm or individual preparing the plan.

3.2.2 The statement, "Approval under the Subdivision Control Law Not Required" and sufficient space for the date and signatures of all members of the Board together with a notation, below the signature block, that "The Planning Board's endorsement of the plan as not requiring approval under the Subdivision Control Law does not give lots or parcels any standing under the Protective Zoning Bylaw of the Town of Ipswich".

3.2.3 Zoning and Water Supply District classifications and location of any zoning district boundaries that may lie within the locus of the plan.

3.2.4 Reference to any decisions by the Zoning Board of Appeals, Board of Selectmen and/or Planning Board including, but not limited to, variances, special permits, or exceptions regarding the land or any structures thereon.

3.2.5 A locus map drawn at a scale of 1"=1000', or such other scale acceptable to the Planning Board, and located in the upper right corner of the plan.

3.2.6 Location and names of all abutters as they appear on the most recent tax list(s), including those in adjoining communities.

3.2.7 Location, names, status (private or public), and widths of pavement and right-of-way of all streets and ways shown on the plan and notation if any streets are designated as "scenic roads" under M.G.L. C.40, S. 15-C.

3.2.8 Bearings and distances or curve data of all street lines, ways, easements and lot lines shall be shown on the plan and location of all permanent bounds identified as existing or proposed. Bearings and distances to a minimum of two (2) existing permanent bounds shall also be shown.

3.2.9 The lot number and area of each lot and easement in square feet and in acres, if over one acre. The units of acres shall be rounded to a minimum of three (3) decimal places.

- 3.2.10** The total frontage of each lot and the total lot width, measured at the front setback line, for each lot.
- 3.2.11** The entire land area in which the division takes place shall be shown including all parcels affected by an increase or decrease in frontage, lot width, and area, which also includes the remaining land, if any, owned by the applicant.
- 3.2.12** Any lot(s) or parcels not meeting the minimum frontage, lot width or lot area in accordance with the requirements for the zoning district in which the lot(s) or parcels is situated, shall be designated as "Not a Building Lot".
- 3.2.13** Location of all known existing structures, both above and below ground, including but not limited to, buildings, wells, septic systems, cisterns, and cesspools, systems on the lot(s) or parcels including all required setback dimensions.
- 3.2.14** Location of all stone walls, fences, cart paths, drives, trails, streams, brooks, and water bodies bounding or crossing any of the parcels or lots shown on the plan.
- 3.2.15** Location of all significant trees over twelve inches in caliper within or along the right-of-way of a "scenic road", and over six in inches in caliper in those areas subject to disturbance, such as for driveways, within or along the right-of-way of a "scenic road", shall be shown.
- 3.2.16** References to all deeds and plans of record used to establish the property lines of the lot(s) or parcels and of the streets, ways and easements shown on the plan, including deed references to abutting lots.
- 3.2.17** The north arrow shall be clearly marked and identified as to whether it is magnetic or true north or referenced to a recorded plan and so stated.
- 3.2.18** Evidence that each lot on the plans, and/or any lot altered by the plan:
- 3.2.18.1** Has frontage on a way which in the reasonable judgment of the Board has sufficient width, suitable grades and adequate construction to provide for the needs of the vehicular traffic created by or resulting from the proposed use(s) of the land abutting thereon or served thereby and for the installation of municipal services to such lot(s) and the buildings located on or to be constructed on such lot(s); and
- 3.2.18.2** Complies with one of the following four criteria:
- a) has the entire frontage required under the Protective Zoning Bylaw on:
- i.) a public way; or
- ii.) a way which the Town Clerk certifies is maintained and used as a public way; or
- iii.) a way shown on a plan already approved and endorsed by the Board; or

iv.) a way existing before the date on which subdivision control was adopted in the Town;
or

v.) a way shown on a plan of a subdivision recorded at the Registry of Deeds or the Land Court prior to the date on which subdivision control was adopted in the Town; or

b) has been clearly marked on the plan to be either:

i.) joined to and made part of an adjacent existing lot; or

ii.) "Not a Building Lot"; or

c) contains a building which existed prior to the date on which subdivision control was adopted in the Town; or

d) constitutes an existing parcel with no new lot division. If the lot is not being subdivided and does not contain frontage on a way, as specified above, the lot shall be clearly marked on the plan that it is "Not a Building Lot."

3.3 DETERMINATION OF FRONTAGE

In determining whether each and every lot shown on the plan has adequate frontage, the Board will determine first whether the lot directly abuts a public or private way, and second, whether the lot has direct, practical access from the abutting way.

3.3.1 In determining whether an existing way is adequate to qualify a plan as not constituting a subdivision, the Board may consider the following conditions, among others:

a) Does the existing horizontal and vertical alignment of the traveled way provide safe visibility?

b) Is the right-of-way at least forty feet (40') wide and of reasonable horizontal alignment?

c) Is the traveled way constructed at least eighteen feet (18') wide, with at least eight inches (8") depth of gravel, and with adequate provisions for drainage?

d) If the road could ever serve six (6) or more buildings and/or lots, is it bituminous surfaced or have provisions been made for such surfacing without cost to the Town?

e) Have provisions been made for public utilities without cost to the Town?

3.4 BOARD ACTION

If the Board finds that the plan does not require approval, it shall forthwith, without a public hearing, endorse the plan under the words "Approval under Subdivision Control Law Not Required". The Board may add to such endorsement a statement of the reason approval is not required. The plan will be returned to the Applicant and the Board shall notify the Town Clerk of its action.

If the Board determines that the plan does require approval under the Subdivision Control Law, it shall, within twenty-one (21) days of the submission of said plan, provide written notice of its determination to the Applicant and return the plan. The Board shall also notify the Town Clerk of its action.

If the Board fails to act upon a plan submitted under this section within twenty-one (21) days after its submission, it shall be deemed to have found that approval under the Subdivision Control Law is not required.

SECTION IV. PROCEDURE FOR SUBMISSION AND APPROVAL OF A PRELIMINARY SUBDIVISION

4.1 PURPOSE

A Preliminary Plan of a subdivision may be submitted by an applicant to the Board for discussion and approval, modification or disapproval by the Board. The submission of such a Preliminary Plan enables the Applicant, the Board, other municipal agencies and officials and the owners of property abutting the subdivision to discuss and clarify any problems the proposed subdivision may present before a Definitive Plan is prepared.

It is suggested that the Applicant first read these Rules and Regulations carefully and thoroughly and then meet informally with the Board with a sketch of the area of the proposed subdivision to obtain information about the subdivision requirements of the area. Any uncertainties and ambiguities about the Rules and Regulations or the requirements in the Appendices should be raised during this initial consultation. Informal discussions with other Town officials also may prove helpful at this phase of the development.

It is strongly recommended that a Preliminary Plan be filed in every case. In accordance with M.G.L. c. 41, s.81-S, in the case of a non-residential subdivision, the submission of a Preliminary Plan is required. However, the submission of a Preliminary Plan for subdivision showing lots in a residential zone is left to the discretion of the applicant.

4.2 APPLICATION PROCEDURE

Any person who desires approval of a Preliminary Plan for the subdivision of land shall:

4.2.1 File with the Board and with the Board of Health, a Form B application.

4.2.2 Submit with the application a reproducible Preliminary Plan, prepared in accordance with the form described under Section 4.3, and thirteen (13) contact prints to the Board and two (2) contact prints to the Board of Health.

4.2.3 Submit with the application a base filing fee of One Hundred Dollars (\$100.00) plus One Hundred Dollars (\$100.00) per lot. The Applicant is also responsible for covering the cost of the Board's technical review.

4.2.4 File, by delivery or registered mail, a written notice to the Town Clerk, stating the date of submission of the Preliminary Plan.

4.3 FORM AND CONTENTS

The Preliminary Plan shall contain the following information:

4.3.1 Subdivision name, boundaries, north arrow, date, zoning district(s), Water Supply district(s) and scale.

4.3.2 Name(s) and address(es) of record owner(s), applicant(s), engineer and land surveyor.

- 4.3.3 Names of all abutters within three hundred (300') feet of the lot which is the subject of the application, as they appear on the most recent tax list.
- 4.3.4 Location, names and present exterior pavement and right-of way widths of existing and proposed streets and ways within the plan and in the immediate vicinity. Indication of whether the existing street is subject to the Scenic Road Act- M.G.L. c.40, s 15-C, location and identification of all existing utilities within the plan and immediate vicinity.
- 4.3.5 Lot lines with approximate dimensions and areas. Each lot shall be numbered.
- 4.3.6 Public areas abutting or within the subdivision.
- 4.3.7 Existing and proposed topography sufficient to establish drainage patterns and profiles and water bodies.
- 4.3.8 Major features of the land, such as existing structures, wells, septic systems, walls, fences, monuments, wooded areas, outcroppings, ditches, swamps, water bodies, and natural waterways intended to receive drainage effluent.
- 4.3.9 A statement with respect to cut and fill operations, including a general assessment of the net import or export of fill from the subdivision.
- 4.3.10 Areas of the Plan designated as wetlands, as defined by the Ipswich Wetlands Protection Bylaw and/or designated as floodplain, in accordance with the Federal Insurance Rate Maps (FIRM).
- 4.3.11 Existing and proposed center line profile of all proposed streets and ways.
- 4.3.12 Proposed drainage systems with easements, sewer and water mains, hydrants, gas lines, and electric, telephone and equipment.
- 4.3.13 Existing and proposed easements and rights-of-way applicable to the area shown on the Plan.

4.4 REVIEW OF PRELIMINARY PLAN

One print each of the Preliminary Plan shall be forwarded forthwith to the Department of Public Works, Department of Public Safety, Fire Chief, Department of Public Utilities, Town Engineer, Conservation Commission and any other applicable Town board and/or commission for their information and review. (These plan sets are intended to be part of the submission required under Section 4.2.2.) Within twenty (20) days of forwarding the Preliminary Plan, each Town agency will report its findings and recommendations to the Board.

4.5 APPROVAL OF A PRELIMINARY PLAN

Within forty-five (45) days after submission of a Preliminary Plan, the Board shall notify the applicant and the Town Clerk, by certified mail, either that the plan has been approved, or that the plan has been approved with modifications suggested by the Board or agreed upon by the person submitting the plan, or that the plan has been disapproved. In the case of disapproval, the Board shall state in detail its reason therefore. The Board shall notify the Town Clerk of its approval or disapproval, as the case may be. Except as otherwise

provided, the provisions of the Subdivision Control Law relating to a plan shall not be applicable to a Preliminary Plan, and no Register of Deeds shall record a Preliminary Plan. The approval of a Preliminary Plan does not constitute approval of a subdivision but does facilitate the procedure in securing the approval of a Definitive Plan.

4.6 RELATIONSHIP OF PRELIMINARY PLAN TO DEFINITIVE PLAN

Approval of a Preliminary Plan does not constitute approval of a subdivision and a Preliminary Plan cannot be recorded in the Registry of Deeds or the Land Court.

SECTION V. DEFINITIVE SUBDIVISION PLAN

5.1 APPLICATION PROCEDURE

Any person who wishes to submit a Definitive Plan of land to the Planning Board for its approval shall submit the following:

- 5.1.1** A definitive subdivision application, using a Form C (See Forms), with the Town Clerk by hand delivery or by registered mail, postage prepaid. Two (2) copies of the Form C shall be stamped by the Town Clerk. One (1) copy shall be kept in the Clerk's files, with the other to be kept in the Planning Board office.
- 5.1.2** Written notice shall be given to the Board of Health, together with a copy of Form C and two copies of the Definitive Plans.
- 5.1.3** Written notice shall be given to the Planning Board, together with two copies of the application forms, (Form C - one original and one copy), two (2) copies of the plans and electronic (PDF) copies of the same.
- 5.1.4** A filing of \$1,000.00 base fee, plus \$250.00 for each lot if a preliminary plan has been approved; or a filing of \$1,000.00 base fee, plus \$500.00 for each lot if a preliminary plan has not been approved; said fee to cover the cost of staff review. The Applicant is also responsible for covering the costs of the legal notices and the Board's technical review. Estimates and procedures for additional fees shall be in accordance with M.G.L. Chapter 44, Section 53A-G.

Any modification of a definitive subdivision shall be subject to the same filing fees as if the plan were a new definitive subdivision submission.
- 5.1.5** An Environmental and Community Impact Analysis, if required (see Section 5.4).
- 5.1.6** A certified copy of the recorded deed for the parcel for verification of ownership.
- 5.1.7** A list of the names and mailing addresses of all abutting property owners as they appear in the most recent tax list(s). This list shall include property owners on the opposite side of any street abutting the subdivision and abutters to abutting property owners within three hundred feet of the property under development consideration. The list of owners and their mailing addresses shall be certified by the Assessor's Office.
- 5.1.8** If applicable, a list of any waivers of the regulations being requested, and the reasons for requesting such waivers.
- 5.1.9** The approximate scheduled time within which the ways in the subdivision will be completed and the public utilities and other improvements required by the Board will be installed therein. If the approved time is exceeded, the bond or conditional approval may be exercised or the approval may be rescinded.

- 5.1.10** A statement of the type of performance guarantee which the applicant plans to submit in the event of approval of the Definitive Plan.
- 5.1.11** A quitclaim deed, including the metes and bounds descriptions for all streets and ways to be dedicated, to be held in escrow by the Town Clerk pending acceptance by Town Meeting; and a quitclaim deed including metes and bounds descriptions for all public area(s), open space(s) to be dedicated, to be held in escrow by the Town Clerk for three years pending any acceptance by the Town Meeting.
- 5.1.12** A list of three proposed street names for each new street being shown on the definitive plan. Only one proposed name per street need be submitted if it is selected from the list of "Acceptable Street Names for the Town of Ipswich", available in the Town Clerk's Office.
- 5.1.13** Modification of Definitive Subdivision: No modification, amendment, or rescission of the approval of a plan of a subdivision or changes in such plan shall affect the lots in such subdivision which have been sold or mortgaged in good faith and for a valuable consideration subsequent to the approval of the plan, or any rights appurtenant thereto, without the consent of the owner of such lots, and of the holder of the mortgage or mortgages, if any thereon; provided, however, that nothing herein shall be deemed to prohibit such modification, amendment or rescission when there has been a sale to a single grantee of either the entire parcel of land shown on the subdivision plan or of all the lots not previously released by the Board.

5.2 FORM AND CONTENTS OF PLANS

The Definitive Plan shall be prepared by a professional engineer and by a professional land surveyor registered in the Commonwealth of Massachusetts. A set of definitive subdivision plans shall contain the following sheets, unless otherwise approved by the Board:

1. Cover Sheet
2. Lot Layout Plan
3. Grading, Drainage and Utilities Plan
4. Street Plan and Profile
5. Landscape Plan
6. Typical Sections, Details and Notes

(For large subdivisions requiring the use of multiple sheets for Items 2 and 3, a Drawing Index Sheet, showing the entire subdivision at a legible scale, shall be included after the cover sheet.)

