

Chapter 237

SUBDIVISION REGULATIONS
for the
TOWN OF PETERBOROUGH

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ARTICLE I – Authority and Purpose

§237-1. Authority

Pursuant to the authority vested in the Peterborough Planning Board by the voters of the Town of Peterborough on March 11, 1958 and March 10, 1970 and in accordance with the provisions of RSA 674:35 of the New Hampshire Revised Statutes Annotated, and as amended, the Peterborough Planning Board adopts the following regulations governing the subdivision of land in the Town of Peterborough, New Hampshire, hereinafter known as the Peterborough Subdivision Regulations.

§237-2. Purpose

The purpose of these regulations is to provide for the orderly present and future development of the Town by promoting the public health, safety, convenience and welfare of its residents. These regulations apply to Planning Board review and approval or disapproval of all subdivisions as defined by RSA 672:14 and minor lot line adjustments or boundary agreements. They do not apply to voluntary mergers as defined by RSA 674:39-a, or boundary line agreements as defined in Article II.

ARTICLE II – Definitions

For the purposes of administration and enforcement, these rules shall apply:

- The word “shall” is always mandatory and not discretionary; the word “may” is permissive.
- Words used in the present tense shall include the future, and words used in the singular shall include the plural, unless the context clearly indicates the contrary.
- The word “includes” shall not limit a term to the specific example, but is intended to extend its meaning to all other instances of like kind.

- (1) **Abutter:** Means any person whose property is located in New Hampshire and adjoins or is directly across the street or stream from the land under consideration by the local land use board. For purposes of receiving testimony only, and not for purpose of notification, the term "abutter" shall include any person who is able to demonstrate that his land will be directly affected by the proposal under consideration. For purposes of receipt of notification by a municipality of a local land use board hearing, in the case of an abutting property being under a condominium or other collective form of ownership, the term abutter means the officers of the collective or association, as defined in RSA 356-B: 3, XXIII. For purposes of receipt of notification by a municipality of a local land use board hearing, in the case of an abutting property being under a manufactured housing park form of ownership as defined in RSA 205-A: 1, II, the term “abutter” includes the manufactured housing park owner and the tenants who own manufactured housing which adjoins or is directly across the street or stream from the land under consideration by the local land use board.
- (2) **Applicant:** Means the owner of record of the land that is the subject of the application, or his\her designated agent.
- (3) **Application, Complete:** Means a final plat and all accompanying materials and fees as required by these regulations.

- (4) **Approval:** Means recognition by the Planning Board, certified by written endorsement on the plat, that the plat meets the requirements of these Regulations and in the judgment of the Board satisfies all criteria of good planning and design.
- (5) **Approval, Conditional:** Means recognition by the Planning Board, certified by written endorsement on the plat, that the plat is not finally approved or ready for filing with the Registry of Deeds until such time as certain conditions, set forth by the Board, are met. This is not to be confused with a plat that has been approved subject to certain conditions that would be met as part of the implementation of the plan.
- (6) **Board:** Means the Planning Board of the Town of Peterborough, New Hampshire
- (7) **Boundary Line Adjustment:** Means adjustments to the boundary between adjoining properties, where no new lots are created.
- (8) **Boundary Line Agreement:** Means the agreement between two adjacent property owners which sets an unknown or poorly defined lot line between the two properties. It is not a subdivision of land (and does not require Planning Board approval), but the agreement is filed with the Hillsborough County Registry of Deeds (see RSA 472). [Added 4-12-93]
- (9) **Building Envelope:** Means the area in which buildings will be built, and shall include the area necessary for the installation of the septic system as well as the area required for a replacement septic system.
- (10) **Certified Soil Scientist:** Means a person qualified in soil classification and mapping, who is certified by the State of New Hampshire.
- (11) **Cul-de-sac:** Means a local street having only one outlet.
- (12) **Development:** Means any construction or grading activities on real estate for other than agricultural and silvicultural (tree care and harvesting) practices.
- (13) **Easement:** Means the authorization by a property owner for the use by another, and for a specific purpose, of any designated part of his/her property.
- (14) **Frontage:** Means that side of a lot abutting a street or body of water and ordinarily regarded as the front of the lot.
- (15) **Lot:** Means land occupied or designed to be occupied by a building or use and the accessory building or uses incident thereto.
- (16) **Lot of Record:** Means a parcel, the plat or description of which has been recorded at the county register of deeds.
- (17) **Performance Guarantee:** Any form of security, including cash deposit, security bond, irrevocable letter of credit, collateral, property or instrument of credit in an amount and form satisfactory to the Planning Board or Board of Selectmen.
- (18) **Plat:** Means a map of a specific land area whose boundaries are defined by metes and bounds. A plat may show: (1) newly-created parcels, streets, alleys, and easements as in a subdivision; or (2)

a lot-line adjustment or site plan depicting existing parcels defined by legal descriptions contained in deeds, grants, or other legal documents.

- (19) **Public Hearing:** Means a meeting, notice of which must be given per RSA 675:7 and 676:4,I (d), at which the public is allowed to offer testimony.
- (20) **Public Meeting:** Means the regular business meeting of the Planning Board as required per RSA 673:10. Notice must be posted at least 24 hours in advance and the meeting must be open to the public, although participation by the public is at the discretion of the Board.
- (21) **Right-of-Way:** Means all town, state, and federal highways and the land on either side of the same as covered by statutes regarding the width of the right-of-way, and private roads as approved by the Planning Board pursuant to the Town Subdivision Regulations.
- (22) **Setback:** Means an undeveloped space on the same lot, extending from the property line into the lot, which shall remain open and unoccupied.
- (23) **Sewage Disposal System (Individual):** Means any onsite sewage disposal or treatment system that receives either sewage or other wastes, or both. For the purposes of this regulation, this means all components of the system, including the leachfield.
- (24) **Street:** Means a publicly approved road maintained for vehicular travel, or a road that appears on a subdivision plat approved by the Planning Board. The word “street” shall include the entire right-of-way.
- (25) **Subdivision:** Means the division of a lot, tract, or parcel of land into two (2) or more lots, plats, sites, or other divisions of land for the purpose, whether immediate or future, of sale, rent, lease, condominium conveyance or building development. The division of a parcel of land held in common and subsequently divided into parts among several owners shall be deemed a subdivision.
- (26) **Subdivision, Major:** Means a subdivision of four (4) or more lots, or one which involves the creation of new streets and/or utilities, regardless of the number of lots.
- (27) **Subdivision, Minor:** Means a subdivision of land into three (3) lots or fewer lots for building development purposes, with no potential for resubdivision on an existing street, and which does not involve the creation of new streets, utilities, or municipal improvements.
- (28) **Subdivision, Technical:** Means a subdivision of land into two lots or sites for the purpose of conveying one such lot or site directly to an abutting landowner. The parcel to be conveyed does not constitute a separate building lot; however, said parcel may be used for building development in conjunction with contiguous land owned by the abutter.
- (29) **Wetland Scientist:** A person qualified in wetland classification that is certified by the State of New Hampshire.

ARTICLE III – Subdivision Review Procedures

§237-3. Preapplication Review

Prior to filing a formal application, an applicant may be required to come before the Board for a review of the proposal. There are two options for such a preapplication review, described below. In no case is either the applicant or the Board bound by any discussion, and any statements made by Board members shall not be the basis for disqualifying said members or invalidating any action eventually taken on the application.

(A) Preliminary Conceptual Consultation

Preliminary Conceptual Consultation is a level of Preapplication Review that is intended to be an informal meeting with the Board to review and discuss a proposal in conceptual form. Such a discussion is directed toward:

- (1) reviewing the basic concepts of the proposal;
- (2) reviewing the proposal with regard to the master plan and zoning ordinance;
- (3) explaining the state and local regulations that may apply to the proposal; and
- (4) determination of the proposal as a major, minor, or technical subdivision, and of the submission items that would be required.

Pursuant to RSA 674:35, the Planning Board is authorized to require preliminary review of subdivisions. The Board may elect to follow this procedure for only those proposals that are potentially of a scope or scale that the Board deems it productive to inform the public prior to a formal application. In such cases, notice to the public and the abutters will be required. The types of projects that might be considered appropriate for mandatory preliminary review include, but are limited to:

- subdivisions of 10 lots or more;
- any open space residential development;
- proposals that involve significant amounts of wetland, shoreland and/or floodplain;

The applicant may use a general map sufficient to explain the concept; such map, however, shall not include any specific design, engineering or surveying information.

(B) Design Review Phase

Prior to submission of an application, an applicant may request to meet with the Board or its designee for non-binding discussions beyond the conceptual and general stage, involving more specific design and engineering details of the potential application. The design review phase may proceed only after proper notification, as set forth in §237-10.