- 5.2.1** All plan sheets shall be prepared in accordance with the Rules and Regulations of the Register of Deeds or the Land Court Manual of Instructions. Plan sheets shall be 24" by 36" with one inch borders.
- 5.2.2** Each sheet shall be provided with a signature block for the endorsement by the Board with spaces for annotating dates of approval and conditions of endorsement. Each sheet shall also be provided with a space for listing and dating revisions to the plan(s).

5.2.3 Each sheet, other than the Cover Sheet, shall contain a title block, in the lower right corner, identifying the name of the subdivision, the title of the sheet, the name and address of the record owner and Applicant, date and scale of the plan, and the name and address of the firm or individual preparing the plan.

5.2.4 Each sheet (including the printed copies of the plans) shall bear the original seal and signature of the professional(s) responsible for the preparation of the plan.

5.2.5 The plans shall include the following information:

5.2.5.1 Cover Sheet

a) Subdivision name, name and address of record owner, name and address of the Applicant, a locus plan at a scale not smaller than 1"=1000', identification of the zoning district(s), water supply district(s), and index to all the plan sheets, a legend, project bench mark data, reference and identification of the starting bench mark, date of submission, and the names and addresses of the professional(s) engaged in the preparation of the plans and a description of the area of responsibility of each professional.

5.2.5.2 Lot Layout Plan

- a) Shall be prepared at a scale of 1"=40', unless otherwise required by the Board;
- b) Shall show bearings, distances and curve data to readily determine the location, direction, and length of every existing and proposed lot line, street line, way, easement and boundary line in and abutting the subdivision;
- c) Shall show location and names of all abutters as they appear on the most recent tax list, including owners of the property on the opposite side of all streets abutting the subdivision;
- d) Shall show the location of all permanent monuments, identified as to whether existing or proposed. Ties, with bearings and distances, shall be shown to a minimum of two (2) existing permanent monuments in or adjacent to the subdivision;

All bench marks and elevations shown on the subdivision plans shall be based on the North American Datum of 1983 (NAD83), and the North American Vertical Datum of 1988 (NAVD88) and the starting NAVD88 bench mark shall be referenced on the plans. The plan submittals shall be in or "tied into" real world State Plane Coordinates using Town control points or a precision global positioning system (GPS);

- e) Shall show the area of each lot and any easements, in square feet and in acres. The units of acres shall be rounded to a minimum of three (3) decimal places;
- f) Shall show the total frontage of each lot and the total lot width, measured at the front setback line, for each lot;

- g) Shall show any lot(s) not meeting the minimum frontage, lot width, or lot area in accordance with the requirements for the zoning district in which it is situated. Such lots shall be designated as "not a building lot";
- h) Shall show lot numbers enclosed in a circle and house numbers as assigned by the town manager or his designee;
- i) Shall show location, names, status, and widths of pavement and right-of-way of all existing streets bounding, approaching or within reasonable distance of the subdivision and a notation if any of the streets is designated as a "scenic road";
- j) Shall show all existing structures in the subdivision and within fifty feet (50') of the perimeter of the subdivision;
- k) Shall show all stone walls, fences, cart paths, water bodies or water courses bounding or crossing the subdivision;
- l) Shall show the zoning district(s) and the water supply district(s) classification(s) of the land in the subdivision and the precise location of the boundaries of each of these district(s);
- m) Shall show reference(s) to any existing or proposed covenants and/or restrictions, including any variances or special permits either granted or required by the Ipswich Planning Board, the Zoning Board of Appeals or the Ipswich Board of Selectmen;
- n) Shall show references to all deeds and plans of record used to establish the property lines of the subdivided parcel and of all the streets, ways and easements including deed references to the abutting lots (see section 5.1.7);
- o) Shall show a clearly marked north arrow, which shall be identified as to whether it is magnetic or true north or shall be referenced to a record plan and so stated;
- p) Shall include a calculations package prepared by the professional land surveyor which indicates the perimeter, lot, and right-of-way closure calculations.

5.2.5.3 Grading, drainage and utilities plan

- a) Shall be prepared at a scale of 1"=40' with a two (2) foot contour interval, unless otherwise required by the Board;
- b) Shall show existing and proposed boundaries of all lots, streets, ways and easements within and adjacent to the subdivision;
- c) Shall show existing contours in the subdivision and extending fifty feet (50') beyond the perimeter of the subdivision. Spot elevations shall also be shown in areas where the existing grades are 1% or less;

- d) Shall show proposed contours indicating the finished grades of all proposed construction in the subdivision. Spot elevations shall also be shown in areas where the finished grades are less than 1%;
- e) Shall show the extent of all existing and proposed streets, drives, walks, handicap ramps, parking areas and the like;
- f) Shall show center line with stations of all proposed streets;
- g) Shall show all stone walls, fences, and cart paths within, bounding or crossing the subdivision;
- h) Shall show all existing structures in the subdivision and within fifty feet (50') of the perimeter of the subdivision;
- i) Shall show all existing wells and septic systems in the subdivision and within one hundred feet (100') of the perimeter of the subdivision;
- j) Shall show location of all proposed structures, wells, and septic systems in the subdivision, including all required setback dimensions to lot lines, wells, septic systems and presumed wetlands boundaries;
- k) Shall show location and identification of all groundwater observation and percolation test pits and/or borings in or adjacent to the subdivision. Logs of observed data of these tests shall be shown on the definitive subdivision plans (use an additional sheet, if necessary);
- l) Shall show existing and proposed water courses, drainage ditches, streams, brooks, water bodies, retention and/or detention basins including annual and 100 year high water elevations;
- m) Shall indicate location and identification of all wetlands boundaries in and within one hundred feet (100') of the subdivision. Wetlands boundaries shall be delineated in the field with numbered flags by a qualified wetlands specialist, surveyed and shown on the plan(s) with the reference to flag numbers. The resource areas shall be identified in accordance with the Wetlands Protection Act (310 CMR 10.00), the Town of Ipswich Wetlands Protection Bylaw, and the Town of Ipswich Conservation Commission Rules and Regulations;
- n) Shall show the location of the 100 year flood boundary, as shown on the Flood Insurance Rate Map (FIRM), in and within 100' of the subdivision;
- o) Shall show the location and type of all existing and proposed above and below ground utilities;
- p) Shall show the location and identification of all permanent project bench marks in the subdivision. A minimum of two (2) bench marks are required for each street;
- q) Shall show the location, size and type of all proposed street trees;
- r) Shall show the location and methods of all proposed erosion/sedimentation control within the subdivision;

- s) Shall show the location of proposed stocking area(s) for "earth" materials;
- t) Shall show the location of proposed stump burial area(s);
- u) Shall show the location of proposed area(s) for disposal of surplus "earth" materials. The finished grades of these areas shall be indicated by contours and/or spot elevations with the volume of "fill" indicated;
- v) Shall show the location of area(s) to be utilized for borrow materials. The finished grades of these areas shall be indicated by contours and/or spot elevations with the volume of material indicated;
- w) Shall show that if excess "earth" materials are proposed to be disposed of offsite, then a notation stating the volume of "earth" to be removed, as defined in the Ipswich Zoning Bylaw and/or the Rules and Regulations Governing the Removal of Sand, Gravel, or Loam, shall be provided on the plan(s). This volume shall include all amounts of "earth" proposed to be removed for the construction of streets, sidewalks, driveways, structures, and all other improvements related to the subdivision. If no "earth" is to be removed, a statement to such effect shall be included on the plan(s);
- x) Shall include a notation stating the volume of "fill" material proposed to be obtained off site including borrow, gravel, and other materials necessary for the construction of the streets, sidewalks, driveways, structures, and all other improvements related to the subdivision;
- y) Shall contain a note which says "No building or structure shall be built or placed on any lot without a permit from the Board of Health, if such a permit is required."

5.2.5.4 Street plan and profile

- a) This sheet shall show the plan of the proposed street drawn to a scale of 1"=40' with the existing and proposed profiles, drawn directly below the plan at a horizontal scale of 1"=40' and a vertical scale of 1"=4', unless otherwise required by the Board;
- b) The street plan shall show the following information:
 1. Bearings and distances of all tangents along the center line and the right-of-way;
 2. Radii, arc length and central angle of all curves along the center line and right-of-way;
 3. Points of intersection of all tangents (pi's), with tangent lengths, of all center line curves;
 4. Stations shall be clearly marked at fifty foot (50') intervals along the street center line and at points of curvature and tangency (pc's and pt's) of all curves. Where the center line intersects itself or other proposed streets, the point of intersection shall be clearly marked with a station equation;

5. Existing and proposed lot lines intersecting the right-of-way with the frontage and lot numbers shown;
 6. Bearings and distances of all lines of existing and proposed easements;
 7. Existing and proposed pavements, including dimensions of all streets, sidewalks, handicapped ramps, driveways and parking areas;
 8. Existing and proposed curbs and berms and identification of the materials;
 9. Existing and proposed drainage facilities with pipe sizes and materials including catch basins, manholes, culverts, headwalls, detention and/or retention basins, and outlet pipes/structures with rim and invert elevations, as applicable;
 10. Existing and proposed water mains with sizes and materials including hydrants, gates and appurtenances;
 11. Existing and proposed sewer mains with sizes and materials including manholes with rim and invert elevations;
 12. Existing and proposed gas mains;
 13. All other existing and proposed, above and below ground, utilities including electric, telephone, cable T.V., poles, conduits, transformers and appurtenances;
 14. Existing and proposed street trees;
 15. Two (2) permanent bench marks shall be shown on the plan for each street. Bench marks shall be identified with sufficient data to readily determine their location and elevation in the field.
- c) The street profile shall show the following information:
1. Existing center line profile drawn with a fine dashed line and the existing elevations labeled at fifty foot (50') intervals;
 2. Existing left and right, right-of-way profiles drawn in fine lines - dot dash for left and dot dot dash for right;
 3. Proposed center line profile drawn in solid line with proposed stations and elevations labeled at fifty foot (50') intervals and at points of vertical curvature, gradient intersection, and tangency (pvc, pvi, and pvt). Where the center line intersects itself or other proposed streets, the point of intersection shall be clearly marked with the existing and proposed elevation and station equation;
 4. Gradient lines shall be labeled with the rate of grade expressed as a percent;

5. Lengths of all vertical curves shall be labeled including applicable sight distances as prescribed in the Design Standards for Streets, Section 6.8;
6. Existing and proposed drainage facilities including drainage lines, catch basins, manholes, culverts, headwalls, outlet pipes/structures shall be drawn in solid lines showing pipe sizes, pipe slopes, rim and invert elevations. Stations and offsets shall be indicated for all catch basins, manholes, culverts, headwalls and outlet pipes/structures;
7. Existing and proposed water mains shall be drawn in solid lines showing pipe sizes, depths of cover, laterals to hydrants and station and offset(s) to hydrants;
8. Existing and proposed sewer mains and manholes shall be drawn in solid lines showing pipe sizes, pipe slopes, rim and invert elevations, and station and offsets to manholes;
9. Vertical clearances shall be labeled between all crossing utilities.

5.2.5.5 Typical sections, details and notes

- a) Typical cross-section of each street (if more than one type) showing width of the right-of-way, width of pavement, curbs, cross slope, sidewalk(s), grass strips, utility locations and depths of cover, thicknesses and types of pavements for the street and sidewalk, thicknesses of street and sidewalk base courses, thicknesses of loam, location of guardrail, existing and proposed grades, and the maximum grade of return to existing grade. One side of the section shall indicate a typical "fill" and the other a typical "cut";
- b) Typical cross-section(s) and details of all proposed retention and/or detention basins showing existing and proposed grades, details of inlet pipes with inverts and full flow capacity, outlet control structures and pipes with inverts and full flow capacity, ten (10) and one hundred (100) year storm water elevations, details and elevations of emergency spillway structure(s), embankment construction and slope treatment, top of dam elevation, and volume of storage capacity;
- c) Profiles of all cross-country drain lines, swales or ditches with typical cross sections of each;
- d) Details of drainage structures including catch basins, manholes, headwalls, flared-end sections, outlet and velocity control structures, rip-rap slopes and channels;
- e) Details of sewer manholes and drop inlet structures;
- f) Details of hydrants, blow-off valves and thrust blocks;
- g) Detail(s) of curb installation(s);
- h) Detail of handicap ramp;
- i) Detail of guardrail(s);

- j) Detail(s) of erosion/sedimentation control devices;
- k) Plans, details, sections, and profiles of any other utility, structure or facility proposed in the subdivision;
- l) All plans and profiles shall be drawn at a horizontal scale of not less than 1"=40' and a vertical exaggeration not greater than 1"=4'; details and sections shall be drawn at a scale of not less than 1"=4' or approximately 1/4 scale if drawn "not to scale", unless otherwise approved by the Board;
- m) Specific and general notes identifying the standards for materials and construction methods of all the elements in the subdivision. Accepted standards and specifications include the following:
 - American Society for Testing and Materials (ASTM)
 - American Water Works Association (AWWA)
 - Commonwealth of Massachusetts Department of Public Works Standard Specifications for Highways and Bridges
 - State Environmental Code - Title V
 - Specifications by the Town of Ipswich as set forth in Appendices I - IX, inclusive, of these Rules and Regulations.

5.3 STORMWATER MANAGEMENT REPORT

A separate storm water management report shall be submitted together with the definitive subdivision plans. The report shall be prepared in accordance with the applicable provisions of Section 6.14 and Appendix VIII of these Regulations, as well as the Ipswich Stormwater Management General Bylaw.

5.4 ENVIRONMENTAL AND COMMUNITY IMPACT ANALYSIS

5.4.1 Applicability: Any subdivision of a residential subdivision which creates frontage for six (6) or more lots, and all non-residential subdivisions, shall be accompanied by eight (8) copies of an Environmental and Community Impact Analysis. The Board may require portions of this Analysis be carried out for shorter roads if, in their opinion, the sensitivity of the land, neighborhood or infrastructure warrants the investigation. The Environmental and Community Impact Analysis shall clearly and methodically assess the relationship of the proposed development to the natural and man-made environment of Ipswich. This report shall be prepared by professionals qualified, experienced, and, as applicable, licensed, in their fields. Such professionals may include Registered Professional (Civil) Engineers, Traffic Engineers, Architects, Landscape Architects, Land-Use Planners, Hydrogeologists, Hydrologists, Biologists and other environmental professionals. The applicant shall bear the cost of this analysis.

5.4.2 Purpose: This analysis shall be a guide to the Planning Board in its deliberations and will build into the Board's decision-making process consideration of the environmental and community impacts of the proposed development.