§237-4. Submission of Application

- (A) A completed application shall be filed with the Office of Community Development according to the schedule posted in that office (generally 18 days prior to the regular scheduled meeting). A completed application shall consist of all data required in Article VI of these regulations.
- (B) At the next meeting for which notice can be posted – or 30 days from the date of delivery – the Board will determine whether the application is complete. If the application is incomplete, the applicant will need to resubmit under a new notification procedure.

- (C) Acceptance of an application shall only occur at a meeting of the Planning Board after due notification has been given according to §237-10. Acceptance will be by affirmative vote of a majority of the Board members present.

§237-5. Board Action on Completed Application

- (A) The Board shall begin consideration of the Completed Application upon acceptance. The Board shall act to approve, conditionally approve, or disapprove the Completed Application within 65 days of acceptance.
- (B) The Board may apply to the Selectmen for an extension not to exceed an additional 90 days before acting to approve, conditionally approve or disapprove an application. An applicant may waive the requirement for Board action within the time periods specified in these regulations and consent to such extension as may be mutually agreeable.
- (C) Approval of the application shall be certified by written endorsement on the Plat and signed and dated by the Chairman of the Board. If any application is disapproved, the grounds for such disapproval shall be adequately stated in the records of the Planning Board and in written notice given to the Applicant within 144 hours of the decision.
- (D) An approved plan shall be recorded by the Planning Board with the Hillsborough County Register of Deeds of within 90 days of approval. Any subdivision plan not filed within this timeframe shall be considered void.
- (E) Within 30 days of approval, the applicant shall provide to the Office of Community Development the final plat in electronic format. Plans shall be submitted in DWG and PDF format. PDF files should have a resolution comparable to 300 dpi. Drawing files must be referenced to NHSPCS/NAD83 and NVD88. CAD files must be compatible with the Town's GIS software.

§237-6. Failure of the Planning Board to Act

- (A) In the event that the Planning Board does not act on an accepted application within the prescribed time period, the applicant may petition the Selectmen to issue an order directing the Planning Board to act within 30 days.
- (B) If the Planning Board fails to act within 40 days of receiving this directive from the Selectmen, the Selectmen must approve the application unless they find in writing that the plan does not comply with a local regulation. In the event the Selectmen fail to act, the applicant may petition superior court to approve the plan.

§237-7. Conditional Approval

The Board may grant conditional approval of an application, but the plat will not be signed or recorded until all of the conditions have been met. If the applicant has not complied with the conditions of approval within one (1) year, the approval is considered null and void and the applicant must submit a new subdivision application. A further public hearing is not required when such conditions:

- (1) are administrative in nature;
- (2) involve no discretionary judgment on the part of the Board;
- (3) involve permits and approvals granted by other boards or agencies, unless subsequent changes to the plan required by such approvals would constitute grounds for a new application process.

§237-8. Expedited Review

- (A) The Planning Board may allow for an expedited review of applications for boundary line adjustments, technical subdivisions or minor subdivisions, as defined in Article II of these regulations.
- (B) The application may be submitted, accepted as complete and voted on at the same meeting, provided the public notice so indicates.
- (C) The Board may waive certain plat requirements for boundary line adjustments, minor and technical subdivisions.

§237-9. Public Hearing

Prior to the approval of an application, a public hearing shall be held. Public hearings may be waived for boundary line adjustments; minor or technical subdivisions do not require a public hearing unless requested by either the Planning Board, the applicant or any abutters, except that public notice shall be given prior to approval of the application.

§237-10. Notification

- (A) Notice of a Preliminary Review shall consist of posting in the local paper of record, and notification sent to all abutters.
- (B) Notice of a Preliminary Review, Design Review, submission of an application, or a Public Hearing shall be given to the abutters, the applicant, any holders of conservation, preservation or agricultural preservation restrictions, and every engineer, architect, land surveyor or soil scientist whose professional seal appears on any plat.
- (C) Notice shall be by certified mail, except notices for Preliminary Review, mailed at least ten (10) days prior to the submission. The public will be given notice at the same time, by posting at the Office of Community Development, in the lobby of the Town House, the Peterborough Library, and publication in the local paper of record.
- (D) The notice shall give the date, time, and place of the Planning Board meeting at which the application will be formally submitted to the Board, shall include a general description of the proposal to be considered, and shall identify the applicant and the location of the proposal.
- (E) If the notice for the public hearing was included in the notice of submission or any prior notice, additional notice of the public hearing is not required. Additional notice is not required for an adjourned session provided that the date, time, and place of the adjourned session is made known at the prior meeting.

§237-11. Fees

- (A) The applicant shall be responsible for all fees incurred by the processing of applications (see Chapter 202, §202-6 & 7). Failure to pay such costs shall constitute valid grounds for the Board to not accept the application as complete.

- (B) It shall be the responsibility of the applicant to pay reasonable fees for special investigative studies, environmental assessments, legal review of documents, administrative expenses and other matters which may be required to make an informed decision on a particular application.

§237-12. Site Inspections

- (A) Whenever the Board deems it necessary for the consideration of an application to visit the site, the Board shall arrange a time that is reasonable for the applicant.
- (B) Such a site inspection shall be posted as a meeting of the Board pursuant to the Right-to-Know provisions of RSA 91-A, and minutes shall be kept.
- (C) All applications are conditioned upon the owner allowing access to the property, to the extent reasonable and necessary to properly review the application. Denial of access automatically terminates any further consideration of the proposal.

§237-13. Concurrent and Joint Hearings

The applicant or the Planning Board may request a joint hearing with one or more land use boards in conjunction with a subdivision hearing if approval from all boards is required for the same project.

ARTICLE IV – Submission Requirements

§237-14. Completed Application

A completed application shall consist of the following items unless written request for waiver(s) is granted by the Board:

- (A) A completed application form, accompanied by:
 - (1) names and addresses of all abutters, taken from the town records not more than five (5) days before the day of filing;
 - (2) a letter of authorization from the owner, if the applicant is not the owner.
 - (3) names and addresses of all persons whose name and seal appears on the plat;
 - (4) names and addresses of all holders of conservation, preservation or agricultural preservation restrictions;
 - (5) payment to cover filing and notification fees;
 - (6) one mylar and four paper copies of the Plat, prepared according to the standards of the NH Land Surveyors Association and the County Register of Deeds, as follows:
 - (a) Plats shall be at any scale between 1"= 20' and 1"=400'.
 - (b) The outside dimensions of the plat shall be 8 ½" X 11", 11" X 17", 17" X 22", or 22" X 34", or as otherwise specified by the County Registry of Deeds.
 - (c) The material composition shall be suitable for electronic scanning and archiving by the Registers of Deeds.
 - (d) All text and dimensions shall be legible for reproduction, and the text sizes shall be no smaller than .08 of an inch for mechanical drafting and 1/8 inch for hand drafting.
 - (e) All plats shall have a minimum ½" margin on all sides.
 - (f) All certifications, seals, and approval blocks shall have original dates and signatures in a legible, permanent black ink.

- (g) All title blocks should be located in the lower right hand corner, and shall indicate:
 - (i) type of survey
 - (ii) owner of record
 - (iii) title of plan
 - (iv) name of the town(s)
 - (v) tax map and lot number
 - (vi) plat and revision dates;

- (B) The plat shall show the following information:
 - (1) Proposed subdivision name or identifying title; name and address of the owner of record; parcel identification number.
 - (2) North arrow, scale – written and graphic, date of the plan; name, license number and seal of the surveyor or other person whose seal appears on the plan.
 - (3) Signature block for Planning Board endorsement.
 - (4) Locus plan showing general location of the total tract within the town and the zoning district(s).
 - (5) Bearings and horizontal distances on all pertinent property lines; curved boundary lines showing radius, delta, and length.
 - (6) All monuments set or found.
 - (7) Names of all abutting subdivisions, streets, easements, building lines, parks and public places, and similar facts regarding abutting properties. Enough information should be provided so that the Board understands what the abutting land uses are, road conditions leading to and from the site, general topography, etc.
 - (8) Lot areas in square feet and acres; lots numbered according to the Town tax map numbering system.
 - (9) Location and amount of frontage on all rights-of-way.
 - (10) Location of building setback lines.
 - (11) Location of existing and proposed buildings and other structures.
 - (12) Location of all parcels of land proposed to be dedicated to public use.
 - (13) Location and description of any existing or proposed easements or covenants.
 - (14) Existing and proposed water mains, culverts, drains, sewers; proposed connections or alternative means of providing water supply and disposal of sewage and surface drainage.
 - (15) Existing and proposed streets with names, classification, travel surface widths, right-of-way widths. (See Appendix A for street standards.)
 - (16) Final road profiles, center line stationing and cross sections.
 - (17) Location and width of existing and proposed driveways.
 - (18) Water courses, ponds, standing water, rock ledges, stone walls; existing and proposed foliage lines; open space to be preserved; and any other natural or man-made cultural or historic features.
 - (19) Existing and proposed topographic contours based upon the USGS topographical data, with spot elevations where necessary.
 - (20) Soil and wetland delineation.
 - (21) Location of percolation tests and test results; outline of 4,000 square-foot septic area with any applicable setback lines.
 - (22) Location of existing and proposed well, with 75-foot well radius shown.
 - (23) Base flood elevations and flood hazard areas, based on current FEMA maps.