5.4.3 Concerns to be addressed: For each of the components of the Environmental and Community Impact Analysis listed under paragraph 4 below, each of the following concerns must be separately addressed:

- a) The Environmental and Community Impacts of the Proposed Development: The primary and secondary environmental and community impacts, both beneficial and adverse, anticipated as a result of the proposed development; this section shall include all impacts resulting from the construction phase as well as those resulting from the project's completion;
- b) Adverse Impacts which cannot be avoided should the proposed development be implemented: The report shall describe the kinds and magnitudes of adverse impacts which cannot be reduced in severity or which can be reduced in severity but not eliminated;
- c) Alternatives to the proposed development: The report shall develop, describe, and objectively weigh alternatives to the proposed development which are allowed by the Zoning Bylaw; and
- d) Measures to be used to minimize adverse environmental and community impacts: Corrective and protective measures which will be taken, as part of the project, to minimize adverse impacts shall be described in detail.

5.4.4 Topics to be Evaluated and Level of Detail Required: The Applicant, as part of a Preliminary Subdivision Plan submitted in accordance with the requirements of Section IV, shall provide a draft Environmental and Community Impact Analysis. The draft shall address all pertinent aspects of Section 5.4. The Planning Board, upon review of the draft Environmental and Community Impact Analysis, shall specify which of the following topics shall be evaluated in detail within the Definitive Plan submittal. If no preliminary subdivision plan is submitted, the Environmental and Community Impact Analysis shall evaluate all of the following topics:

5.4.4.1 Natural Environment

- a) Air and Noise Pollution: The impact of local air quality and noise from the proposed development (including traffic generated from the development), both during and after construction, shall be evaluated; for larger developments (over 30 dwelling units) the Planning Board may require detailed technical reports of such impacts;
- b) Water Pollution: The impact of storm water run-off on adjacent and downstream surface water bodies and sub-surface ground water shall be evaluated; dangers of flooding as a result of increased downstream runoff, especially peak runoff; and the impact of the proposed project on water table levels shall also be analyzed;
- c) Land: Compatibility of the proposed development with existing soils; the impact of any soils or other such materials to be removed from or added to the site; and the potential dangers and impact of erosion and sedimentation caused by the proposed development;

- d) Plants & Wildlife: The impact that the proposed project may have on wildlife habitat and on any rare or endangered plant or animal species known to exist in the area;
- e) Water Supply: The average and peak daily demand and the impact of such demands on the ground water; and
- f.) Sewage Disposal: The average and peak daily disposal and the impact of each disposal on the ground water.

5.4.4.2 Man-Made Environment

- a) Existing Neighborhood Land Use: Compatibility with adjacent or nearby existing land uses, or approved private development plans, if known, for adjacent or nearby land use changes to occur during the life of the proposed development; if not compatible, reasons therefore shall be detailed; and
- b) Zoning: Compatibility of proposed development with the purposes of the Protective Zoning Bylaw and the zoning district(s) within which the site is located.

5.4.4.3 Public Services

- a) Schools: The expected impact on the school system, both elementary and secondary levels, and the number of students; projected school bus routing changes and projections of future school building needs resulting from the proposed project;
- b) Police: The expected impact on police services, time and manpower needed to protect the proposed development and service improvements necessitated by the proposed development;
- c) Fire: Expected fire protection needs; on-site fire fighting capabilities; on-site alarm or other warning devices; fire-flow water needs, source and delivery system and other needs shall be presented; fire department service improvements necessitated as a result of the proposed project shall also be discussed;
- d) Recreation: On-site recreation provisions shall be detailed and off-site recreation demands shall be estimated; provision for public open space, either dedicated to the Town or available to its residents or employees shall also be described;
- e) Solid Waste Disposal: Analysis of the projected volume and type of solid waste to be generated by the proposed development and methods of removal;
- f) Traffic: The expected impact of traffic generated by the proposed development on area roadways; discussion shall include existing average and peak traffic volumes and composition, projected average and peak traffic generation and composition, intersection impacts and analysis of area roadway and intersection capacities; methodologies used to make projection shall be included; and

- g) Highway: Projected needs responsibility and costs to the Town of roadway maintenance shall be analyzed; impacts of construction equipment on area roadways shall also be discussed.

5.4.4.4 Aesthetics

- a) Lighting: The type, design, location, function and intensity of all exterior lighting facilities shall be described; attention given to safety, privacy, security, minimization of light pollution, and daytime and nighttime appearance shall be detailed;
- b) Landscaping: Provisions for landscaping shall be described, including type (common and botanical designations), location and function of all plantings and materials, which shall include native plants when feasible; and
- c) Visual: Attention given to views into the site and from the site shall be described; included shall be long-distance views as well as views to and from adjacent properties.

5.4.4.5 Planning

Analyze the compatibility of the proposed development and its alternatives with the goals and objectives of the most recent Community Development Plan and the most recent Open Space Plan.

5.4.4.6 Traffic Impacts

The applicant shall provide an analysis of development impact which, at a minimum, includes the following:

- a) The existing Level of Service (LOS - see definition below) of relevant road systems including quantitative and qualitative measurements of operational factors including speed, travel delay, freedom to maneuver and safety;
- b) The expected change in the condition of relevant road systems as a result of the proposed development;
- c) The comparison on a per-acre basis of the total vehicular traffic generation from the proposed development with:
 - i) The existing and potential vehicular traffic generation from all other developments accessing relevant road systems; and
 - ii) The vehicular traffic generation which would be expected to produce a LOS below LOS "C"; and
- d) In determining the impact of vehicular traffic generation from a development, the following standards and definitions shall be used (unless the Applicant demonstrates to the Planning Board that given the nature of the proposed project or applicable road systems, other standards are appropriate):

- i) Trip generation rates for land uses as listed in the most recent update of Trip Generation, Institute of Transportation Engineers, Washington, D.C.; and
- ii) Levels of Service: "Level of Service (LOS) is a term which traffic engineers use to define the various operating conditions that occur on a roadway or intersection when accommodating various traffic volumes; although LOS is a qualitative measure of traffic flow, it is an acceptable measurement for determining overall impact of development on roadway networks; LOS "A" is associated with relatively free-flow and average overall traffic speed in excess of 30 miles per hour; LOS "B" represents stable flow with minor delays and speeds of 25 miles per hour or greater; LOS "C" corresponds to the design capacity of a road system and indicates stable flow with delays, and speeds of 20 miles per hour or more; LOS "D", "E", and "F" correspond to decreasing abilities to travel greater than 15 miles per hour and correspond to the over-capacity of the road system.

5.4.4.7 Cost/Benefit Analysis

The Applicant shall provide a cost/benefit analysis of the development at full build-out; this municipal cost/benefit analysis should follow standard and usual procedures for measuring both the benefits to be derived and costs to be incurred by the Town of Ipswich as a result of the proposed development; this also should estimate net benefits or costs of non-quantifiable environmental impacts.

5.5 REVIEW PROCEDURES

5.5.1 Application Review: Within fourteen (14) days after the filing of the Definitive Plan Application (Form C) with the Board, the Board's Designee shall notify the Board and the Applicant in writing of any missing or incomplete information in the application. At that time, the Applicant may withdraw an incomplete application by notifying the Board and the Town Clerk, in writing, of the decision to withdraw the application from consideration.

If the Applicant withdraws the application, the filing fee shall be forfeited.

If the Applicant does not withdraw an incomplete application within seven (7) days of notification of incompleteness, the Board shall proceed to advertise and hold a Public Hearing on the application as submitted. No additional information or materials shall be accepted for review after the receipt of application is acknowledged by the Board without their express written consent. If the Board approves the acceptance of additional submission materials, the Applicant is required to formally amend the application with amendment materials being provided to the Town Clerk, the Board of Health and the Board.

5.5.2 Public Hearing: Upon determination by the Board that the application for approval of the Definitive Plan is complete, or that it is incomplete and the Applicant has failed to withdraw or seek to formally amend the application, the Board shall set a date for the public hearing and so notify the Applicant.

Notice of the hearing shall be arranged by the Board or the Board's Designee, at the Applicant's expense, by advertisement in a newspaper of general circulation in Ipswich in each of two (2) successive weeks, the first publication being not less than fourteen (14) days before the day of such hearing: and by mailing, not less than ten (10) days before the date of the hearing, a copy of the advertisement to all owners of land abutting upon the land included in the plan as appearing on the most recent tax list.

5.5.3 Report of the Board of Health: The Board of Health shall submit a written report to the Board within forty-five (45) days after the plan is filed. Said report shall indicate approval or disapproval of said plan and, in the event of disapproval, shall make specific findings in the report, and where possible, shall make recommendations for adjustment. Failure to report within forty-five (45) days after filing shall be deemed approved by the Board of Health. If the proposed subdivision is to be serviced by the Ipswich sewage system, failure to report within forty-five (45) days after filing shall also be deemed approved by the Board of Health.

Extreme care shall be practiced in the layout of a subdivision in unsewered areas. The extent of soil evaluation shall be determined by the Ipswich Board of Health Agent based on the Town of Ipswich Soils Maps and whatever other soil information is available. The tests which may be required include deep hole test holes, percolation tests and test borings, and the number of tests required shall be determined by the Board of Health Agent.

Before any building construction may commence on a lot, a permit to construct an individual subsurface absorption area must be obtained from the Board of Health for each such individual lot not served by the Ipswich sewage system, if required; moreover, a condition shall be inscribed on the plan as follows: "No building or structure shall be built or placed on any lot without a permit from the Board of Health, if such a permit is required."

5.5.4 Plan Review by Other Town Officials: Prior to approval of any Definitive Plan, the Board shall give due regard to the reports of the Town Planner, the Town Engineer, the Director of Public Works, the Director of Public Utilities, the Director of Public Safety, the Fire Chief, the Conservation Commission and any technical expert hired by the Board.

Where any deviations from the design requirements specified by these Rules and Regulations or the Town of Ipswich's design standards and construction specifications are indicated on the plan, the Board's designee shall so notify the Board and shall provide a written statement approving or disapproving said deviation.

The Board's designee shall also provide a recommendation of the proper amount of security as required in Section 6. This recommendation shall be based on information provided by the Applicant on the cost of performing the various items of work described in the plans. Due to the fact that the Board is using the security as assurance of project completion, the Board may, at their reasonable discretion, factor in administrative costs, applicable prevailing wage schedules, engineering and inspection services and a contingency for the project.

5.6 DECISION:

After the Public Hearing the Board will approve, modify and approve or disapprove the plan as submitted. Criteria for action by the Board shall be the following:

- a) completeness and technical adequacy of the plans and supporting materials;
- b) determination that development at the proposed location does not entail unwarranted hazard to safety, health and convenience of future residents of the development or of others because of possible traffic hazards, or environmental degradation which could be avoided or ameliorated through an alternative plan;
- c) conformity with the design and construction standards described in these Rules and Regulations and in attached Appendices;
- d) conformity with all applicable zoning requirements;
- e) consistency with the purposes of the Subdivision Control Law as described in M.G.L. c.41, s.81M.

Following such action, and within ninety (90) days of receipt of the Definitive Plan, the Board shall file a certificate of its action with the Town Clerk. In the event a Preliminary Plan has not been filed, or in the event that a Preliminary Plan previously had been filed and disapproved by the Board, the Board shall file a certificate of vote within one hundred thirty-five (135) days of receipt of the Definitive Plan.

5.6.1 Time Extensions: Further time, as may be agreed upon by the Board and the Applicant, may be allowed for the Board's decision. Such time extensions shall be at the written request of the Applicant and such notice(s) of time extension shall be filed forthwith by the Board with the Town Clerk.

5.7 PERFORMANCE GUARANTEE:

5.7.1 Performance Guarantee - Construction Element: Before endorsement of approval, the Board shall require that timely construction of improvements indicated on the Definitive Plan be secured by one, or in part by one and in part by another, of the methods described in Sections 5.7 a.,b., and c. which method(s) may be selected and from time to time may be varied by the Applicant. The sufficiency of the amount and type of the security shall be determined by the Board, based on the costs of construction. The Board shall, at their reasonable discretion, include provisions for administrative costs, applicable prevailing wage schedules, and contingency to cover the costs of completion should the Board be required to complete the construction. A separate surety may be required for erosion control or wetlands impacts relating to site construction. The alternative methods of security are as follows:

- a) by a proper performance bond or deposit of money or negotiable securities, in an amount to be determined by the Board to be sufficient to cover the cost of the construction of the ways and the installation of municipal services. Each bond or deposit shall be computed on the basis that such construction and installation be completed within such period of time as the Board shall determine. (See Forms D and E for the suggested forms);
- b) by covenant running with the land, which shall be executed and recorded by the owner of record, whereby such ways and services shall be provided to serve any lot before such lot may be built upon or conveyed by other than mortgage deed, provided, that a mortgagee who acquires title to the mortgaged premises by foreclosure or otherwise and any succeeding owner of such premises or part thereof may sell any such lot, subject, to that portion of the covenant which provides that

no lot shall be built upon until such ways and services have been provided to serve such lot; and provided, further, that nothing herein shall be deemed to prohibit a conveyance by a single deed, subject to such covenant, of either the entire parcel of land shown on the subdivision plan or of all lots not previously released by the Board. A deed of any part of the subdivision in violation hereof shall be voidable by the grantee prior to the release of the covenant but not later than three years from the date of such deed. (See Form F for suggested form.)

In order to determine if the lots are adequate security, the Board may require appraisal(s), completed by a licensed appraiser, of the lots to be held as security. Said appraisal(s) shall be at the sole expense of the Applicant.

- c) by delivery to the Board of an agreement executed by the Applicant and the lender after recording of the first mortgage covering the premises shown on the plan or a portion thereof given as security for advances to be made to the Applicant by the lender. This agreement shall provide for retention by the lender of funds sufficient in the opinion of the Board to secure the construction of ways and the installation of municipal services. Said agreement shall also provide for a schedule of disbursements which may be made to the Applicant upon completion of various stages of the work, and shall further provide that in the event the work is not completed within the time set forth by the Applicant, any funds remaining undisbursed shall be available for completion. Any covenant given under the preceding paragraph and any condition required by the Board of Health or Health Agent shall be either inscribed on the plan or contained in a separate document, referred to on the plan.

5.7.2 Performance Guarantee -- Fees for Inspectional Services: Before endorsement of approval, the Board shall require the Applicant to submit a cash deposit or an irrevocable letter of credit in a form acceptable to the Board, of a sum sufficient to guarantee payment for the services of the Board's subdivision inspector. The amount of this deposit or letter of credit shall be determined, and may be revised from time to time, by the Board, exercising its reasonable judgment.

5.8 ENDORSEMENT AND FILING OF DOCUMENT:

The Board's approval of a Definitive Subdivision Plan, if granted, shall be endorsed on the plan only after the expiration of the twenty (20) day appeal period and after certification of the Town Clerk that no appeals have been taken.

Following recording of the endorsed plan and Board's written decision at the Southern Essex District Registry of Deeds or the Land Court by the Applicant, the Applicant shall provide the Board with four (4) complete sets of prints of the recorded plan, one (1) copy of the recorded written decision and one copy of the recorded covenants and restrictions or other required documents. In addition the Applicant shall provide an electronic (PDF) copy of the complete set of plans, the recorded written decision and one copy of the recorded covenants, restrictions or other required documents. The Board shall transmit one set of plans and the written decision to the Building Inspector and the Peer Review Engineer. The Applicant shall also provide two (2) copies submitted in DXF (drawing exchange file) format. Digital data for subdivisions creating six or more lots shall conform to the following guidelines: The coordinate system should be Massachusetts State Plane coordinate feet, North American Datum of 1983 (NAD83), and the North American Vertical Datum of 1988 (NAVD88). The plan submittals shall be in or "tied into" real world State Plane Coordinates using Town control points or a precision global positioning system (GPS)."

5.8.1 Filing of Notice of Modification, Amendment or Rescission: No register of deeds or recorder of the Land Court shall accept for record a notice of modification, amendment or rescission of approval of a plan of a subdivision unless such notice contains a statement by the Board that such modification, amendment or rescission does not affect any lot or rights appurtenant thereto in such subdivision which lot was conveyed or mortgaged in good faith and for valuable consideration subsequent to the approval of the subdivision plan.

5.9 RELEASE OF PERFORMANCE GUARANTEE

5.9.1 Written Request: Upon completion of improvements required by these Regulations, the Applicant may request either partial or full release of the bond, deposit or covenant by filing a statement of completion and a request for release to the Town Clerk and the Board. The statement shall include:

- a) written evidence from the Subdivision Inspector and/or Board designee that the streets and drainage conform to the Board's requirements in accordance with the approved Definitive Subdivision;
- b) written evidence from the Subdivision Inspector and/or Board designee that the underground wiring, water mains, sanitary sewers, storm sewers, hydrants and/or other site improvements conform to the specifications and the Board's requirements in accordance with the approved Definitive Plan;
- c) written evidence from both the Subdivision Inspector and the Town Engineer that as-built and road layout plans have been submitted and reviewed;
- d) written evidence from the Subdivision Inspector and/or Board designee that the improvements have been exposed to one complete winter environment (Dec. 1- April 30) without damage, or that damage, if incurred, has been repaired to the satisfaction of the Subdivision Inspector and the Town Engineer; and
- e) written evidence from the Tree Warden that installation of street trees and other plants as described in Section 6 have been completed satisfactorily, the plant materials are in healthy condition and that the warranty has been assigned to the Town.

5.9.2 Partial Release: Prior to final release of security, the Board may, at its discretion; grant up to three (3) partial releases from the required security for partial completion of improvements provided that:

- a) no reduction shall reduce the bond, deposit or covenant to a value below the estimated cost of completing the unfinished portions of the improvements;
- b) no lot shall be released from the covenant unless and until construction of ways and installation of municipal services up to and including the base course of asphalt to serve said lot both have been completed to the Board's satisfaction (See Forms D and E);
- c) no partial release of security shall be granted until the Board has received written verification from the Subdivision Inspector and/or the Board designee that substantially more than fifty percent (50%) of the required improvements have been completed satisfactorily and

- d) no partial release of security shall be granted until the Board has received stamped record plans documenting construction completed to date.

5.9.3 Final Release of Security: If the Board determines that the required improvements have been completed in accordance with these Rules and Regulations, it may release the interest of the Town in any bond or deposit and return the bond or deposit to the applicant, or release the covenant by appropriate instrument. (See Forms D, E and F)

However, the Board shall retain security in an amount equal to at least 10% of the total cost of landscaping and street improvements to ensure construction adequacy against latent defects. Such security shall not be released until the fee in the road and any related instruments have been conveyed to the Town and said road has been accepted at Town Meeting or until three years have elapsed since completion of improvements in accordance with the approved plans and associated conditions, whichever occurs first.

5.9.4 Refusal of Release: If the Board determines that required construction or installation has not been completed, it shall specify, in a detailed written determination, the items of construction or installation which fail to comply with its Rules and Regulations by notice sent by registered mail to the applicant, a copy of which shall be delivered to the Town Clerk. If the Board fails to so notify the Town Clerk and the applicant within forty-five (45) days of receipt of a request for release of security, as described in Section 5.9.1, the deposit or bond shall be returned and any covenant shall become void. In the event that the forty-five (45) day period expires without such specifications or without release of the security, the Town Clerk shall issue a certificate to such effect. (See Section 5.15)

5.10 RESCISSION:

Failure of an Applicant to record the Definitive Plan within six (6) months of its endorsement by the Board at the Essex South District Registry of Deeds or at the Land Court; or to comply with the construction schedule incorporated into the performance agreement; or to initiate construction of improvements in a subdivision within seven (7) years of the approval of the Definitive Plan; or to comply with all applicable Protective Zoning Bylaw requirements; or to comply with the approved plans and any conditions of approval; shall constitute grounds for rescission of approval in accordance with the requirements and procedures set forth in M.G.L. c.41, s. 81-W.

5.11 MUNICIPAL COMPLETION OF SUBDIVISION:

Any such bond may be enforced and any such deposit may be applied by the Board for the benefit of the Town of Ipswich, as provided in M.G.L. c.41, s.81-Y, upon failure of the performance for which any such bond or deposit was given to the extent the reasonable cost to the Town of completing the construction and installation of the improvements.

The proceeds of any such bond or deposit shall be made available to the Town for expenditure to meet the cost and expenses of the Town in completing the work as specified in the approved plan. If such proceeds do not exceed One Hundred Thousand Dollars (\$100,000.00), the expenditure may be made without specific appropriation under M.G.L. c.44, s. 53; provided, however, that such expenditure is approved in advance by the Board of Selectmen.

5.12 ACCEPTANCE AND MAINTENANCE OF SUBDIVISION IMPROVEMENTS:

5.12.1 Acceptance: Approval by the Board of a Definitive Subdivision Plan shall not constitute acceptance by the Town of any street, sidewalk or other municipal service within the subdivision.

5.12.2 Maintenance: The Applicant shall maintain and repair all streets and improvements in the approved subdivision in a manner satisfactory to the Town, acting by and through its Board, during this period until one of the following has occurred:

- 1) Applicant conveys the title to the fee for each street
- 2) Applicant provides an easement to the Town but retains the underlying fee. For each definitive plan approved, the Board shall determine whether it shall accept the fee to the street(s) or an easement over the street. A notation shall be made on the plan which indicates the Applicant's ownership of said street(s) pending acceptance by the Town.

If the Town must maintain a portion of, or enter the subdivision for the purpose of public safety, emergency purposes, or otherwise, the Town reserves the right to charge the Applicant for services rendered.

Prior to final release of security, the Applicant shall submit to the Board and the Board of Selectmen all the necessary documentation for street acceptance including, but not limited to, plans in a form acceptable to the Registry of Deeds or the Land Court, a street layout plan, legal descriptions, easements, a list of owners and mortgagees of lots having rights in the street(s), and all other necessary grants, of deeds or instruments affecting a locus.

5.12.3 Maintenance by Applicant: The Applicant shall be responsible for maintaining in good repair all streets in the subdivision after release of the security, as required in Section 5.7 and Section 5.9 or until the streets are accepted by the Town Meeting. To assure such responsibility, the Applicant shall guarantee the maintenance of the streets in the subdivision in a condition which meets all the requirements of these Rules and Regulations to the satisfaction of the Board, by posting with the Town a maintenance security, in an amount sufficient in the determination of the Board, to secure the aforesaid maintenance. The applicant shall be responsible for maintenance of all improvements within the street, from edge to edge of the right-of-way.

5.13 COMPLETION WITHIN THREE YEARS:

The Board may impose as a condition of approval on a Definitive Plan that construction of all ways and all installation of municipal services shown on the plan be completed within three (3) years of the date of approval. If the construction and installation is not completed within a three (3) year period, the approval shall automatically lapse and no way shall be laid out, constructed or opened for public use unless and until a new Definitive Plan application has been filed in accordance with the Rules and Regulations then in effect and the new plan has been approved by the Board.

5.14 RIGHT OF ENTRY:

The Board, its officers and agents, may, as far as they deem necessary in carrying out the subdivision control law, enter upon any lands and there make examinations and surveys or to place and maintain monuments and marks.

5.15 AS-BUILT/RECORD PLAN:

Two (2) copies of an accurate "as-built" or record plan and profile of the roadway(s) and associated site improvements, prepared by a registered professional engineer and registered professional land surveyor, shall be submitted to the Board after completion of the construction and prior to any partial release. Said plan shall indicate the record location of all municipal services as actually installed. Sufficient ties, including depths shown as profiles, for the proper and accurate identification and location, shall be provided. Additional information to be provided includes, but is not limited to, the location of each stump dump and/or spoil disposal area within the subdivision, location and size of sewer pump/lift stations, location and total storage provided of detention ponds, and other similar facilities. The Applicant shall also provide two (2) copies of the "as-built" plan submitted in DXF (drawing exchange file) format, in the same datum as the original approved plan.

The Applicant shall submit a partial as-built drawing, with completed municipal services, for review and acceptance by the Board, before the placement of any pavement.

A statement shall be provided on the "as-built" plans that the information provided conforms to these regulations, to the design intent of the design engineer and that any exceptions, exclusive of granted waivers, shall be noted on said plan.

SECTION VI. REQUIREMENTS FOR IMPROVEMENTS AND DESIGN

6.1 GENERAL REQUIREMENTS:

In order to provide for streets of suitable location, width and construction to accommodate prospective traffic and afford satisfactory access for police, emergency and medical, firefighting, snow removal, sanitation and other road maintenance equipment; to coordinate streets so as to compose a convenient system; to avoid undue financial burdens for present and future taxpayers; and to avoid potential natural or technological hazards or nuisances, including the problems associated with uncontrolled storm water runoff, the Board has established the design of subdivisions set forth in this Section.

In addition to the requirements established in these regulations, all subdivisions shall conform to the provisions of the Town of Ipswich Protective Zoning Bylaw, the regulations of the Ipswich Board of Health, the Town of Ipswich Water Rules and Regulations, the Town of Ipswich Sewer Regulations, the Ipswich Wetlands Protection Bylaw and Rules and Regulations of the Ipswich Conservation Commission, and all other rules and regulations applicable in the development of land in Ipswich.

6.2 CHARACTER OF THE LAND

6.2.1 Protection of Natural Features: In laying out a subdivision, the Applicant shall comply with these rules and regulations with due regard to all natural features such as large trees, natural groupings of trees, watercourses, scenic or historic elements, aquifers, flood plains, and habitats of rare or endangered plant and animal species. These features shall be left undisturbed wherever practical and the Board may waive design requirements in order to protect important natural features. The Applicant is strongly encouraged to leave as many existing trees as possible extant and to protect those trees during construction to retain natural character, filter stormwater and provide shade to the future development.

6.2.2 Unsuitable Land: Land which the Board finds to be unsuitable for development due to flooding, improper drainage or adverse drainage, adverse topography, poor soils, bedrock, location of utility easements, or other features which the Board has reason to believe would be detrimental to the health, safety, and general welfare of the present or future inhabitants of the subdivision and/or its surrounding area, shall not be subdivided or developed unless adequate measures are formulated by the Applicant and are approved by the Board to eliminate or minimize any short-term or long-term impacts created by development of the unsuitable land.

6.2.3 Subdivisions Straddling Municipal Boundaries: Whenever access to the subdivision is required across land in another Town, the Board may require documentation that access has been legally established in that Town as a public street or as part of an approved subdivision. In general, lot lines should be laid out so as not to cross municipal boundaries.

6.2.4 Self-Imposed Restrictions: If, as part of a subdivision application, the Applicant or Owner places voluntary restrictions on any of the land contained in the subdivision which are greater than the requirements of these Regulations or of the Town of Ipswich Protective Zoning Bylaw, such restrictions or references thereto shall be indicated and located on the Definitive Plan and shall be recorded in the Essex South District Registry of Deeds or the Land Court.

6.3 LOTS

6.3.1 Lot Arrangement: Lots shall be arranged so there will be no foreseeable difficulties due to topography, soils, wetlands, bedrock, improper drainage, or other conditions, in securing permits to build upon all lots in compliance with the Town of Ipswich Protective Zoning Bylaw, nor in providing practical, feasible driveway access to a building on each such lot.

6.3.2 Lot Dimensions: Lot dimensions shall comply with the minimum standards of the Town of Ipswich Protective Zoning Bylaw. Dimensions of corner lots should be large enough to allow for erection of buildings and fulfilling the minimum front yard setback and lot width from both streets. Depth and width of properties laid out for business or industrial use shall be adequate to provide for the off-street parking and loading facilities required by the Protective Zoning Bylaw.

6.3.3 Lot Configuration: Except for corner lots, lots should not have double frontage on two rights-of-way and shall not be oddly shaped. To discourage oddly shaped lots the angle of the sidelines shall be as close as is practicable to ninety (90) degrees or radial to a curve.

6.3.4 Soil Preservation, Sedimentation and Erosion Control: The Applicant shall comply with the Rules and Regulations Governing Soil Erosion and Sedimentation Control as provided for in Appendix IX. of these Rules and Regulations.

6.3.5 Lot Drainage: Lots shall be laid out so as to provide positive drainage away from all proposed buildings. Individual lot drainage shall be designed so as to avoid concentrating storm water drainage from each lot to adjacent lots and/or to the street.

6.3.6 Debris and Waste: No debris, junk, rubbish or other non-biodegradable waste materials shall be buried on any land in the subdivision or left on any lot or on the street right of way, and removal of the same shall be required prior to final release of any covenant or security. Burial of biodegradable materials on the site shall be subject to the approval of the Board of Health and the Planning Board or the Planning Board's Designee. It should be noted that no burial areas will be allowed if located within the buffer zones under the jurisdiction of the Ipswich Conservation Commission. The burial location(s) and description of buried materials shall be noted on the "as-built" plans. The Board may require that the description and the location of buried materials be recorded in the Registry of Deeds or the Land Court prior to the release of affected lots for sale or building.

6.4 CONSTRUCTION SPECIFICATIONS:

The specifications for construction that are provided in this Section VI are supplemented by Appendices I through IX of these Rules and Regulations, and together these two sections provide the required construction standards. The Board, upon recommendation from the Board's Designee, shall determine if the standards have been met.

6.5 GENERAL CONSTRUCTION PROCEDURES

6.5.1 Notification: No step in the construction of the required improvements shall commence until the Board's Designee has been notified at least twenty-four (24) hours in advance of the beginning of construction phases.