(C) Other Information (as applicable)

- (1) State subdivision approval for septic systems; septic design approval; or certification by septic designer of adequacy of existing system.
- (2) Alteration of Terrain Permit from NH Department of Environmental Services.
- (3) Plan for Stormwater Management and Erosion Control (See Appendix B).
- (4) EPA Phase II approval.
- (5) State/Town driveway permit.
- (6) Report from the Fire Chief, Police Chief, and/or Town Conservation Commission.
- (7) Approval for municipal water/sewer connections.
- (8) Any deed restrictions; and all deeds covering land to be used for public purposes, easements and rights-of-way over property to remain in private ownership, and rights of drainage across private property, submitted in a form satisfactory to the Board's counsel.
- (9) Any other state and/or federal permits.
- (10) Any additional reports or studies deemed necessary by the Board to make an informed decision, including but not limited to traffic, school, fiscal and environmental impact analyses. The Board reserves the right to request such information after an application has been accepted as complete, as well as before acceptance. Should the Board determine that some or all of the above-described information is to be required, the applicant will be notified in writing within ten (10) days of the meeting at which the determination was made.

ARTICLE V – General Requirements for the Subdivision of Land

§237-15. Character of Land for Subdivision

Land of such character that it cannot, in the judgment of the Board, be safely used for building development purposes because of exceptional danger to health or peril from fire, flood, poor drainage, excessive slope, or other hazardous conditions, shall not be platted for residential, commercial, or industrial subdivision, nor for such other uses as may increase danger to life or property, or aggravate the flood hazard.

§237-16. Premature Subdivision

The Board may provide against such scattered or premature subdivision of land as would involve danger or injury to health, safety, or prosperity by reason of the lack of water supply, sewage disposal, drainage, transportation, schools, fire protection, or other public services which necessitate the excessive expenditure of public funds for the supply of such services.

§237-17. Preservation of Existing Features

Wherever feasible, suitable steps shall be taken to preserve and protect significant existing features such as trees, scenic points, stone walls, rock outcroppings, water bodies, and historic landmarks. Where possible, the boundary line(s) should follow stone walls.

§237-18. Conservation Design

All subdivisions shall be designed to take into consideration important natural, historic, and cultural features (for example noteworthy trees or tree groups, unusual geological formations, stone walls, etc.).

To the greatest extent possible, the physical development shall be located on the lot so that such features will not be disturbed nor encroached upon.

ARTICLE VI – Subdivision Design Standards

§237-19. Lots

- (A) Areas set aside for parks and playgrounds to be dedicated or reserved for the common use of all property owners shall be of reasonable size and character for neighborhood playgrounds or other recreational uses.
- (B) Lots shall be laid out and graded to eliminate flood or stagnant water pools. No water shall be permitted to run across a street on the surface, but shall be directed into catch basins and pipes underground in a pipe of not less than 12 inches in diameter.
- (C) Within all newly-created lots it must be possible to place a square box whose sides are equal to the minimum lot width for the district.
- (D) All cut and filled slopes shall not be greater than 3:1 and shall be graded, loamed, seeded and mulched.
- (E) Lots shall be numbered to coincide with the existing Parcel Identification numbering system. New lots shall be given a parcel number; thus, Lot R008-034-000 would be subdivided into R008-034-001, R008-034-002, etc. In cases where a lot at one time contained a letter (i.e., R8-34A), the letter was changed to a numbering system (e.g., R008-034-100), and therefore parcel R008-034-100 would be subdivided into R008-034-101, R008-034-102, etc.

§237-20. Reserve Strips

Reserve strips of land that show an intent on the part of the subdivider to control access to land dedicated, or to be dedicated to, public use (such as a road) shall not be permitted.

§237-21. Fire Protection

Applications for new subdivisions shall be required to address water supply needs for fire protection. The Fire Chief or his/her designee shall review all proposals to determine whether or not water supply should be addressed for that particular proposal; if so, the following requirements apply:

- (A) The Fire Chief shall complete an inspection of the proposed site to evaluate the availability of existing water supply in the area.
- (B) The Fire Chief shall implement all applicable provisions of the National Fire Prevention Association's Standard on Water Supplies for Suburban and Rural Fire Fighting.
- (C) The Fire Chief shall determine the type, location and spacing of any water supply (such as fire ponds, cisterns, etc.)
- (D) Following the inspection and evaluation, the Fire Chief will submit his findings in writing to the Planning Board.

- (E) All proposed developments, whether including the provision of hydrants or other water supply facilities, shall be accessible to firefighting and other emergency equipment.

§237-22. *Septic Systems and Water Supply*

- (A) In areas not currently served by public sewer systems, it shall be the responsibility of the subdivider to prove that the area of each lot is adequate to permit the installation and operation of an individual septic system.
- (B) On new lots of less than five (5) acres, not less than two (2) test pits and at least one (1) percolation test shall be required within the 4,000 square-foot area designated for a leach field.
- (C) In subdividing parcels with existing dwellings, the subdivider must demonstrate to the satisfaction of the board that the existing septic system is in good working order and adequate for the existing structure.
- (D) All new wells shall have a radius of seventy-five (75) feet that is located entirely on its lot. When that cannot be accomplished, the protective radius shall be maximized to the extent practicable. The 75-foot radius may extend over the property line(s) with written consent of the abutter(s).

§237-23. *Utilities*

- (A) Whenever necessary and practicable, all subdivisions will be serviced by town water and town sewer. All necessary water and sewer lines shall be installed to the required specifications of the Water and Sewer Department and shall include service lines running from the water and sewer mains to the property line to service each lot.
- (B) All proposed utility easements shall be no less than ten (10) feet in width and shall have satisfactory access to existing or proposed public ways. Where practical, utilities should be placed underground.

§237-24. *Stormwater Management and Erosion Control*

1. A stormwater management and erosion control plan is required when any one of the following conditions are proposed:
 - i. A cumulative disturbed area exceeding one acre or more.
 - ii. Construction of a street or road.
 - iii. A subdivision of more than three building lots.
 - iv. The disturbance of critical areas (as defined in Appendix B).
2. Standard agricultural and silvicultural practices are exempt from this regulation.
3. All plans shall be developed in conformance with the Stormwater Management and Erosion Control Regulation contained in Appendix B and Stormwater Design Standards outlined in Appendix C.
4. It shall be the responsibility of all applicants to determine whether or not their project requires a National Pollutant Discharge Elimination System permit from the Environmental Protection Agency.

5. A disturbed area of less than one acre may not need a plan, but must comply with accepted Best Management Practices.

§237-25. Monumentation

- (A) Monuments constructed of concrete or stone at least 4 inches square and at least 30 inches long shall be set at all control corners.
- (B) If the subdivision involves the construction of a roadway, all monumentation shall be in place before 50% of the surety held for the construction is released. If no road construction is involved, all monumentation must be in place prior to the signing of the plat by the Board Chairman.
- (C) Pipes shall be set at all lot corners. Concrete or granite bounds shall be set at all points of curvature and all points of tangent for surveying purposes.
- (D) Monuments shall be tied in to a public street intersection, a U.S.G.S. benchmark, or other recognized existing monument.

§237-26. Surveys

- (A) All surveys shall be prepared according to the most up to date technical standards adopted by the NH Land Surveyors Association for Standard Property Surveys.
- (B) In the case of applications that involve large acreages from which one building lot is being subdivided, the Board may waive the requirement for a complete boundary survey, when it is apparent that the remaining lot can meet existing frontage requirements and is suitable for building.

§237-27. Streets

- (A) All new and reconstructed streets shall conform to the standards outlined in Appendix A.
- (B) A Drainage Easement to be recorded in the Registry of Deeds is required for all new roads. The Easement shall describes all culverts, drainage swales, detention basins, level spreaders, or other drainage facilities, and notes that these are conveyed to the Town along with the right of entry necessary to maintain them.

ARTICLE VII – Developments Having Regional Impact

- (A) All applications shall be reviewed for potential regional impacts. Upon such a finding, the Board shall furnish the regional planning commission(s) and the affected municipalities with copies of the minutes of the meeting at which the determination was made. The copies shall be sent by certified mail within 72 hours of the meeting.
- (B) At least 14 days prior to the scheduled public hearing, the Board shall notify by certified mail the regional planning commission(s) and the affected municipalities of the date, time and place of the hearing, and of their right to appear as abutters to offer testimony concerning the proposal.

ARTICLE VIII – Previously Approved Subdivisions

If any land shown on a subdivision plat has been part of any previous subdivision approved, constructed, or created by conveyance no more than three (3) years prior to the new proposal, any such previous subdivision will be treated as part of the new proposal for purposes of analyzing its effect and applying all review criteria.

ARTICLE IX – Special Flood Hazard Areas

- (A) The Planning Board shall review the proposed development to assure that all necessary permits have been received from those governmental agencies from which approval is required by Federal or State law, including Section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1334.
- (B) The Board shall require that all subdivision proposals and other proposed new developments greater than 50 lots or 5 acres, whichever is the lesser, include base flood elevation data. Sufficient evidence (construction drawings, grading and land treatment plans) shall be submitted so as to allow determination that:
 - (1) all such proposals are consistent with the need to minimize flood damage;
 - (2) all public utilities and facilities, such as sewer, gas, electrical, and water systems are located and constructed to minimize or eliminate flood damage; and
 - (3) adequate drainage is provided so as to reduce exposure to flood hazards.

ARTICLE X – Performance Guarantee

- (A) As a condition of approval, the Board shall require the posting of a security in an amount sufficient to defray the costs of construction of streets and public utilities. The amount of the security shall be based on an estimate of costs provided by the subdivider and, at the discretion of the Planning Board, reviewed by a licensed engineer. All costs of such review shall be paid by the applicant.
- (B) The security shall be approved by the Board and Town Counsel. The amount of the security shall include fees to cover the cost of periodic inspections.
- (C) Where electric lines or other utilities are to be installed by a corporation or public utility, a letter of intent shall be required stating that the work will be done in reasonable time and without expense to the Town.
- (D) Each approved plat shall contain a time limit for the completion of streets and public improvements. The performance guarantee shall be released in phases as portions of the secured improvements or installations are completed and approved by the Board or its designee, in accordance with the plan approved by the Board. In the case of road construction, the Board may require that the security stay in place until one full year has passed after completion of the road.

ARTICLE XI – Revocation of Planning Board Approval

An approved and recorded subdivision plat may be revoked by the Board in whole or in part, under the following circumstances: (1) at the request of or by agreement with the applicant; (2) when any requirement or condition of approval has been violated; (3) when the applicant has failed to perform any

condition of approval within the time specified or within four years; (4) when four years have elapsed without any vesting of rights and the plan no longer conforms to applicable regulations; or (5) when the applicant has failed to provide for the continuation of adequate security.

ARTICLE XII – Administration and Enforcement

- (A) These regulations shall be administered by the Planning Board. The enforcement of these regulations is vested with the Code Enforcement Officer.
- (B) No subdivision regulation or amendment, adopted under RSA 674:35-42, shall be legal or have any force and effect until copies of such are filed with the Town Clerk.
- (C) Waivers: The requirements of these regulations may be waived or modified when, in the opinion of the Board, strict conformity would pose an unnecessary hardship to the applicant and waiver would not be contrary to the spirit and intent of the regulations.
- (D) Penalties and Fines: Any violation of these regulations shall be subject to a civil fine as provided in RSA 676:16 and 676:17, as amended.

ARTICLE XIII - Appeals

Any person aggrieved by a decision of the Planning Board concerning a plat or subdivision may appeal said decision to the superior court pursuant to RSA 677:15, except when a disapproval by the Board is based upon non-compliance with the zoning ordinance, in which case an appeal can be taken to the Board of Adjustment.

ARTICLE XIV - Validity

If any section or part of a section or paragraph of these regulations shall be declared invalid or unconstitutional, it shall not be held to invalidate or impair the validity, force or effect of any other section or part of a section or paragraph of these regulations.

ARTICLE XV - Amendments

These regulations may be amended by a majority vote of the Planning Board after at least one (1) public hearing following the notification procedure outlined in Section IV, H & I.

ARTICLE XVI – Effective Date

These regulations shall take effect upon their adoption, and all regulations or parts of regulations, inconsistent therewith, are hereby repealed.

Adopted by the Planning Board on August 9, 2004
Amended November 14, 2005

APPENDICES

A. Street Standards

A-1. Street Construction Inspection Schedule

B. Stormwater Management and Erosion Control Regulation

C. Stormwater Design Standards

APPENDIX A:

STREET STANDARDS

A. PURPOSE AND INTENT

The purpose of these standards is to provide design and construction guidance for both existing and new streets, whether public or private. These standards reflect the most up-to-date technical standards available at this time, as well as design standards that are intended to provide not only safe and efficient streets, but also streets that contribute to a sense of neighborhood and livability.

B. GENERAL DESIGN STANDARDS

(1) **GENERAL STREET PLAN.** Approval of the general development street plan is required before construction of any phase of the plan. The street plan shall conform to References (1), (3), and (6) except as described at the end of this document. Any other variation shall be justified by engineering judgment and approved by the Board.

(2) **STREET LAYOUT.**

- **General.** All subdivisions shall have adequate provision for a safe and suitable access to a Class V or better road, or shall make provisions for the construction and dedication of a Class V or better road, to obtain safe and suitable access to the subdivision. Where the Board determines an existing access street to be substandard, it may require the upgrading of said street. Where traffic from a proposed subdivision will adversely impact a nearby street or intersection, provisions shall be made for the mitigation of said impacts. Proposed streets shall be of suitable location, width, grade, and improvement to accommodate prospective traffic and afford satisfactory access to police, fire fighting, emergency equipment, snow removal, sanitation, and road maintenance equipment. The arrangement and character of all streets in a subdivision shall conform to the Master Plan, and any and all other Town regulations, and shall compose a safe and convenient system in relation to other existing and planned streets, to topographic conditions, and to the proposed uses of land to be served by the street. Existing stonewalls shall be retained where possible or relocated and restored as required by the Board.
- **Access.** No subdivision shall be approved unless the property to be subdivided shall have frontage on from an existing Class V or better road, or a private road approved by the Planning Board. Each lot shall have a safe, independent and direct access. Where warranted, the Board may require that a driveway be shared by two (2) lots.
- **Arrangement.** Streets shall be laid out so as to intersect at right angles as nearly as possible. No street shall intersect another street at less than 60 degrees. Streets shall be continuous and in alignment with existing streets as much as possible. All streets shall be integrated with the existing and proposed street system where possible. The Applicant shall provide for a circular terminus at the end of all proposed roads for all phases and situations where through streets are not provided in the design. Where extension of existing roadways is proposed, the existing turnaround shall be removed in its entirety.

(3) **DEAD-END (CUL-DE-SAC) STREETS.** Except where near-future connections may be probable, dead-end streets shall be avoided whenever possible. Said streets shall not exceed 1,000 feet, and shall be provided with a turnaround having an inside road surface diameter of at least 90 feet. No other dead-end streets are permitted off of a dead-end street. Consideration shall always be given to

potential future connections and, when a street cannot feasibly be connected to an existing street, every attempt shall be made to provide a loop road rather than a dead-end road.

- (4) The widths of blocks shall not be less than 200 feet nor longer than 1,200 feet.
- (5) STREET NAMES. All streets shall be named to comply with the provisions of the “Enhanced 911 System” (RSA 106-H: 2 and RSA 106-H: 10), and shall be subject to the approval of the Fire Department.
- (6) STREET SIGNS. The location and type of sign to be installed shall be in accordance with the Manual on Uniform Traffic Control Devices (MUTCD).
- (7) STREET LIGHTS. Street lights shall be provided if required by the Board.
- (8) SAFETY. Safety is an important factor on all roadway improvements. On development roads it may not be possible or practical to obtain obstacle-free roadsides but every effort should be made to provide clear areas within the maintenance limits. The use of flatter slopes, the use of guardrail where necessary and the use of warnings signs are other safety factors to be considered. These areas are addressed in the publication Roadside Design Guide by AASHTO, 2002.

C. CONSTRUCTION STANDARDS

- (1) GUARDRAILS. Guardrails shall be used in locations where the New Hampshire Department of Transportation’s typical warrant for guardrail is met and/or as required by the Board. Guardrails shall be metal beam on wood posts, meeting State specifications. All guardrail installation must end safely using a MELT-type terminal unit. FLEAT or ELT-type units may be permitted by the Road Department.
- (2) RIGHT-OF-WAY. The minimum width of right-of-way shall be 50 feet. A greater width may be required to construct roads and ditches of the widths as described in the attached “Geometric Cross Section Design.” The Board may require greater right-of-way width where, in its judgment, the width is warranted due to present or future demands.
- (3) HIGHWAY RIGHT-OF-WAY BOUNDS. Highway bounds, of a type approved by the Board, shall be installed at each point of curvature (PC), point of tangent (PT), and changes in property at all intersection of streets, at all points of change in direction and at any other points the Board may deem necessary to designate the street lines.