6.5.2 Inspections: Each phase or step in the construction of the required improvements shall be inspected and approved in writing by the Board's Designee. The Board's Designee may require submittals and testing as necessary to assure proper construction. As a minimum, the Applicant shall request an inspection at the following stages of construction:

- a) following preparation of the street subgrade and shoulders and prior to the placement on any fill;
- b) following installation of all underground drainage and utilities, prior to backfilling;
- c) following spreading and compaction of the gravel base, prior to application of the binder course on the street;
- d) immediately prior to and during the application and compaction of the surface course on the street and, if required, on the sidewalk;
- e) following completion of all improvements and installation of bounds. The Applicant shall not proceed with construction of any of the above stages of development until the Board's Designee has signed off on the previous stage.

The Board's Designee may require inspection at such other intervals as (s)he may deem necessary to assure proper construction of improvements, including but not limited to as-built drawing submittals required under Section 5.15. In addition, the Board's Designee may require periodic inspection reports from the Applicant's engineer.

6.6 CONSTRUCTION METHODS AND MATERIALS

6.6.1 Clearing and Grubbing: The area between property lines within the right of way shall be cleared and grubbed as necessary to construct the required travel way and to provide required sight distances, except for those trees which are intended to be preserved as street trees. Said trees shall be protected by the erection of a six (6) foot high temporary fence around the tree, to be located at the drip line unless otherwise specified by the Board.

6.6.2 Earth Excavation: All excavation shall conform to the lines and grades shown on the approved Definitive Plan(s). Where mucky soils, ledge or clay is encountered within the right of way, it shall be removed entirely and, where necessary, replaced with sand and gravel. Where water is encountered, or is expected to be encountered, within four feet (4') of the finished grade of the street, subsurface drainage, of a design acceptable to the Board, upon recommendation from the Board's Designee, shall be installed.

6.6.3 Ledge Excavation: Boulders or ledge shall be removed to a depth of at least twenty-four inches (24") below finished grade wherever it exists within the road or sidewalk pavement area.

6.6.4 Retaining Walls: If street and/or shoulder grades require more than two feet (2') of cut or fill, the Board may require retaining walls along abutting property lines unless a suitable alternative is approved by the Board.

6.6.5 Materials: Specifications and standards may be obtained through the Town Engineer and/or Department of Public Works. Reference is also made to the "typical street cross section", appended hereto.

6.7 STREETS – BASIC REQUIREMENTS (SEE APPENDIX I. STREET CONSTRUCTION SPECIFICATIONS)

6.7.1 Frontage: No subdivision shall be approved unless the land to be subdivided shall have frontage on an existing or proposed public street or, if the area to be subdivided is to use a private way to access the public street, the private way shall be improved or constructed by the Applicant to meet the minimum design and construction requirements of these Regulations.

6.7.2 Improving Existing Streets: If a subdivision borders and existing but inadequately constructed public or private street, the applicant may be required to improve the street bordering the subdivision tract or provide the land necessary for future improvements for that portion bordering the subdivision. Land used for or reserved for future street improvements may not be counted in satisfying the setback and area requirements of the Town of Ipswich Protective Zoning Bylaw.

6.7.3 Topography and Arrangement: Streets shall be designed to conform as closely as possible to the original topography of the site; nevertheless, a combination of steep grades and curves shall be avoided.

6.7.4 Street Names: Proposed street names shall be included on the plans and shall be sufficiently different in sound and in spelling from other street names in the Town so as not to cause confusion. A street which is planned as a continuation of an existing street shall bear the same name. Written approval of the proposed street name must be obtained from the Director of Public Safety and shall be included in the application submitted to the Board.

6.7.5 Street Numbers: Street numbers shall be assigned by the Chief Assessor in consultation with public safety officials, and shall be included in the application submitted to the Board.

6.7.6 Temporary Construction Easement: A twenty foot (20') wide temporary construction easement shall be provided contiguous to both sides of the right-of-way of all proposed streets in a subdivision. Said easement shall expire upon the satisfactory completion of the subdivision.

6.8 STREETS – DESIGN STANDARDS

6.8.1 Table IA

**Minimum Design Standards for COURTS (may serve no more than two lots)
(Design Speed: 20 miles per hour)**

	ZONING DISTRICT	
	Residential	Non-Residential
Min R.O.W. Width	30'	NA
Min. Pavement Width	18'*	NA
Max. Grade	12%	NA
Min. Grade	1%	NA
Min. Sight Distance	120'	NA
Min. Radius of Centerline Curve	NA	NA
Min. Length of Vertical Curve	NA	NA
Min. Curb Radius at Intersection	25'	NA
Cul-De-Sacs**		
R.O.W. Diameter	120'	NA
Outside Paving Diameter	100'	NA
Max. Length of Cul-de-sac	300'	NA

*A pavement width of 16 feet is acceptable for courts serving only one residential lot, unless the grade of the road is 10 percent or greater, in which case the minimum width shall remain 18 feet.

** As an alternative to a circular turnaround, the Board will allow a T or Y-shaped turn-around of a design that would permit a vehicle with a 47 foot outside turning radius and a width of eight feet to reverse its direction without backing more than once.

6.8.2 Table IB

**Minimum Design Standards for LANES (may serve no more than five lots)
(Design Speed: 25 miles per hour)**

	ZONING DISTRICT	
	Residential	Non-Residential
Min. R.O.W. Width	40'	NA
Min. Pavement Width	20'	NA
Max. Grade	12%	NA
Min. Grade	1%	NA
Min. Sight Distance	120'	NA
Min. Radius of Centerline Curve	NA	NA
Min. Length of Vertical Curve	NA	NA
Min. Curb Radius at Intersection	25'	NA
Cul-de-sacs		
R.O.W. Diameter	120'	NA
Outside Paving Diameter	100'	NA
Max. Length of Cul-de-sac	450'	NA

6.8.3 Table IC

**Minimum Design Standards for LOCAL STREETS
(Design Speed: 30 miles per hour)**

	ZONING DISTRICT	
	Residential	Non-Residential
Min. R.O.W Width	50'	50'
Min. Pavement Width	22'	26'
Max. Grade	10%	7%
Min. Grade	1%	1%
Min. Sight Distance	130'	250'
Min. Radius of Centerline Curve	100'	250'
Min. Length of Vertical Curve	100'	100'
Min. Curb Radius at Intersection	25'	30'
Cul-de-sacs		
R.O.W. Diameter	120'	170'
Outside Paving Diameter	100'	150'
Max. Length of Cul-de-sac	600' **	600' **

** The Planning Board may allow a cul-de-sac street with a greater length than six hundred feet (600'), provided that the following two conditions are met: (1) The Board determines that a greater length would serve to minimize disruption of the site or to protect other local conditions; and (2) the cul-de-sac street is created as part of an Open Space Preservation Zoning Development approved under Section IX.A of the Ipswich Protective Zoning Bylaw (in which instance the 600 foot cul-de-sac maximum length requirement may not apply to a conceptual plan drawn for the purpose of determining the maximum number of building lots as required in Section IX.4.a of the Ipswich Protective Zoning Bylaw).

6.8.4 Table ID

**Minimum Design Standards for COLLECTOR Streets
(Design Speed: 40 miles per hour)**

	ZONING DISTRICTS	
	Residential	Non-Residential
Min. R.O.W. Width	50'	50'
Min. Pavement Width	28'	30'
Max. Grade	6%	6%
Min. Grade	1%	1%
Min. Sight Distance	325'	325'
Min. Radius of Curve	450'	450'
Min. Length of Vertical Curve	350'	350'
Min Curb Radius at Intersection	30'	30'
Cul-de-sacs	N/A	N/A

6.8.5 Table IE

**Minimum Design Standards for ARTERIAL Streets
(Design Speed: 45 miles per hour)**

	ZONING DISTRICT
	Residential and Non-Residential
Min. R.O.W. Width	60'
Min. Pavement Width	32'
Max. Grade	5%
Min. Grade	1%
Min. Sight Distance	450' in each direction
Min. Radius of Curve	800'
Min. Length of Vertical Curve	450'
Min. Curb of Radius at Intersection	30'
Cul-de-sacs	N/A

6.8.6 Street Geometry: Street geometry (i.e., horizontal and vertical alignment) should be selected to achieve both safe vehicular movement and adequate sight distances for associated design speeds. The design engineer shall demonstrate conformance to this objective by providing tables of calculations which indicate the resultant sight distances.

6.8.7 Excess Right-of-Way: Right-of-way widths in excess of the standards designated in Tables IA, IB, and IC may be required whenever, due to anticipated future traffic/ loading conditions, additional width is necessary to provide improved alignment.

6.8.8 Cul-de-sac - Temporary: The subdivision design shall provide for continuation of streets between adjacent properties when such continuation promotes the convenient movement of traffic, effective fire protection and emergency vehicle access, efficient snow removal service and efficient provision of utilities, and/or where such continuation is in conformance with the Town's Master Plan.

If the adjacent property is undeveloped and a street must be dead-ended temporarily, the right-of-way shall extend to the property line.

6.8.9 Cul-de-sac- Permanent: If a street will not extend beyond the subdivision boundaries and its continuation is not required for access to an adjoining property, the terminus shall not be nearer the subdivision boundary than fifty feet (50'). A permanent dead-end street shall be provided with a cul-de-sac turnaround in accordance with Section 6.8.1, Table IA.

6.8.10 Reserve Strips: Reserve strips prohibiting access to streets or adjoining property shall not be permitted except where, in the opinion of the Board, such strips shall be in the public interest.

6.8.11 Intersections: Streets shall be laid out so as to intersect as nearly as possible at right angles, and in no case at less than a 75 degree angle. New intersections at one side of an existing street shall align directly with any existing intersection at the opposite side of the street whenever feasible. Street intersection jogs with centerline offsets of less than one hundred and fifty feet (150') shall not be permitted.

Street intersections shall be designed with a flat grade (not greater than 3%) for a distance of at least one hundred feet (100') as the street approaches each side, as applicable, of any intersecting street, except that for courts intersecting with lanes or local streets, the grade shall be not greater than 4% for a distance of at least seventy-five (75') feet from the intersection.

The minimum sight distances (in both directions) at all intersections of streets shall be three hundred twenty-five feet (325'), i.e., for a design speed of forty miles per hour (40 mph); greater sight distances may be required for higher design speeds.

6.8.12 Landscape Island: A landscape island is required at all circular turnarounds. Unless otherwise allowed by the Board, landscaped areas shall be densely planted with hardy species that are non-invasive as defined by "The Evaluation of Non-Native Plant Species for Invasiveness in Massachusetts", as amended from time to time.

6.8.13 Soil Testing: Subsurface soils test data may be required to evaluate the adequacy of roadway design. The need for and location of test pits shall be established by the Board during the Preliminary and/or Definitive Plan review process, upon receiving recommendation on same of the Board's Technical Review Consultant. Test pits in wetlands require prior approval from the Conservation Commission.

6.9 CURBING

Sloped granite curbing shall be provided as an integral part of all new streets, except for courts. Modified cape cod berm shall be required on courts at intersections and on grades over four (4) percent. On cul-de-sac turnarounds and at intersections with collector or local streets, sloped granite curbing shall be required. Sloped granite curbing shall be required where road grades are over two (2) percent but less than six (6) percent. Vertical granite curb shall be required at the back of catch basins, on grades over six (6) percent, and at the intersections with arterial streets, except that the Board may allow sloped granite curb in lieu of vertical granite curb at the back of catch basins or on grades over six (6) percent if the entire proposed street is being provided with sloped granite curb. Continuous low-profile, modified Cape Cod berm may be allowed on new roads near wetland areas or vernal pools to facilitate wildlife movement. Breaks in curbing are allowed to facilitate natural drainage and wildlife movement if soils permit and if allowed under the rules and regulations governing stormwater management (Appendix VIII).

6.10 DRIVEWAY APRONS

Driveway aprons and road pavement shall be installed at the same time. Aprons shall extend from the street to the lot. In the event that the driveway aprons cannot be installed at the same time as the street construction, it shall be the responsibility of the applicant to ensure that the driveway aprons are installed, in accordance with the Department of Public Works standards, prior to the acceptance of the street by Town Meeting. If a lot is undeveloped, the applicant shall curb the frontage of the lot until such time as the lot owner obtains a street opening permit. The Department of Public Works shall not be responsible for the installation of driveway aprons after the construction of the subdivision streets.

6.11 SIDEWALKS

6.11.1 Requirement: Sidewalks shall be required on one side of the street along all lanes, local and collector streets unless the Board determines pedestrian movement is otherwise accommodated.

6.11.2 Design Standards: The design and construction of sidewalks shall be based upon the nature and density of development as shown in TABLE II:

TABLE II - Minimum Design Standards for Sidewalks

ZONING DISTRICT

Street Class	Residential	Non Residential.
Local, Lane	Bit. meandering ¹ or standard ² 5' wide	Concrete standard 6' wide in business district or bit. standard 5' wide in other areas.
Collector	Bit. meandering or standard 5' wide	Concrete standard 6' wide in business district or bit. standard 5' wide in other areas.
Arterial	Bit. standard 5' wide	Concrete standard 6' wide in business district or concrete standard 5' wide in other areas.

Footnotes: ¹ Meandering: following existing terrain and major features such as stone walls, large trees, or rock outcroppings, within the street right-of-way.

² Standard: uniform width parallel to the street.

6.11.3 Materials: Where new sidewalks are to be constructed in short sections to connect existing sidewalks, the new sections shall be constructed to the same specifications as the existing sidewalks.

6.11.4 Americans with Disabilities Act: All sidewalks and ramps shall conform with the Americans with Disabilities Act (ADA).

6.12 MONUMENTS

6.12.1 Requirements: Monuments shall be installed at all street intersections, at all points of change in direction or at curvature of streets, at two (2) property corners of all new lots and at any other points where, in the opinion of the Board, permanent monuments are necessary.

6.12.2 Monument Spacing: Monuments located in the street right of-way shall be spaced so as to be within sight of each other, the sight lines being contained wholly within the street right-of-way limits. The maximum interval shall be one thousand feet (1000').

6.12.3 Monument Materials: Monuments shall be either standard granite markers of not less than four feet (4') in length and not less than five inches (5") square, and shall have a drill hole in the center or shall be made of concrete and reinforcing bar and of similar dimensions as noted above. If subsoil conditions prohibit installation of four (4') foot monuments, with advance approval by the Board, monuments meeting alternative specifications shall be installed. Monuments shall be set flush with the finished grade.

6.12.4 Monument Certification: No permanent monuments shall be installed until all construction which would destroy or disturb the monuments is completed. Placement and location of bounds are to be certified by a registered professional land surveyor after installation of the street, and shall be shown on the "as-built" or record plans.