- Type

- a. Stone or Concrete Bounds shall be of concrete or stone, not less than thirty-six (36) inches in length, not less than four (4) inches square or five (5) inches in diameter, and marked on top with a cross, brass plug, iron rod, or other durable material securely imbedded.
- b. Iron Pipes shall be at least thirty-six (36) inches long and seven-eighths (7/8) inch in diameter or square.

- Location

- a. Bound Locations. The external boundaries, rights-of-way lines, block corners, etc. of a subdivision shall be monumented on the field by bounds. These bounds shall be placed not more than 1,400 feet apart in any straight line and at all corners, at each end of all curves, at the

point a curve changes its radius, at all angle points in any line, said points to be not less than twenty (20) feet from the bank of any river or stream.

b. **Iron Pipe Locations.** The lines of all lots and any other points not monumented by bounds shall be monumented by iron pipes. Those iron pipes located along rivers and streams shall be located along the meander line.

- **Placement.** Bounds shall be set flush with finished grade. No permanent bounds shall be set until all construction that would disturb or destroy the monuments is completed. All bounds shall be set under the direction of a registered professional engineer or a registered land surveyor.

(4) **ALIGNMENT AND GRADES.** Table 1 provides minimums for curves, grades, and other geometry.

- **Exception.** Where, in the opinion of the Board, and where it has been demonstrated to the satisfaction of the Board by the Applicant that adherence to the maximum grade specified in Table 1 will cause local streets to be constructed in what the Board considers to be excessive cuts or fills, a waiver from the above specified maximum grade may be granted, provided:

a. The maximum allowable grade is eight percent (8%);

b. The maximum length of such grade, measured between vertical points of intersection (PVI) is five-hundred (500) feet; and

c. No other such slope greater than six percent (6%) occurs within five-hundred (500) feet measured along the centerline of the road from PVIs.

(5) **CLEARING AND GRUBBING.** The entire area of each right-of-way shall be cleared and grubbed of all stumps, brush, roots, boulders, like materials and all trees not intended for preservation, and shall not be used for fill or buried on site. Clearing and grubbing shall conform to Section 201 of the State Specifications.

(6) **SUBGRADE PREPARATION.** All loam, humus, soft clay, and other yielding material shall be removed from within the limits of the right-of-way to a depth of no less than twenty-four (24) inches below subgrade grade and/or to a depth that may be required by the Town Engineer. Ledge occurring anywhere in the full cross-section of the roadway must be cleared to a minimum depth of twenty-four (24) inches below the finished surface. Ledge occurring in pipe trenches must be cleared so as to have a gravel cushion of at least one (1) foot below and on both sides of the pipe.

(7) **STORM DRAINAGE.** The proposed development shall provide for proper surface drainage so that removal of surface waters will not adversely affect any neighboring properties or the public storm water system and will help reduce flooding, erosion, and sedimentation. The drainage system shall be designed so that the post-development runoff rate does not exceed the pre-development runoff rate. Surface water runoff shall be controlled and directed in a system of catch basins, pipes, swales, drainage ways, culverts, or channels to a natural watercourse or existing drainage facilities. Where a subdivision is traversed by a watercourse, drainage way, channel, or stream, there shall be provided an easement conforming to the lines of such watercourse. When a proposed drainage system will result in water encroaching on private property on land outside a subdivision, appropriate drainage easements must be secured and indicated on the plan. Where the Town Engineer determines that the existing downstream, offsite drainage system is substandard, the Planning Board may require the Applicant to improve the drainage system. Whenever required, longitudinal storm drainage systems will be provided. Construction shall be in accordance with State Spec Sections 603, 604 and 605, and State Plans Standards DR-1, DR-2, DR-3, DR-4, and DR-S.

- Design Computations. A drainage study and a stormwater pollution prevention plan shall be submitted for review and shall include:
 - a. A table of contents;
 - b. A narrative statement indicating how the Applicant has met the requirements describing the methodology and results of the analyses;
 - c. A summary table comparing existing and post-development rates of runoff for each individual drainage basin/watershed to abutting properties. All watersheds and drainage areas shall be consistently labeled in the tables, calculations and plans;
 - d. A summary table of each pipe indicating project location, drainage area, time of concentration, pipe size, type, length, slope, Manning's "n" value, peak discharge, depth of flow, and peak velocity for the design storm. The summary table shall also include hydraulic grade line (HGL) elevations at each location in closed conduit piping systems;
 - e. A summary table of each swale and channel indicating project location, cross-section/channel width, slope, Manning's "n" value, peak discharge, depth of flow, and peak velocity for the design storm;
 - f. The project location and watershed area shown on USGS quadrangle as a figure in the report;
 - g. A watershed area plan for the existing condition showing topography and existing ground elevations at two (2)-foot contour interval for the project site. The plan shall clearly show the boundary of each drainage area and subarea with identifying label and size indicated in acres.
 - h. A watershed area plan for post-development conditions showing existing and proposed topography at two (2) -foot contour intervals for the project site. The plan shall clearly show the boundary of each drainage area and subarea with identifying label and size indicated in acres. The post-development area shall be shown on a separate plan from the existing condition;
 - i. Runoff calculations shall be completed for the existing and post-development conditions using Soil Conservation Services (SCS) methods as described in the Stormwater Management and Erosion and Sediment Control Handbook for Urban and Developing Areas in New Hampshire for the appropriate design storms as required by the regulations;
 - j. Flood routing calculations shall be provided for the design of each detention pond using acceptable methods such as Hydro Cad TR20 Method, or as may be approved by the Town Engineer. In addition to the design storm, a 50-year storm analysis shall be conducted to establish the fifty (50) - year elevation at the detention basin. A minimum of twelve (12) inches of free board shall be provided above the fifty (50)-year storm to the minimum elevation of embankment at the detention basin;
 - k. Water quality treatment facilities shall be designed to New Hampshire Department of Environmental Services standards and are in addition to the requirements if these regulations;
 - l. Riprap design calculations shall be provided to the requirements of the Stormwater Management and Erosion and Sediment Control Handbook for Urban and Developing Areas in New Hampshire for each pipe outfall location and where necessary for open channels and swales; and

- m. The report shall be stamped by a professional engineer licensed in the State of New Hampshire.
- Hydraulic Grade Line (HGL).
 - a. Closed Conduit: Closed conduit systems shall be designed to convey the appropriate design storm required by the regulations under gravity flow conditions with no more than full flow pipe conditions;
 - b. Open Channels and Swales: For open channels and swales, the HGL shall be shown for the appropriate design storm required by the regulations; and
 - c. Detention Basins/Ponds: The HGL shall be shown for the fifty (50)-year flood event.
- Flow Computations. Flow computations shall be in accordance with the following:
 - a. Manning's formula shall be used to compute capacities for all open channels, swales, and closed piping drainage systems; and
 - b. The capacity of cross culverts shall be computed in accordance with Manual on Drainage Design for Highways — New Hampshire Department of Transportation.
- Design Runoff. The rainfall frequency to be used for calculations shall be as follows:
 - a. Residential Areas: 10 years;
 - b. Commercial Areas: 25 years;
 - c. Industrial Areas: 25 years; and
 - d. Flood Protection Works: 50 years
- Placement of Drain Lines. All off-site drain lines shall be placed within the right-of-way dedicated for public streets unless use of easements is specifically approved by the Board.
- Pipe Size, Velocity and Type.
 - a. Minimum allowable pipe diameter in any storm drain system shall be fifteen (15) inches;
 - b. The minimum design velocity in pipes shall be two (2) feet per second and the maximum velocity shall be ten (10) feet per second;
 - c. The minimum depth of cover for storm drain lines shall be thirty-six (36) inches from the top of pipe to finished grade.
 - d. Bedding shall be three-quarter (3/4)-inch crushed stone. Bedding shall be a minimum six (6)-inch depth in earth and twelve (12)-inch depth in ledge; and
 - e. Acceptable pipe material as recommended and approved by the Town Engineer and Planning Board.
 - f. Maximum length between drain manholes shall be three hundred (300) feet.
- Drainage Structures. Manholes and other drainage structures shall be pre-cast concrete meeting H-20 loading and constructed and installed in accordance with New Hampshire Department of Transportation Standards and Specifications for Road and Bridge Construction. Drainage structures shall not exceed eighteen (18) feet in depth (nm to bottom of structure). Outlet structure at detention basins, when necessary, shall be submitted for approval.

- Driveway Culverts. The location, length, size, bedding and backfill of all driveway culverts shall be approved by Town Engineer prior to construction. Driveway culverts shall be located a minimum of eight (8) feet off edge of roadway pavement, and shall be capable of carrying a gross vehicle weight of 60,000 pounds. Driveways and driveway culverts and related items shall be designed and approved and incorporated into the subdivision plan.

(8) CURBS. The Board may require roadways be curbed on both sides and drained appropriately. Construction shall be in accordance with State Specifications Section 609, and State Plans Standards CR- 1 and CR-2.

(9) PEDESTRIAN AND BICYCLE ACCESS.

The Board may require construction of sidewalks for pedestrian access to schools, parks, shopping areas and transit stops or where population density and/or traffic volume conditions are such that the Board determines the construction of sidewalks to be prudent. In commercial and industrial districts, sidewalks may be required on both sides of the street. In residential districts, sidewalks may be required on one side of the street. Sidewalks shall be a minimum of 5 feet wide (minimum), no closer than ~~22~~ **20** feet to the street centerline, and constructed with granite curb, 6 inches thick gravel (State Specification 304.2, except maximum size shall be 2 inches), 3 inches crushed gravel (State Specification 304.3), and 3 inches of asphalt pavement (State Specification 608). Curb shall be set in Portland Cement Concrete. Curb ramps and sidewalks shall be constructed to comply with reference (2).

Where the Board determines that a sidewalk is not practical, an area within the right-of-way will be kept clear of obstructions to allow for pedestrian and bicycle travel. Where practical, pedestrian and bicycle access within and between adjacent development should be provided.

(10) BASE COURSE. The road base course shall be of materials, and at least the widths and thicknesses, indicated in the attached “Geometric Cross Section Design.” Crushed gravel shall conform to Pay Item 304.3 in State Specification Section 304. Gravel shall conform to Pay Item 304.2 in State Specification Section 304, except that the maximum size stones shall be 3 inches. All other provisions of State Specification Section 304 are part of these standards.

(11) ASPHALT SURFACE. Where designated in the attached “Geometric Cross Section Design,” “Asph. Surf Treated” surfaces shall be a two-layer Bituminous Surface Treatment in accordance with State Specification Section 410. “Hot Mix” surfaces shall be Hot Bituminous Pavement in accordance with State Specification Section 403. Widths and thicknesses shall be at least as indicated in “Geometric Cross Section Design.” At least a 44-foot wide pavement is required in areas where on-street parking is expected on both sides of the travel way. Angle parking is not allowed.

(12) GRAVEL SURFACE. In cases of very low traffic volumes, defined herein as up to 50 vehicles per day, where the Board determines an asphalt surface is not required, the total usable roadway width may be a minimum of 18 feet with two feet of shoulders. Provision for a wider section should be considered to allow for future upgrading to an asphalt surface as recommended above. The gravel-wearing course shall conform to State Specification 304.2, except that the maximum size stones shall be 1¼ inches. All other provisions of State Specification Section 304 are part of these standards.

(13) GRAVEL SHOULDERS. Gravel shoulders, and their base courses, shall be at least the depths, widths, and thicknesses indicated in the attached “Geometric Cross Section Design.” Gravel shall

conform to State Specification 304.33. All other provisions of State Specification Section 304 are part of these standards.

- (14) BRIDGES. Bridges, as defined by State Law (RSA 234:2), are structures of 10.0 feet or greater clear span, and shall be designed to MS- 18 (HS-20) loading (AASHTO Specifications). The minimum roadway width shall be 24 feet. Bridges shall be designed by a professional engineer, and constructed in accordance with that design.
- (15) ENVIRONMENTAL IMPACTS AND PERMITS. The Applicant shall be responsible for determining the applicability of any and all environmental regulations that apply to this project, for acquiring the necessary permits, for taking whatever action is necessary to comply with applicable regulations and permits, and, if necessary, for terminating the necessary permits. The applicable work could include, but not be limited to:
 - Any fill, dredge, excavation, etc that impacts wetlands or other jurisdictional areas;
 - All temporary and permanent measures and treatment devices necessary to prevent erosion and control sediment during and after construction;
 - Any construction activity proposed to disturb, one (1) or more acre of land as defined by US EPA NPDES permits
 - Any disturbance of more than 100,000 square feet of terrain (50,000 sq. feet. if within the protected shoreland) as defined by NHDES rules for a "Site Specific" permit.
- (16) UTILITIES. Utility poles should be kept close to the right-of-way line, in no case closer than the ditch back slope and always well back of a curb. Water and sewer mains should be constructed outside the surface area, and preferably outside the ditch line.

D. PRIVATE ROADS

Private roads may be approved by the Planning Board if the application meets the following criteria:

- (1) The application must be for a residential development.
- (2) The maximum number of dwelling units that can be served by a private road is ten (10).
- (3) The maximum number of lots allowed in a subdivision served by a private road is twenty (20).
- (4) Each lot accessing a private road must be a minimum of ten (10) acres in size and contain at least the minimum frontage required in the Rural District.
- (5) A neighborhood association must be formed, consisting of all owners of properties with access to the private road(s), and shall have the responsibility of all repairs, maintenance and plowing of said roads. The neighborhood association shall also have the responsibility for the repair and maintenance of the associated drainage system. The neighborhood association documents shall specifically state that the Town of Peterborough assumes no responsibility or liability for maintenance or repair of the private roads. The documents shall also specifically state that in the event that the homeowners wish to have the town take over the road(s), the neighborhood association is responsible for the total cost of rebuilding the road to meet the road construction specifications as stated in the Subdivision Regulations in effect at that time and that the town will not take action on the request until the improvements have survived one (1) winter to the satisfaction of the Planning Board or its designee.

No private road shall be approved by the Planning Board until Town Counsel has reviewed and approved the contents of the legal documents for the neighborhood association.

- (6) All private roads shall have access from public roads and internal circulation shall be designed to provide for vehicular and pedestrian safety and convenience, emergency and fire equipment, snow clearance and delivery and collection services. If necessary, turnout areas shall be provided to allow passing room for large vehicles. Parking shall be provided on each lot.
- (7) The Planning Board may use its discretion to modify the width, construction standards and surface of private roads; however, any private road approved by the Planning Board will be constructed to the minimum standards illustrated in Table #1.
- (8) Private roads shall be posted as such.

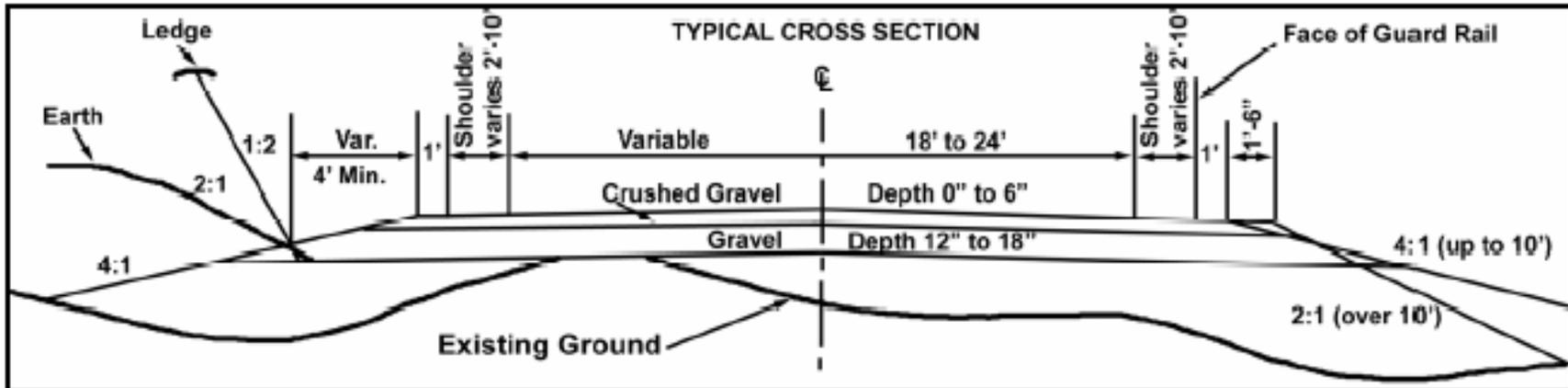
REFERENCES

- (1) A Policy on Geometric Design of Highways and Streets, 2001 or later edition; AASHTO.
- (2) Designing Sidewalks and Trails for Access, Part II of IL Best Practices Design Guide.
- (3) Guidelines for Geometric Design of Very Low- Volume Local Roads (ADT<400,), 2001 or later edition; AASHTO.
- 4) Roadside Design Guide, 2002 or later edition; AASHTO.
- (5) Standard Specifications for Highway Bridges, 17th Edition (2002) or later; AASHTO.
- (6) Standard Plans for Road and Bridge Construction, 2001 or later edition; NHDOT.
- (7) Standard Specifications for Road and Bridge Construction, 2002 or later edition; NHDOT.
- (8) Stormwater Management and Erosion and Sediment Control Handbook for Urban and Developing Areas in New Hampshire, 1992 or later edition; Rockingham County Conservation District.