6.13 UTILITIES – BASIC REQUIREMENTS

6.13.1 Installation: All utility lines, and/or other subsurface facilities within the street rights-of-way shall be installed prior to the preparation of the street base material.

6.13.2 Identification: The subdivider shall provide and install utility identification tape for all underground utility installations. The tape shall be placed in the trench a minimum of twelve inches (12") above the pipe, conduit or cable and not less than twelve inches (12") below the finished grade.

Identification tape for utilities shall be traceable, durable, and either non-biodegradable plastic or metallic, and shall be approximately six inches (6") wide by four thousandths (.004) inches, or four mil, in thickness.

The following colors shall be used:

- Orange- Gas
- Yellow- Electric
- Green- Communications (telephone, cable, fire alarm)
- Blue- Water
- Red- Sanitary Sewer

6.13.3 Easements: Wherever necessary, the Board shall require perpetual, unobstructed easements for sewers, storm drains, power lines, water mains and all other utilities. Such easements shall be a minimum width of thirty feet (30'), centered on the utility, and shall be indicated on the Definitive Plan by metes and bounds. When utilities proposed within the right-of-way of a street are located within fifteen feet (15') of the right-of-way line, the Board shall require a minimum twenty foot (20') wide easement contiguous to the right-of-way.

6.14 STORM DRAINAGE (SEE APPENDIX II – SURFACE WATER DRAINAGE INSTALLATION SPECIFICATIONS AND APPENDIX VIII - RULES AND REGULATIONS GOVERNING STORMWATER MANAGEMENT)

Storm water run-off shall be mitigated through a combination of storage and controlled release, as required in the Rules and Regulations Governing Storm Water Management (See Appendix VIII.), the Town of Ipswich Stormwater Bylaw and Regulations, and the Massachusetts Department of Environmental Protection (DEP) Stormwater Management Standards, as applicable. Drainage systems shall be designed according to the following principles and criteria:

6.14.1 Peak Flows: Property shall be developed in such a manner as to maximize storm water recharge on the site and to minimize direct overland run-off into adjoining streets and watercourses. Peak flows and run-off at the boundaries of the subdivision shall be no higher following development than before development, for the 10 and 100 year storm events.

6.14.2 Capacity: Drainage systems shall have adequate capacity to handle all storm water run-off presently flowing through the subdivision, as well as to dispose of any additional run-off generated by the proposed development up to and including the run-off from a one hundred (100) year storm using the following methods:

- a) the flow from storms of up to a twenty-five (25) year frequency and a twenty-four (24) hour duration shall be conveyed through the storm drain system on the subdivision site. Storm drain piping and grade inlets shall be designed for a 25 year storm event;
- b) Detention facilities and culverts shall be provided to handle all run-off, up to and including the run-off generated by the one hundred (100) year, twenty-four (24) hour storm. As a minimum, detention basin routing calculations shall be prepared for the ten (10) and one hundred (100) year storm events.

6.14.3 Release Rate: The combination of storage and design release rate shall not result in storage duration of greater than seventy-two (72) hours. Maximum depth of storm water detention/retention areas shall be two feet (2').

6.14.4 Outlet Structures: Outlet control structures shall be designed as simply as possible and shall require little or no maintenance for proper operation.

6.14.5 Emergency Overflow: Each storm water detention area shall be provided with a method of emergency overflow in the event of a storm in excess of the one hundred (100) year frequency type.

6.14.6 Natural Patterns: Natural drainage patterns shall be used wherever possible. All existing watercourses shall be left open unless approval to close them is obtained through the Conservation Commission. All new open watercourses shall be appropriately seeded, sodded, and ripped.

6.14.7 Alteration: Any alteration of land on the site shall be such that changes in existing patterns of drainage shall not affect properties outside the subdivision by increasing the amount or rate of peak flow.

6.14.8 Structured Systems: If soil conditions or topography make natural drainage systems impractical and existing drains in adjacent streets or easements have adequate capacity to accommodate the drainage flow from the subdivision, a structured system shall be used and appropriate connection to the existing Town drainage system shall be made.

6.14.9 Calculations: Hydraulic calculations, prepared by a registered professional engineer, shall be submitted to substantiate all design features of any proposed drainage system. Computations for run-off shall be made in accordance with standard engineering practice, acceptable to the Town Engineer and/or the Board's Designee, and the method of calculation shall be noted.

6.14.10 Basin Side Slopes: Basin area side slopes shall be kept as close as possible to natural land contours, i.e. ten percent (10%) or less wherever possible. A maximum 6:1 side slope may be constructed for the interior of the basin areas. For security purposes fencing may be required by the Board. Drainage basins shall be designed for easy access for maintenance vehicles and personnel.

6.14.11 Drainage Easements: If it is necessary to carry drainage across lots within the subdivision, storm drainage easements shall be provided, of such width and construction as will be adequate to accommodate the volume and velocity of the run-off. However, no such easement shall be less than thirty feet (30') in width.

If a detention basin is proposed, the boundary of the required easement shall be at least twelve feet (12') beyond the maximum extent of the one-hundred (100) year flood stage and further, the easement should be configured to provide construction vehicles with adequate access around the perimeter of the basin.

If a proposed drainage system would carry water across land outside the subdivision boundaries to an approved outfall, appropriate drainage rights shall be secured by the subdivider at the subdivider's expense, and shall be referenced on the Definitive Plan.

6.14.12 Roof Runoff: All primary dwelling structures within a residential subdivision and all buildings within a non-residential subdivision shall have a rainwater harvesting system designed to collect preferably 100% of roof run-off for a two inch (2") rainfall, but at minimum, the system shall collect 75% of the run-off. When practicable, collected roof run-off should be used for landscape irrigation purposes. Excess stormwater may be recharged. Prior to the Board's sign-off for the issuance of a Certificate of Occupancy, the Board shall assure that these systems have been installed as designed and approved. The Board may use its Technical Review Consultant/Subdivision Inspector to provide the Board with this assurance.

6.14.13 Soft Structure Drainage: When feasible and appropriate, applicants shall use natural-looking, open drainage instead of closed, hard engineering structures as otherwise required in these regulations.

Examples of these Low-Impact Development design techniques include:

- a. Bio-retention facilities;
- b. Filter/buffer strips and other multifunctional landscape areas;
- c. Grassed swales, bio-retention swales, and wet swales; and
- d. Infiltration techniques

Information on these practices can be obtained from the documents referenced in Section 6.14.

6.15 STORMWATER MANAGEMENT

6.15.1 Applicability

Except as provided in paragraph C. below, stormwater runoff from all subdivision lots created pursuant to the Rules and Regulations Governing the Subdivision of Land in Ipswich, Massachusetts that result in a land disturbance exceeding an area of 10,000 square feet or an area of more than 50% of a parcel or lot, whichever is less, shall comply with the Ipswich Stormwater Management General Bylaw (hereafter "Stormwater Bylaw"). In the case of a single land alteration project, whether phased or not, involving more than one contiguous parcel or lot whether or not under common ownership, the entire area of the project shall be considered a lot or parcel under this Section IV.

Compliance with the Stormwater Bylaw requires the Applicant to obtain approval from the Board for any land disturbance as described in the preceding paragraph. In applying the requirements of the Stormwater Bylaw, the Board adopts and applies the Massachusetts Stormwater Management Standards as set forth in 310 CMR 10.05 (6)(k)-(q), except that within the jurisdiction of the Board as is now established or may be amended by the Regulations Governing the Granting of Special

Permits, the application of the Stormwater Management Standards shall not be limited as set forth in 10.05(6)(l) and (m) as may be amended, but shall apply to any development and/or redevelopment project and/or land disturbance activity as set forth in Section 5.A of the Stormwater Bylaw, and is not exempted by other provisions thereof."

6.15.2 Definitions

The Board adopts, to the extent they are applicable, the definitions appearing as "Section 3. Definitions" of the Stormwater Bylaw.

6.15.3 Stormwater Buyout

The Board may allow the Applicant to contribute to the construction of a public or shared stormwater facility in lieu of an onsite stormwater facility if the Board determines that there is not sufficient space for onsite stormwater best management practices and that accepting such a contribution is in the best interests of the Town.

6.15.4 Monitoring

To insure that the permitted stormwater improvements are performed in accordance with the approved plans, the Board may require Applicants, as a condition of approval and at their own expense, to retain a Board-approved consultant to monitor the process of the work and submit periodic reports. The consultant shall be a qualified environmental professional and shall prepare and submit certified reports on a schedule established by the Board. If, during construction, unexpected site conditions require modifications to the approved plans, the consultant shall immediately notify the Board and request the Board's approval of any requested modifications. No work shall be performed without the prior approval of the Board.

6.16 WATER FACILITIES (SEE APPENDIX IV –WATER RULES AND REGULATIONS)

6.16.1 Installation: The subdivider shall be responsible for installing water facilities, including, but not limited to water supply, pipes, hydrants, hydrant markers, gates, valves, and all other related appurtenances, in accordance with the Regulations of the Water Division of the Department of Public Utilities. Any extension of an existing line and/or creation of a new line requires approval from the Town of Ipswich Board of Selectmen, acting as Water Commissioners. A copy of the written approval from the Water Commissioners shall be submitted to the Planning Board prior to the start of construction of the subdivision. Connections from the main to the exterior line of the street right-of-way shall be constructed for each lot unless the Board of Health has approved individual wells. Said water facilities shall be shown on the Definitive Plan.

6.16.2 Fire Hydrants: Fire hydrants shall be required for all a subdivisions, except that hydrants shall not be required for courts if the terminus of the court is within 300 feet of an existing, operable fire hydrant. Fire hydrants, with hydrant markers, shall be located not more than five hundred feet (500') apart; shall be approved, in writing, as to location by the Fire Chief and the Water Division of the Department of Public Utilities; and shall be shown on the Definitive Plan.

6.16.3 Extensions: Reasonable provisions shall be made for extension of the water main to adjoining property, including installation of water gates. Appropriate easements may be required.

6.16.4 Additional Alternative System of Water Supply/Fire Protection: If the municipal water supply is available but the minimum required flow is not available, in addition to extending the municipal water system, the Applicant shall propose an alternative system for providing water supply for fire protection.

6.16.5 Municipal Water Supply Not Available: If the municipal water supply is not available to the subdivision, the applicant shall propose an alternative method of providing water supply for fire protection. Water for firefighting may be supplied by natural or man-made bodies of water. The surface of each pumping access point shall be adequate to support at least 42,000 pound gv vehicles at all times of the year. Provisions shall be made so that such water suction points shall be visible and useable in all weather conditions. Each dry hydrant which may be exposed to damage by vehicular traffic shall be protected by suitable barriers.

6.17 SEWER (SEE APPENDIX V- SEWER REGULATIONS)

6.17.1 Installation: In the event that the Town sanitary sewer system is located within four hundred feet (400') of the subdivision, the subdivider shall be responsible for connecting all lots to the sewerage system. The connections shall be made in accordance with the Town's Master Sewer Plan as last revised, to the extent applicable. Connection to the system shall require an approval from the Town of Ipswich Board of Selectmen, acting as Sewer Commissioners, and any other required approvals, including, but not limited to, a permit for extension of the sewer system issued by the Massachusetts Division of Water Pollution Control.

6.17.2 Sewer Options: If the subdivider is not required to connect to the Town sanitary sewer system, the subdivider must provide an alternative system for wastewater disposal. The following options are available:

- a) install a communal sewage disposal system, the design and construction of which shall be subject to the approval of the Massachusetts Department of Environmental Protection (DEP), the Ipswich Board of Health and all other necessary review agencies; or
- b) provide engineering data in accordance with Title V."Minimum Requirements for the Subsurface Disposal of Sanitary Sewage" of the Massachusetts Environmental Code and with the Rules and Regulations for Sewage Disposal Installations as promulgated and amended from time to time by the Town of Ipswich Board of Health (See Appendix V.), to prove to the satisfaction of the Board and the Board of Health the feasibility of providing private on-lot sewage disposal systems for each lot. Each on-lot system shall be located in the front yard, wherever practical, to facilitate future connections to the Town sanitary sewer system.

6.18 ELECTRIC, GAS AND COMMUNICATIONS LINES (SEE APPENDIX III - SPECIFICATIONS FOR INSTALLATION OF ELECTRIC SERVICES)

6.18.1 Installation: All electrical, gas and communications lines shall be installed underground, in a manner that does not undermine the health and vitality of street trees. Lines shall be placed such that no disturbance is nearer than the drip lines of the trees. Communications lines shall include, but not be limited to, telephone, data and cable television.

6.18.2 Electric Lines: The electrical power distribution shall be installed in accordance with the specifications of the Rules and Regulations of the Department of Public Utilities of the Town of Ipswich in effect at the time of application.

6.19 TREES AND OTHER PLANTINGS (SEE APPENDIX VII - TREE PLANTING SPECIFICATIONS AND APPENDIX IX - RULES AND REGULATIONS GOVERNING SEDIMENTATION AND EROSION CONTROL)

6.19.1 Location: Street trees shall be placed at intervals based on drip line measurements at maturity (as determined by the Board) for each species chosen. Attention shall be given to the location and species and habit of trees to be planted so that upon maturity, the trees will not interfere with existing utility lines and poles or with each other.

6.19.2 Species: The species of street trees selected shall be of USDA (U.S. Department of Agriculture) Zone 6b hardiness, shall be non-invasive, and shall be of licensed nursery stock with good root development and branching characteristics, with at least a one-year warranty. Further, the selected species shall be deciduous trees that are tolerant of urban conditions. Existing trees may be preserved as street trees if inspected and approved by the Tree Warden and the Planning Board.

6.19.3 Size: The minimum size of street trees shall be two and one-half inches (2 -1/2") in caliper, measured four feet (4') from the ground level and eight to ten feet (8-10') in height, in place.

6.19.4 Planting: Street trees shall be planted in holes at least six inches (6") deeper than and one and one-half (1-1/2) times as wide as the root ball. Trees shall be planted at their previous depth in good quality topsoil and shall be securely staked.

6.19.5 Slopes: All cut-and-fill slopes within or contiguous to the street right of way shall be planted with suitable, well rooted, low growing plant materials or grass as determined by the Board, with advice from the Tree Warden. A wood chip or comparable mulch shall be used with ground cover plants to minimize erosion. Planting of sod may be required.

6.19.6 Cleared Areas: All cleared areas of the street right-of-way not to be planted with ground cover, and all disturbed area within public easements, shall be loamed with not less than six inches (6") compacted depth of good quality loam and shall be seeded with turf grass seed or such mixture as may be approved by the Tree Warden. Seeding shall be completed at appropriate times of the year and in such a manner as to insure an appropriate growth of grass. (See Appendix IX. Rules and Regulations Governing Soil Erosion and Sediment Control)

6.20 GUARD RAILS:

Guard rails shall be installed in all areas where fill slopes are in excess of 3:1. Appropriate slope treatment and erosion control measures shall be provided for all slopes in excess of 3:1 and rip-rap may be installed on all slopes in excess of 2:1, unless otherwise specified by the Board.