**TABLE #1
Roadway Geometric Design Standards**

Note: All standards should be considered minimums, except as otherwise noted.	Average Daily Traffic (vehicle trips per day)		
	0 - 200	200 - 1500	1500 and over
Right-of-way Width	50 feet	50 feet	60 – 80 feet
Traveled way Width	18 - 20 feet	20 - 22 feet	24 feet
Shoulder Width	2 feet	3 feet	4 - 10 feet
Minimum Grade	1%	1%	1%
Maximum Grade	8.0%	8.0%	8.0%
Maximum Grade within 100 feet of Intersections	2.0%	2.0%	2.0%
Angle of Intersection	75	75	75
Centerline Radii	200 feet	200 feet	300 – 600 feet
Intersection Radii: 0 – 200 ADT 200 – 1500 ADT 1500 and over ADT	30 feet 30 feet 30 feet	30 feet 30 feet 30 feet	30 feet 30 – 50 feet 50 feet
Rate of Super Elevation (Use AASHTO Chart)	.04 feet	.04 feet	.08 feet
Rate of Super Elevation through intersection	.04 feet	.04 feet	.04 feet
Cross Slope of Pavement	2%	2%	2%
Slope of Shoulder	5%	5%	5%

Figure 1
Geometric Cross Section Design Elements



Average Daily Traffic (vehicles/day)	<u>0-50</u>	<u>50-200</u>	<u>200-750</u>	<u>750-1500</u>	<u>1500 & over</u>
Pavement Width (feet)	18 (min)	20	20	22	24
Shoulder Width (feet) (Note 1)	2	2	4	4	8-10
Center of Road to Ditch Line (feet)	15	16	18	19-21	Varies
Cross Slope of Roadway	4%	3%	2%	2%	2%
Wearing Surface Type	Hot Bituminous“	“	“	“	“
Wearing Surface Thickness (inches)	2	2+1	2+1	2+1	3+1
Wearing Surface Specification (Note 2)	UNH T ² Handout	UNH T ² Handout Or Type C	Type C	Type B	Type A
Pavement Base Thickness (inches)			3	3	4
Pavement Base Specification (Note 2)			Type F	Type E	Type D

Notes: 1. For average daily traffic over 1,000 vehicles/day, paved shoulders should be considered.
2. “Type” is defined in Section 401 of NHDOT *Standard Specifications for Road and Bridge Construction*.

E. CONSTRUCTION SUPERVISION

Applicants shall ensure that roadways, drainage facilities, sidewalks, curbs and all other elements of the streets are constructed under the supervision of and with the approval of the Planning Board or its designated agent(s). Bonding for the project shall be provided in accordance with Article X of the Subdivision Regulations. The Planning Board may require independent inspection of the project's construction; if so, the following applies.

(1) Temporary Improvement:

The applicant shall build and pay for all temporary improvements required by the Planning Board and shall maintain same for a period specified by the Planning Board. Prior to construction of any temporary facility or improvement, the developer shall file with the local Board of Selectmen a separate suitable bond for temporary facilities, which bond shall insure that the temporary facilities will be properly constructed, maintained, and removed.

(2) Costs of Improvements:

All required improvements shall be made by the applicant at his expense without reimbursement by the municipality.

(3) Failure to Complete Improvement:

When a performance bond has been posted and required improvements have not been installed within the terms of such performance bond, the Board of Selectmen may thereupon declare the bond to be in default and require that all public improvements be installed, regardless of the extent of the building development at the time the bond is declared to be in default.

(4) The Planning Board or its designated agent(s) shall provide the inspection of required improvements during the construction and certify their completion.

(5) During the construction phase the developer or agent shall notify the Public Works Director at least two (2) business days in advance before starting the phases of construction as specified.

(6) If, upon inspection, any of the required public improvements have not been constructed in accordance with the Planning Board construction standards and specifications, the applicant shall be responsible for completing the improvements. Wherever the cost of improvements is covered by a performance bond, the applicant and the bonding company shall be severally and jointly liable for completing the improvements according to specifications. Any costs incurred by the Town as a result of the inspection procedures shall be borne by the developer and failure to pay such costs may result in the calling of the bond by the Town.

(7) Occupancy Permits: Pursuant to NH RSA 676:12, no occupancy permits will be issued until such time as all necessary public improvements have been deemed complete by the Planning Board or their designated agent.

(8) Release or Reduction of Performance Bond

(a) Certificate of Satisfactory Completion:

The Planning Board will not release, nor reduce a performance bond, until the Planning Board or their designated agent, has submitted a certificate, stating that all required improvements have been completed and until the applicant's engineer or surveyor has certified to the Planning Board, or their designated agent, through submission of detailed "as built" survey plan of the subdivision, indicating locations, dimensions, materials, and other information required by the Planning Board, that the layout of the line and grade of all public improvements and lot monuments is in accordance with the final plat and construction plans for the subdivision and that a title insurance policy has been furnished to and approved by the Planning Board, as completed.

(b) Reduction of Performance Bond:

A performance bond may be reduced upon actual completion of public improvements and then only to the ratio that the public improvement dedicated bears to the total public improvements for the subdivision. In no event shall a performance bond be reduced below twenty-five (25%) percent of the principal amount.

(c) Release of Performance Bond:

Bonds may be released, in whole or in part, following notice from relevant agents that required improvements have been installed and completed in a satisfactory manner. Partial bond release will be considered following receipt and approval of a revised estimate of the cost of the remaining improvements. The applicant shall submit to the Board "as-built" construction drawings prior to release of the bond.

(d) Warranty Bonds:

In no instance shall a performance bond be reduced below twenty-five (25)% of the principal amount. Upon completion of public improvements by the subdivider or owner, and approval by the Planning Board, the surety covering maintenance of the streets for a period of two years from completion and acceptance shall be required in an amount equal to twenty-five (25%) percent of the total cost of such improvements, or \$10,000.00, whichever is greater. The maintenance of streets shall be defined as work required to correct defects in the construction if it becomes apparent to the Town within the two year time period.

APPENDIX A-1:
STREET CONSTRUCTION INSPECTION SCHEDULE

The following is an inspection schedule which will be abided by during the construction of all streets and roads in the Town of Peterborough. An inspection shall be performed for each item and documented by the Town's Engineer or designated representative, as part of an inspection checklist.

1. Pre-construction conference with the Town's Engineer, contractor, developer and Town Road Agent.
2. Review of design engineer's layout and wetlands marking.
3. Inspection of clearing and grubbing and erosion control measures.
4. Inspection of fill placement. In place compaction testing of fill is required every 1,000 c.y. or as directed by the inspector:
5. Inspection of drainage piping and buried utilities. Full time inspection is required including the trench backfilling.
6. Inspection of subgrade and slope work.
7. Inspection of gravel grade. Compaction testing of the gravel course is required every 200 linear feet of roadway.
8. Inspection of crushed gravel grade. Compaction testing of the crushed gravel course is required every 200 200 linear feet of roadway.
9. Inspection of final ditch work, slope work, landscaping and erosion control measures.
10. Inspection of headwall construction.
11. Inspection of binder course paving. Full time inspection will be performed during the paving. After the binder course pavement and all work required prior to that point has been completed, the developer can request, in writing, a reduction of the roadway bond the Planning Board. The exact amount of the bond reduction is to be d by the Planning Board.
12. Remaining work inspection by the Developer and Inspector.
13. Final walk through inspection by the Planning Board, Board of Selectmen and Town Engineer
14. Follow up inspection.

APPENDIX B:

STORMWATER MANAGEMENT AND EROSION CONTROL REGULATION

A. GENERAL

The purpose of this regulation is to control runoff and soil erosion and sedimentation resulting from site construction and development of one acre or greater. Subdivision and site plans shall include plans for managing stormwater and controlling erosion and sedimentation as provided below.

B. DEFINITIONS

- (1) Best Management Practice (BMP): A proven or accepted structural, non-structural, or vegetative measure the application of which reduces erosion, sediment, or peak storm discharge, or improves the quality of stormwater runoff.
- (2) Critical Areas: Disturbed areas of any size within 50 feet of a stream, bog, waterbody, or poorly or very poorly drained soils; disturbed areas exceeding 2,000 square feet in highly erodible soils; or, disturbed areas containing slope lengths exceeding 25 feet on slopes greater than 15 percent.
- (3) Development: Any construction or land construction or grading activities other than for agricultural and silvicultural practices.
- (4) Disturbed Area: An area where the natural vegetation has been removed exposing the underlying soil, or vegetation has been covered.
- (5) Erosion: The detachment and movement of soil or rock fragments by water, wind, ice, or gravity.
- (6) Highly Erodible Soils: Any soil with an erodibility class (K factor) greater than or equal to 0.43 in any layer as found in Table 3-1 of the "Stormwater Management and Erosion and Sediment Control Handbook for Urban and Developing Areas in New Hampshire."
- (7) Project Area: The area within the subdivision or site plan boundaries.
- (8) Sediment: Solid material, either mineral or organic, that is in suspension, is transported, or has been moved from its site of origin by erosion.
- (9) Stabilized: When the soil erosion rate approaches that of undisturbed soils. Soils which are disturbed will be considered protected when covered with a healthy, mature growth of grass or a good covering of hay or straw mulch (2 tons/acre). Mulch is only a temporary measure; ultimately, the site needs vegetation.
- (10) Stormwater Runoff: The water from precipitation that is not absorbed, evaporated, or otherwise stored within the contributing drainage area.
- (11) Stream: Areas of flowing water occurring for sufficient time to develop and maintain defined channels but may not flow during dry portions of the year. Includes but is not limited to all perennial and intermittent streams located on U.S. Geological Survey Maps.