6.21 STREET SIGNS:

Street signs shall be installed at all intersections in conformity with the specifications of the Department of Public Works. Until such time as each street is accepted by the Town as a public way, the sign posts at the intersection of each street with any other street, shall have affixed thereto a sign designating such street as a private way. The costs for advertising for hearing, and for data collection in support of filings for traffic regulations on streets to be accepted, shall be borne by the Applicant.

6.22 STREET LIGHTING:

Provisions shall be made for street lighting connections at locations determined by the Board, after consultation with the Department of Public Utilities. All installations shall be in accordance with the Rules and Regulations of the Department of Public Utilities and/or the Electric Light Department. Lighting shall be designed to reduce glare, and minimize light pollution and light trespass. Full cutoff street lights shall be installed.

6.23 RESERVATION OF LAND FOR PUBLIC PURPOSE:

The Board may require that the subdivider designate a portion of the subdivision tract for reservation for a period of three years for municipal purposes. Reservation of land shall not be unreasonable in relation to the size of the tract being subdivided and to the prospective uses of the reserved land.

If the Board reserves land, notation shall be made on the plan concerning the area being reserved and the requirements that no street, utilities, building or other improvements within the boundaries of the land being reserved may be made without the Board's approval for a period of three (3) years from the date of endorsement of the Definitive Plan. If the Board requires the reservation of land for public purposes, in conjunction with its conditions for the approval of the subdivision, it shall require the subdivider to send a letter to the Board of Selectmen, indicating the name of the subdivision, the street name, the lot number and the street number as so reserved.

APPENDICES

I. STREET CONSTRUCTION SPECIFICATIONS

1. ROADWAYS

- a) **Clearing and Grubbing:** The entire area of each right-of-way shall be cleared of all stumps, brush, roots, boulders and like material and all trees not intended for preservation. Existing trees within the area of the right-of-way may be selected for preservation for aesthetic or other values by the Planning Board or its Designee provided that they shall be over four (4) inches in caliper and shall be located at least five (5) feet from the edge of the finished roadway pavement. No trees shall be removed until said selection is made. Such trees to be preserved shall be protected from bruises and other abuses continuously throughout the construction of the subdivision in a manner satisfactory to the Planning Board or its Designee.
- b) **Excavation and Subgrade Preparation:** All top and other unsuitable soils shall be removed for the full length and width of the paved roadway and from under the sidewalk location when sidewalks are required regardless of whether or not the finished grade is above existing grade.

All other material shall be removed for the full length and width of the roadway to a depth of at least fifteen (15) inches below the existing grade as shown on the profile plan; provided, however, that if the soil is soft and spongy or contains undesirable material such as clay, peat, sand pockets, tree stumps, or any other material detrimental to the subgrade, a deeper excavation below the subgrade shall be made as required by the Planning Board Subdivision Inspector or the Director of Public Works.

- c) **Utilities:** With the roadway at the subgrade level, all pipes and underground services shall be laid. Connections for sewer, drain, water, gas, telephone and electric services, where municipal services are available, shall be constructed for each lot (whether or not there is a building there) from the main service line in the way to five (5) feet beyond the exterior line of the way, except that the Planning Board may waive such requirement in whole or in part in the case of a lot to be used for a park, playground or for any other purpose for which, in the opinion of the Planning Board, such connections shall not be required.
- d) **Grading:** All roadways shall be brought to a finished grade as shown on the profiles of the Definitive Plan or other design with gravel as specified below to a width of eight (8) feet wider than the required paved roadway except where curbs are used. The roadway crown shall have a minimum of one-quarter (1/4) inch per foot of pitch.
- e) **Gravel Base:** After the roadway has been carefully graded to an elevation fifteen (15) inches below the finished grade, twelve (12) inches of base gravel shall be spread and rolled with a roller of sufficient weight to achieve ninety five (95) percent compaction. Gravel shall be in conformity with the most recent "Standard Specifications for Highways and Bridges" of the Massachusetts Department of Public Works and shall consist of hard, durable stone and coarse sand practically free from loam and clay, uniformly graded and containing no stone having a dimension greater than three (3) inches or as specified by the Planning Board Subdivision Inspector or the Director of Public Works. The gravel shall be spread in two six-inch (6") layers, each thoroughly compacted to 95% Proctor density and true to line and grade.

The gravel shall conform to the following requirements:

Sieve	Percent Passing
3 inches	100%
1/2 inch	50-85%
3/8 inch	45-80%
No. 4	40-75%
No. 10	30-60%
No. 40	8-35%
No. 200	0-8%

If in-situ material meets the Specifications of the Massachusetts Department of Public Works, it may be used as a base material. Upon request, the Planning Board will consider allowing recycled asphalt for the base in lieu of gravel. If allowed, the recycled asphalt will be subject to the review and approval of the Subdivision Inspector prior to its installation. All banks and curves must be established before the standard base course can be applied.

- f) **Pavement or Wearing Surface:** The wearing surface shall consist of two courses of Class I, Type I-1 plant-mixed bituminous concrete, composed of materials and prepared in conformity with the Specifications of the Massachusetts Department of Public Works. It shall be spread, rolled, and compacted in two (2) courses.
- g) **Guard Rails and Posts:** Guard rails and posts shall be of the steel beam highway guard type SS as specified by the Commonwealth of Massachusetts Department of Public Works Standard Specifications for Highways and Bridges (1973), as amended. Where appropriate, the Planning Board, upon recommendation from the Director of Public Works, may allow the above specified steel guardrail to be faced with wood and/or all the use of wooden guard rails and posts. Public safety and visual attributes shall be considered in granting the use of wooden guard rails.

2. CURBING

Permitted curbing shall be sloped granite. Type A bituminous, or straight-faced granite is acceptable at the discretion of the Board.

3. SIDEWALKS

- a) **Preparation:** All materials shall be removed for the full width of the sidewalk to a subgrade fifteen (15) inches below the finished grade. All soft spots and other undesirable material below such subgrade shall be removed. This excavated area then shall be filled with base gravel material in accordance with the specifications outlined above for the roadway base.
- b) **Surface:** Where concrete sidewalks are required, the wearing surface shall be 3000 lb. strength concrete, four (4) inches in thickness, reinforced with No. 10, 6" by 6" mesh and broom finished. An expansion joint (3/4" open) shall be provided at least every twenty (20) feet; dividing joints shall be scored into the sidewalk every four (4) feet. Where bituminous sidewalks are required, the material shall be as specified in "Pavement or Wearing Surface" above.

4. PATHWAYS AND BICYCLE PATHS

Wherever pedestrian pathways or bicycle paths are provided for in the Definitive Subdivision Plan, construction shall be as required by the Board.

All edges of concrete pathways shall be formed with wood which shall be securely anchored and left in place; this provision shall not apply to bituminous paths/pathways.

II. SURFACE WATER DRAINAGE INSTALLATION SPECIFICATIONS

The surface water drainage system which is to provide adequate disposal of surface runoff from the street and adjacent areas shall be installed in accordance with the following specifications:

1. **Pipes, Culverts and Drains:** Pipe for the construction of culverts and drains shall be reinforced concrete. All pipe shall not be less than twelve (12) inches in diameter. Pipe joints shall be carefully made so that the spigot is tightly butted to the seat of the bell and the spacing between the spigot is uniformly proportioned and caulked with loose or braided jute. In all cases the joints shall be filled with cement.

Pipes shall be laid in a bed of six (6") inches of gravel or crushed stone. All utility trenches shall be backfilled with bank gravel carefully compacted and shall be leveled with adjacent grades. When pipes, culverts or drains are not located in the street or street shoulder, six (6) inches of loam shall be placed over the trench fill, and the grades shall be leveled with adjacent terrain. All drains shall be laid to uniform grades and shall be carefully backfilled so that the pipe is supported throughout its entire length with compacted earth. Earth cover shall be a minimum of three (3) feet, except where a greater pipe strength is requested and approved by the Board.

2. **Catch Basins:** All catch basins shall have a three (3) foot sump and shall discharge into manholes. The distance between two (2) catch basins shall not exceed three hundred (300) feet; however, the Planning Board may approve a greater distance if deemed advisable due to unusual field conditions and justifiable by calculations.
3. The materials and construction of catch basins and drain manholes shall conform to the "Standard Specifications for Highways and Bridges", published by the Massachusetts Department of Public Works. Any change in alignment or grade, if not normally the location of a catch basin, shall be made by using a standard manhole conforming to the above specifications. Catch basins and drain manholes shall be constructed of pre-cast concrete. Drain manholes shall contain ladder rungs and brick and/or concrete inverts. Catch basin and sewer manhole structures shall have a minimum forty-eight (48") inch inside diameter.
4. **Curb Drainage:** Underdrains may be required by the Planning Board in instances where ground water is four (4') feet or less below the finish grade of the street or as subsurface conditions dictate.
5. **Natural Drainage:** Where natural drainage courses are altered, cross drains and/or other structures, approved by the Planning Board, the Planning Board Subdivision Inspector and/or the Director of Public Works, shall be installed to restore natural drainage. Such alterations shall be sized for a 100 year storm capacity. Where cross drains carry flow of natural water courses, masonry headwalls or rip-rap shall be installed, as approved by the Planning Board, the Planning Board Subdivision Inspector and/or the Director of Public Works, to prevent erosion.
6. **Subsurface Drainage from Foundation Drains, Roof Leaders and Other Sources:** In cases where underground drainage is proposed in connection with the erection of buildings or the use of any lot, such underground lines may not be connected to the storm drains in the proposed streets.

III. SPECIFICATIONS FOR INSTALLATION OF ELECTRICAL SERVICES

Underground Distribution System in Residential Subdivisions

- 1.** Upon application to the Town of Ipswich Electric Department/Department of Public Utilities and subject to the provisions hereinafter specified, an Applicant proposing to construct a residential subdivision, which has been approved by both the Planning Board and the Electric Department with regard to design feasibility, shall extend underground wiring for light, power, and street lighting throughout the subdivision where no other electric distribution system is in existence.

All provisions hereinafter set forth apply to subdivisions consisting of front lot distances measuring an average of not over two hundred (200) feet. For lots over two hundred (200) feet frontage, additional terms, conditions and/or costs may apply.

- 2.** The subdivider's cost and responsibility shall be to:
 - a.** Present to the Department at least two (2) sets of the Preliminary Plan and/or Definitive Plan showing the subdivision as proposed, including the location and depth of electric service lines and all other underground installations such as water, sewer and drainage as are required in said plans. The approximate schedule for subdivision completion shall be noted.
 - b.** If a Definitive Plan is approved, provide the Department with lines, grades, permanent easement(s), and partial release of mortgage from any mortgagee for the location and installation of hand holds, manholes, transformer vaults, cable, ducts, street lighting fixtures and other necessary equipment.
 - c.** Install all underground wires and structures in accordance with the National Electric Code. All work shall be installed by an electrician, licensed by the Commonwealth of Massachusetts. All work shall be reviewed and approved by the Electric Department/Department of Public Utilities.
 - d.** Obtain adequate ties to underground conduit, prior to backfilling, to plot the location of all underground conduits on the as-built drawings for the street.
 - e.** Provide for each residential lot owner service installation(s) as required by the Electric Department/Department of Public Utilities.
 - f.** Provide, as necessary, temporary, sixty (60) ampere structures in conformity with the design and requirements shown in Figure 5.
- 3.** No extension shall be made under the above provisions until the Applicant furnishes the Electric Department/Department of Public Utilities with a set of plans for the subdivision and the necessary permanent easements or rights-of-access which bear no cost to said Department.

IV. WATER RULES AND REGULATIONS

(This Appendix is on file with the Town Clerk.)

V. SEWER REGULATIONS

(This Appendix is on file with the Town Clerk.)

VI. HEALTH REGULATIONS OF THE TOWN OF IPSWICH, MASSACHUSETTS:

(This Appendix is on file with the Town Clerk.)

VII. TREE PLANTING SPECIFICATIONS

- 1.** All street trees shall be planted within the right-of-way lines of a street except, when upon the written consent of the owner, trees may be planted upon private property up to twenty (20) feet from the right-of-way lines.
- 2.** If the planting of trees is required, the placement shall be based on drip line measurements at maturity (as determined by the Board) for each species chosen. At the discretion of the Board natural clusters of trees may replaced regular interval plantings.
- 3.** All trees to be planted shall have a minimum height of eight to ten (8-10) feet and shall be of at least two and one half (2-1/2) inches in caliper measured at a height of four (4) feet from the ground level.
- 4.** The specie and variety of the trees to be planted shall be selected by the Applicant and approved by the Planning Board. The Board strongly encourages the Applicant to select the street trees from “Recommended Street Trees for the Town of Ipswich”, as amended from time to time. Attention shall be given to the planting locations, species of tree and habit so that upon reaching mature size, the trees will not interfere with existing utility lines and poles or each other. In no event shall the Planning Board approve a variety or specie that is considered invasive as defined by “The Evaluation of Non-Native Plant Species for Invasiveness in Massachusetts”, as amended from time to time. Both of these documents are available from the Department of Planning & Development in Town Hall, or on the Town’s website.
- 5.** No evergreen trees, such as pine, fir, spruce or hemlock shall be planted as public shade trees along a way.
- 6.** No trees or shrubs shall be planted at any corner or intersection where they could become a traffic hazard by obstructing vision or preventing safe vehicular movement.
- 7.** All cut bankings that tend to wash or erode shall be planted with a low-growing evergreen shrub and shall be seeded with a deep-rooted perennial grass to prevent erosion.
- 8.** All trees shall be planted in one-half (1/2) of a cubic yard of loam, mulched with four (4) inches of chips and shall be properly wrapped and guyed in a manner to ensure their survival.(See Figure 6.)
- 9.** In a subdivision, the Applicant shall be liable for all plant materials as to their erectness and good health for one (1) year after its installation, as determined by the Planning Board and the Director of Public Works/Tree Warden.

VIII. RULES AND REGULATIONS GOVERNING STORMWATER MANAGEMENT

1. Purpose and Intent

The purpose and intent of storm water management shall include:

- a. for quantitative control of storm water runoff, consisting of a system of native species vegetation and structural measures that control the increased volume and rate of surface runoff caused by man-made changes to the land; and
- b. for qualitative control of storm water runoff, consisting of a system of native species vegetation, structural or other measures that reduce or eliminate pollutants that might otherwise be carried off by surface runoff.

2. Application

The Applicant shall follow all regulations and policies for proper storm water management for the following activities:

- a. all new subdivisions
- b. all new multi-family developments
- c. all new site plan review applications

3. Submission Requirements

The Applicant shall be responsible for providing applicable information in compliance with these Rules and Regulations. Information to be provided shall include:

- a. All storm drainage information in accordance with 6.15 of the Rules and Regulations Governing the Subdivision of Land in Ipswich, Massachusetts and with the Ipswich Stormwater Management General Bylaw.
- b. Detailed description of the existing environmental and hydrological conditions of the site and of the receiving waters and wetlands. This information shall include, but not be limited to, the following:
 - 1) the direction, flow rate, and volume of surface runoff under existing conditions and, to the extent practicable, pre-development conditions;
 - 2) the location of areas of the site where storm water collects or percolates into the ground;
 - 3) a description of all surface watercourses, water bodies, and wetlands on or entering the site, or adjacent to the site, or into which storm water flows. Information regarding their water quality and current water quality classification shall be included;
 - 4) depth of seasonal groundwater levels, approximate direction and rate of flow, seasonal fluctuations;
 - 5) location of 100 year flood zones/plains;
 - 6) principal vegetation types;

- 7) topography described in full contour detail, at two (2) foot intervals, with areas of steep slope (over 10%) highlighted;
 - 8) soils, with an accompanying analysis of the best use potential of the soils and the hydrological group classification: the soil map and use potentials analysis prepared by the U.S. Soil Conservation Service shall be used as the basis for this analysis.
- c. Proposed alterations of the site shall be described in detail including, but not limited to, the following:
- 1) changes in topography, described in full contour, with details at two (2) foot intervals;
 - 2) areas where vegetation will be cleared or otherwise altered;
 - 3) areas that will be covered with an impervious surface and a description of the surfacing material(s).
- d. The proposed development layout shall be described in detail including, but not limited to, the following:
- 1) the site arrangement including the location of structures, roadways, parking areas, sewage disposal facilities and undisturbed lands;
 - 2) all drainage systems to be provided, including the location and design of the roadway and individual lot subdrains and full drainage calculations and supporting documentation.
- e. Predicted impacts of the proposed development on existing conditions shall be described in detail and shall include:
- 1) changes in water quality including, but not limited to, ground and surface water;
 - 2) changes in groundwater levels;
 - 3) changes in the incidence and duration of flooding on the site and upstream and downstream from it;
 - 4) adverse impacts on wetlands;
 - 5) impacts on vegetation.
- f. All components of the drainage system and any measures for the detention, retention or infiltration of water and/or for the protection of water quality shall be described in detail, including the following:
- 1) the channel, direction, volume and rate of flow and the quality of stormwater that will be conveyed from the site, with a comparison to existing conditions and to the extent practicable, pre-development conditions;
 - 2) detention and retention areas and devices, including:
 - a) plans for discharge of contained waters, including the time to draw down from full condition, and description of outlet structures;
 - b) maintenance plans: including maintenance schedule, an outline of responsible parties and owners, and all pertinent information and/or agreements to be executed to insure proper maintenance;

- c) an evaluation of the pollutant removal efficiency of such devices under the existing conditions;
 - 3) areas of the site to be used or reserved for percolation including the depth to seasonal groundwater table, and prediction of the impact on groundwater quality;
 - 4) areas to be utilized in overland flow, the hydrological soil type of such areas, vegetation present, and the soil susceptibility to erosion;
 - 5) any other information which the Applicant or the Planning Board believes is necessary for an evaluation of the development.
- g. Nitrogen and/or Phosphorus Loading Report:

For review of water quality impact, an Applicant shall submit calculations of anticipated nitrogen and/or phosphorus contribution from roads, lawns and septic systems. The Applicant must determine the "carrying load" or ability to absorb nitrogen and phosphorus loading of all receiving water systems on site.

4. Performance Standards:

The Stormwater Management Report submitted must demonstrate that the proposed development or activity has been planned and designed and will be constructed and maintained to meet each of the following standards:

- a. ensure that after development that no detrimental effects shall be created or caused by the proposed development.
- b. maintain the natural hydrodynamic characteristics of the watershed.
- c. protect or improve the quality of surface and ground waters.
- d. protect, maintain, or improve water quality or existing water quality standards for all receiving waters, water courses and water bodies.
- e. protect and maintain groundwater levels.
- f. protect the beneficial functioning of wetlands as areas for natural storage of flood waters, the chemical reduction and assimilation of pollutants and wildlife and fisheries habitat.
- g. prevent increased flooding and damage that results from improper location, construction and design of structures.
- h. prevent reverse salt water intrusion.
- i. protect the natural fluctuating levels of salinity in estuarine areas.
- j. minimize alteration to flora and fauna and adverse impacts to fish and wildlife habitat.
- k. otherwise further the objectives of the Stormwater Management Policies and Regulations.

5. Design Standards

The design, construction and maintenance of stormwater systems shall be consistent with the following:

- a. Discharging runoff directly into rivers, streams, watercourses, or enlarging the volume, rate or further degrading the quality of existing discharges/runoff is prohibited. Runoff shall be routed through vegetated swales, using native species and other structural and nonstructural systems

designed to increase time of concentration, decrease velocity, increase infiltration, allow suspended solids to settle and remove pollutants. Such systems will utilize overland flow and re-infiltration as priority techniques for the treatment of run-off;

- b. Retention and detention ponds, and methods of overland flow may be used to retain, detain and treat the increased and accelerated runoff which the development generates;
- c. There shall be a minimum of two (2') feet of naturally occurring soils between the detention basin bottom and the maximum annual ground water table;
- d. Water shall be released from detention ponds at a rate and in a manner approximating the natural conditions which would have occurred before development;
- e. Intermittent water courses such as swales shall be vegetated;
- f. The first one (1") inch of runoff from impervious surfaces, such as rooftops and paved surfaces, shall be treated in the site of the development;
- g. Runoff from parking lots and streets shall be treated so as to remove oil and sediments. Catch basins shall be provided with hoods; in the alternative, drainage outfalls shall discharge to low velocity "vegetated treatment" swales;
- h. The use of drainage facilities and vegetated buffer zones as open space and conservation areas shall be encouraged;
- i. Neighboring properties shall not be effected by flooding from excessive runoff.

6. Detention/Retention Basins:

- a. **Performance Standards:** The performance standards shall include the following:
 - 1) Development shall be oriented to the site so that cutting and stripping of vegetation and grading are minimized;
 - 2) Temporary seeding, mulching or other suitable stabilization methods shall be used to protect exposed areas during construction; as feasible, natural vegetation shall be retained and protected; during the months of October through March, when seeding and sodding may be impractical, an anchored mulch shall be applied as approved by the Board or by the Board's Subdivision Inspector; diversions and/or prepared outlets may be required in critical areas during construction;
 - 3) Soil and other materials shall not be stockpiled or redistributed, either temporarily or permanently, in locations or in such a manner as would cause suffocation of tree root systems;
 - 4) Erosion and sediment controls shall be coordinated with the sequence of grading, development and construction operations; control measures shall be in effect prior to commencement of each increment/phase of the process;

- 5) No area shall be cleared larger than that portion on which construction can be completed rapidly; large areas shall not be left bare and exposed for long periods of time;
- 6) Grading shall be kept to a minimum; tree removal shall be minimized;
- 7) Runoff shall be controlled and conveyed into storm drains and other outlets so it will not erode the land or cause off-site damage; sediment in runoff shall be trapped by using staked hay bales, silt fencing, or sedimentation traps;
- 8) Sediment basins shall be constructed where necessary to detain runoff and to trap sediment during construction;
- 9) Permanent vegetation and erosion control structures, as necessary, shall be installed preferably immediately after construction is completed but otherwise no later than the first full spring season immediately thereafter; they shall comply with the erosion and sedimentation vegetative practices recommended by the U.S. Soil Conservation Service;
- 10) Temporary ground cover or erosion/sedimentation controls shall be established on any unbuilt lots as required by the Board;
- 11) Native species shall be used for re-vegetation;
- 12) All graded areas beyond the Street Right-of-Way shall be covered with four (4") inches of topsoil and planted with a native species of vegetative cover, sufficient to prevent erosion;
- 13) Topsoil shall be stripped from disturbed areas, stockpiled in approved areas and stabilized with temporary vegetative cover if it is to be left for more than thirty (30) calendar days; perimeter sediment controls shall be installed around each area of stockpiled topsoil.
- 14) Detention/retention basins shall be screened with native, non-invasive trees and/or shrubs in order to minimize their visual impact from abutting properties and rights-of-way. Planting shall not impede regular maintenance activities.
- 15) Basin bottoms shall be constructed of natural material, preferably planted.

b. **Design Standards:**

- 1) Soil erosion control structures shall not be located in a front yard or side yard bordering a street;
- 2) Structures should be designed to preclude the necessity for perimeter security fencing;
- 3) The slope of any bank should not be greater than six (6) to one (1);
- 4) The greatest depth of water in a detention pond during a 100-year design storm shall not exceed two (2) feet; release rates shall comply with the provisions of Section 6.14.3 of the Rules and Regulations Governing the Subdivision of Land in Ipswich, Mass.; and

- 5) Groundwater recharge systems shall be utilized whenever feasible.

c. **Maintenance Standards - Prior to Acceptance**

- 1) As required by the Board, all control structures and associated systems shall be inspected for functionality and damage at least twice each year by the Board's Subdivision Inspector or an agent of the Town. The costs for such inspection shall be borne by the Applicant;
- 2) The Applicant shall be responsible for cleaning sediment and debris from catch basins at least annually; additional cleaning may be required by the Board;
- 3) The Applicant shall be responsible for removal of trees, bushes and/or other growth in the sedimentation basins, and for keeping live native species vegetative cover on the banks of such basins. Replacements for dead vegetative cover and re-seeding shall be completed promptly;
- 4) The Applicant shall repair or replace any damaged system to the satisfaction of the Board; the Applicant shall be responsible for any damage due to flaws in design or construction; and
- 5) The Applicant shall be responsible for cosmetic maintenance such as periodic mowing of grassed areas in sedimentation basins.

d. **Acceptance of the System**

- 1) Prior to any acceptance by the Town or by another entity, the control structures shall be subject to a final inspection by the Board's Subdivision Inspector and/or the Town's agent; the cost of inspection shall be borne by the Applicant; the inspection shall assure compliance with the following elements:
 - a) the system has been constructed in accordance with the plans approved by the Board;
 - b) all construction debris has been removed;
 - c) sediment has been flushed from pipes by a pressure wash;
 - d) catch basins and detention/retention structures are free of sediment; and
 - e) ground cover is fully established on banks.
- 2) No release of security for erosion and sedimentation control measures shall be granted until the Board is satisfied that the systems comply with the plans;
- 3) If as a result of the final inspection the Applicant is found to be in non-compliance with the plans, the Board may use the security to assure that the control system(s) is/are brought into conformance and is/are cleaned and maintained properly in accordance with the plans.

7. General Requirements

The Applicant shall secure future maintenance of the stormwater system by a proper bond or by a deposit of money of an amount as determined by the Board. Such security must be established to the satisfaction of the Board prior to release of any lots within the development and prior to the Board's sign-off of building permit(s).

In the event that the Applicant does not follow maintenance procedures and programs as approved by the Board, the Board shall have the authority to expend any portion of said security to provide such maintenance.

In the event that the stormwater system is accepted by the Town or any private association and/or trust, and, therefore the Town or a private association and/or trust assumes the ownership of said system, any remaining portion of this security may be refunded to the applicant or the homeowner's association as deemed appropriate by the Board.

IX. RULES AND REGULATIONS GOVERNING SEDIMENTATION AND EROSION CONTROL

1. Purpose and Intent

These regulations are to prevent adverse environmental impacts due to erosion, soil loss and sedimentation, including secondary and cumulative, caused by alterations to vegetation and soil surfaces during land development.

Sedimentation and erosion control structures are required to prevent sediment from clogging stormwater/drainage systems and road ditches. These structures also prevent sediment from entering ponds, streams, reservoirs, watercourses, wetlands and other critical resources within which it is a pollutant. In many cases, these structures detain stormwater runoff, thus preventing flooding of downstream areas.

Responsibility for periodic inspection, maintenance and repair of these control structures and systems to insure they continue to operate consistent with approved design lies solely with the Applicant, until such time as the street(s) and all other improvements in the subdivision are accepted by the Town.

2. General Requirements

- a. If the Applicant's proposed development creates six (6) or more house lots or otherwise requires submission of an Environmental and Community Impact Analysis pursuant to Section 5.4 of the Rules and Regulations Governing the Subdivision of Land in Ipswich, Massachusetts, the Applicant shall submit a separate plan therewith, which plan shall contain the elements in Section B. and which complies with all other provisions of this Appendix. All subdivision applications must comply with the Performance, Design, and Maintenance Standards in paragraph B. below, the Massachusetts Department of Environmental Protection's (DEP) Stormwater Management Policy Handbook, and the DEP's "Massachusetts Erosion and Sediment Control Guidelines for Urban and Suburban Areas: A Guide for Planners, Designers, and Municipal Officials" and be subject to final inspection before acceptance, as specified herein. The DEP manuals are available for review at the Town of Ipswich's Planning and Development Office as well as online.
- b. The Applicant shall submit an erosion/sedimentation control plan which shall include the following:
 - 1) existing and proposed grades, elevations, and contours;
 - 2) location and description of existing natural and manmade features on the property and within one hundred (100) feet of the property;
 - 3) perimeters of the areas affected and the types of controls proposed within each affected area;
 - 4) a soils survey or soils engineering report;
 - 5) a schedule of the sequence of installation or application of planned erosion controls, both temporary and permanent, relative to the proposed improvements as the project progresses;
 - 6) a slope stabilization and re-vegetation plan which shall include: a description of the existing vegetation; the vegetation to be removed and the method of disposal; the native species vegetation to be planted; and the slope stabilization measures which are to be installed. The plan also shall assess the environmental effects of such operations on slope stability, soil erosion and water quality;
 - 7) a maintenance schedule for erosion/sedimentation controls until street construction is completed and until the street(s) is accepted by the Town or other entity;

- 8) details and, if applicable, cross sections of erosion/sedimentation control devices;
- 9) perimeter delineation of any drainage ways, steep slopes and proposed stockpiles of topsoil, to be restored and/or seeded;
- 10) a note on the plan stating that temporary ground cover and/or erosion/siltation control shall be established on any unbuilt lots as required by the Board;
- 11) a note on the plan that the erosion/sedimentation control plan and associated information is referenced on the definitive subdivision plan.

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These Rules and Regulation Governing the Subdivision of Land in Ipswich, Massachusetts were adopted by the Ipswich Planning Board on November 4, 1993, and further amended by the Planning Board on May 18, 1995, February 18, 1999, February 13, 2003, and July 2, 2013.