C. APPLICABILITY

The applicant shall submit a stormwater management and erosion control plan to the Planning Board for any tract of land being developed or subdivided, where one or more of the following conditions are proposed:

- A cumulative disturbed area exceeding one acre.
- Construction or reconstruction of a street or road.
- A subdivision of more than three building lots.
- Disturbed critical areas.

D. MINIMUM REQUIREMENTS

- (1) The Planning Board may waive the requirement for all or part of a stormwater management and erosion control plan if it determines that a plan is unnecessary because of the size, character, or natural conditions of a site.
- (2) All requests for waivers and action thereon shall be made in writing by the applicant with supporting technical documentation to demonstrate minimal environmental impact.
- (3) The following minimum requirements apply to all projects, regardless of size:

(i) Site drawing of existing and proposed conditions:

- (a) Locus map showing property boundaries
- (b) North arrow, scale, date
- (c) Property lines
- (d) Easements
- (e) Structures, utilities, roads and other paved areas
- (f) Topographic contours
- (g) Critical areas
- (h) Surface water and wetlands, drainage patterns, and watershed boundaries
- (i) Vegetation
- (j) Soils information for design purposes or for determining highly erodible soils shall be determined from a National Cooperative Soil Survey (NCSS) soil series map. A High Intensity Soil Map of the site, prepared in accordance with SSSNNE Special Publication No. 1, can only be used for design purposes and not for determining highly erodible soils.
- (k) Temporary and permanent stormwater management and erosion and sediment control BMPs
- (l) Areas and timing of soil disturbance
- (m) A schedule for the inspection and maintenance of all BMPs

(ii) Narrative section including discussion of each measure, its purpose, construction sequence, and installation timing as they apply to the site.

E. DESIGN STANDARDS

The following standards shall be applied in planning for stormwater management and erosion control:

- (1) All measures in the plan shall meet as a minimum the Best Management Practices set forth in the "Stormwater Management and Erosion and Sediment Control Handbook for Urban and Developing Areas in New Hampshire," Rockingham County Conservation District, NH Department of Environmental Services, Soil Conservation Service (now the Natural Resources Conservation Service), August 1992, as amended, a copy of which is available in the planning board office.
- (2) Whenever practical, natural vegetation shall be retained, protected or supplemented. The stripping of vegetation shall be done in a manner that minimizes soil erosion.
- (3) Appropriate erosion and sediment control measures shall be installed prior to soil disturbance.
- (4) The area of disturbance shall be kept to a minimum. Disturbed areas remaining idle for more than 30 days shall be stabilized.
- (5) Measures shall be taken to control erosion within the project area. Sediment in runoff water shall be trapped and retained within the project area using approved measures. Wetland areas and surface waters shall be protected from sediment.
- (6) Off-site surface water and runoff from undisturbed areas shall be diverted away from disturbed areas where feasible or carried non-erosively through the project area. Integrity of downstream drainage systems shall be maintained.
- (7) Measures shall be taken to control the post-development peak rate of runoff so that it does not exceed pre-development runoff for the 2-year, 24-hour storm event and for additional storm event frequencies as specified in the design criteria of the "Stormwater Management and Erosion and Sediment Control Handbook for Urban and Developing Areas in New Hampshire."
- (8) Priority should be given to preserving natural drainage systems including perennial and intermittent streams, wetlands, swales, and drainage ditches for conveyance of runoff leaving the project area.
- (9) All temporary erosion and sediment control measures shall be removed after final site stabilization. Trapped sediment and other disturbed soil areas resulting from the removal of temporary measures shall be permanently stabilized within 30 days unless conditions dictate otherwise.

F. COMPLETED APPLICATION REQUIREMENTS

- (1) The Planning Board shall require each of the following in the final plan unless the project is deemed of sufficiently minimal impact to qualify for the minimum requirements specified in Section 4 of this regulation.
 - (a) Construction drawings
 - (i) Existing and proposed conditions:
 - (a) Locus map showing property boundaries
 - (b) North arrow, scale, date
 - (c) Property lines

- (d) Structures, roads, utilities, earth stockpiles, equipment storage, and stump disposal
 - (e) Topographic contours at two-foot intervals
 - (f) Critical areas, stockpile and staging areas
 - (g) Within the project area and within 400 feet of project boundary surface waters, wetlands, and drainage patterns and watershed boundaries
 - (h) Vegetation
 - (i) Extent of 100-year flood plain boundaries if published or determined
 - (j) Soils information for design purposes from a National Cooperative Soil Survey (NCSS) soil series map or a High Intensity Soil Map of the site, prepared in accordance with SSSNNE Special Publication No. 1. Highly erodible soils shall be determined by soil series.
 - (k) Easements
 - (l) (12) Areas of soil disturbance
 - (m) Areas of cut and fill
 - (n) Areas of poorly or very poorly drained soils including any portion to be disturbed or filled
 - (o) Location of all structural, non-structural, and vegetative stormwater management and erosion control BMPs
 - (p) Identification of all permanent control BMPs
 - (q) Tabulated sequence of construction
- (ii) Other plan requirements:
- (a) Construction schedule
 - (i) Earth movement schedule
 - (b) A proposed schedule for the inspection and maintenance of all BMPs
 - (c) Description of temporary and permanent vegetative BMPs including seeding specifications
 - (d) Description of all structural and non-structural BMPs with detailed drawings of each as appropriate
- (b) Report section including:
- (i) Design calculations for all temporary and permanent structural control BMP measures
 - (ii) A proposed schedule for the inspection and maintenance of all BMPs
 - (iii) Identification of all permanent control measures and responsibility for continued maintenance
 - (iv) Drainage report with calculations showing volume, peak discharge, and velocity of present and future runoff

- (v) When detention structures are planned to reduce future condition peak discharge the soil cover complex method shall be used to compute the runoff volume and peak discharge for designing the structure. The design will conform to the criteria outlined for those types of structures given in the "Stormwater Management and Erosion and Sediment Control Handbook for Urban and Developing Areas in New Hampshire".

G. RESPONSIBILITY FOR INSTALLATION/CONSTRUCTION

- (1) The applicant shall bear final responsibility for the installation, construction, inspection and disposition of all stormwater management and erosion control measures required by the provisions of this regulation.
- (2) The Planning Board may require a bond or other security in an amount and with surety conditions satisfactory to the Board, providing for the actual construction and installation of such measures within a period specified by the Planning Board and expressed in the bond or the surety.
- (3) Site development shall not begin before the stormwater management and erosion control plan receives conditional approval. Best Management Practices shall be installed as designed and scheduled as a condition of final approval of the plan.

H. PLAN APPROVAL AND REVIEW

- (1) The Planning Board shall indicate approval of the stormwater management and erosion control plan, as filed, if it complies with the requirements and objectives of this regulation. Such approval shall be a component of subdivision or site plan approval. If disapproved, a list of plan deficiencies and the procedure for filing a revised plan will be given to the applicant.
- (2) Technical review of any stormwater management and erosion control plan prepared under this regulation shall be reviewed by a qualified professional consultant, as determined to be appropriate by the planning board, at the expense of the applicant.

I. MAINTENANCE AND INSPECTION

- (1) A narrative description of on-going maintenance requirements for water quality measures required by stormwater management and erosion and sediment control plans after final planning board approval shall be recorded on the deed to the property on which such measures are located. The description so prepared shall comply with the requirements of RSA 478:4-a.
- (2) The purpose of this article is to enact locally the administrative and enforcement procedures set forth in RSA 676 of the existing planning and land use statutes.
- (3) The planning board may require routine inspections to verify on-going maintenance of water quality protection measures. Such inspections shall be performed by the designated agent at reasonable times to the landowner. Any costs incurred by inspections will be borne by the landowner.
- (4) If permission to inspect is denied by the landowner, the designated agent shall secure an administrative inspection warrant from the district or superior court under RSA 595-B.