

RULES AND REGULATIONS GOVERNING THE SUBDIVISION OF LAND STURBRIDGE, MASSACHUSETTS

Adopted June 18, 2002 under the Subdivision Control Law Chapter 41, General Laws, Section 81K to 81-GG inclusive as amended.

INTRODUCTION

Purpose The purpose of these subdivision rules and regulations is to protect the safety, convenience and welfare of the present and future inhabitants of the Town of Sturbridge by regulating the laying out and construction of ways in subdivisions, providing access to the several lots therein, but which have not become public ways, and ensuring sanitary conditions in subdivisions and in proper cases parks and open areas.

Powers The Powers of the Planning Board shall be exercised with due regard for the provisions of adequate access to all the lots in a subdivision, 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 the applicable zoning ordinances or bylaws; for securing adequate provision of water, sewerage, drainage, underground utilities services, fire police, and similar municipal equipment, and street lighting and other requirements where necessary in the subdivision; and to coordinate the ways in a subdivision with each other and with the public ways in the Town of Sturbridge and with the ways in neighboring subdivisions.

ARTICLE I AUTHORITY

SECTION 1 STATUTORY AUTHORITY AND ADOPTION.

Under the authority vested in the Planning Board of the Town of Sturbridge by M.G.L. C. 41, Section 81-Q, said Board hereby adopts these rules and regulations governing the subdivision of land in the Town of Sturbridge by vote dated June 18, 2002, which will become effective when duly recorded as required by law.

ARTICLE II GENERAL PROVISIONS

SECTION 2 DEFINITIONS

As used in these regulations, the following terms shall have the meanings indicated:

AS BUILT PLAN A final plan submitted after construction, stamped and certified by a registered engineer or surveyor, that shows the actual location of all construction elements as opposed to the approved plan.

APPLICANT Shall include an owner or his agent or representative or his assignee.

BOARD The Planning Board of the Town of Sturbridge.

CERTIFIED BY (endorsed by) As applied to a plan or instrument required or authorized by the Subdivision Control Law to be recorded, shall mean bearing a certification or endorsement signed by a majority of the members of the Planning Board

DEAD-END STREET A permanent or temporary street to provide a single access to and from an existing or proposed through street. This definition is intended to include cul-de-sacs. The total length of road shall be measured to the end of the turn-around area.

DEFINITIVE PLAN The plan of a subdivision meeting the requirements of the subdivision regulations for submission, with appropriate and complete application submitted to the Board for approval, to be recorded in the Registry of Deeds or filed with the Land Court when approved and endorsed by the Board, all as distinguished from a preliminary plan.

DESIGNER A professional engineer or land surveyor or both, registered to practice in Massachusetts. All work defined by MGL Chapter 112, Section 81D as professional engineering or surveying shall be done under the direct supervision of a registered professional engineer or registered land surveyor, respectively.

DEVELOPER A person (as hereafter defined) who develops, under a plan of subdivision approved under these rules and regulations, and may also be referred to as the applicant, contractor or subdivider.

DRAINAGE Shall mean the control of surface water within the tract of land to be divided.

FRONTAGE: For the purposes of these regulations, physical access, or the demonstrated feasibility for physical access, to a property from a street designed for such purposes.

ITE Institute of Transportation Engineers.

LAYOUT The full strip of land designated as a way or street as distinguished from the roadway or traveled way.

LOT shall mean an area of land under one ownership, with definite boundaries used, or available for use, as a site for one or more buildings.

MUNICIPAL SERVICES Public utilities furnished by the Town of Sturbridge; or other services provided by the State of Massachusetts.

OWNER As applied to real estate, the person or persons holding the fee simple title to a parcel, tract or lot of land, as shown by the record in the Registry of Deeds, or Probate Records.

PARCEL A contiguous lot or tract of land owned and recorded as the property of the same persons or controlled by a single entity

PERSON An individual, or two or more individuals, a partnership, corporation, or trust having common or undivided interest in a tract of land.

PRELIMINARY PLAN A plan showing the proposed layout of lots and infrastructure within a proposed subdivision, submitted for preliminary approval only.

REGULARITY FACTOR A calculated relationship, expressed as a decimal, between the lot perimeter and required lot area. See appendix

RESIDENTIAL SUBDIVISION A subdivision lying entirely within the rural residential or suburban residential zones as established by the Sturbridge Zoning Map and Bylaw.

ROADWAY The area within the limits of the traveled way.

STANDARD SPECIFICATIONS The Standard Specifications for Highways and Bridges of the Massachusetts Department of Public Works, dated 1988, including all revisions thereto and the Construction Standards of 1977 of the Massachusetts Department of Public Works, as most recently amended.

STREET A public or private way, either shown on a plan approved in accordance with the subdivision control law, or otherwise qualifying a lot for access and frontage under MGL Chapter 41 Section 81L.

SUBDIVISION The division of a tract of land into two (2) or more lots in such a manner as to require provision for one (1) or more new ways, not in existence when the Subdivision Control Law became effective in the Town of Sturbridge, to furnish access for vehicular traffic to one (1) or more of such lots, and shall include resubdivision, and, when appropriate to the context, shall relate to the process of subdivision or the land or territory subdivided; provided, however, that the division of a tract of land into two (2) or more lots shall not be deemed to constitute a “subdivision” within the meaning of the Subdivision Control Law if, at the time when it is made, every lot within the tract so divided has frontage on a public way, or a way shown on a plan theretofore approved in accordance with the Subdivision Control Law, of at least such distance as is then required by zoning or other ordinance or bylaw, if any, of said city or town for erection of a building on such lot and, if no distance is so required, has such frontage of at least twenty (20) feet. Conveyances or other instruments adding to, taking away from or changing the size and shape of lots in such a manner as not to leave any lot so affected without the frontage above set forth, or the division of a tract of land on which two (2) or more buildings were standing when the Subdivision Control Law went into effect in the city or town in which the land lies, into separate lots on each of which one (1) of such buildings remains standing shall not constitute a “subdivision.”

SUBDIVISION CONTROL The power of regulating the subdivision of land granted by the Subdivision Control Law.

THROUGH STREET A street within or outside of the boundaries of a subdivision with a minimum of two (2) points of egress on which vehicular traffic is given preferential right of way and intersecting subdivision streets are required to yield the right of way in obedience to a stop sign, yield sign or other traffic control device.

TOWN shall mean the Town of Sturbridge

TRAVELED WAY That part of the roadway provided for the movement of vehicles, exclusive of shoulders and auxiliary lands.

Other words shall have the meaning assigned to them in the Subdivision Control Law and the Sturbridge Zoning Bylaw; and if not within these regulations, then by those definitions contained in the most recent edition of The New Illustrated Book of Development Definitions, by Harvey S. Moscovitz and Carl G. Lindbloom.

SECTION 3 PLAN NECESSITY APPROVAL OR ENDORSEMENT.

Only those plans which constitute subdivisions, as that term is defined in Section 2, require the approval of the Planning Board. However, all plans that show new parcel, lot or property lines or new ways, whether subdivisions within the meaning of the law or not, must have either approval as a subdivision or endorsement that they do not require approval before they will be accepted for recording at the Worcester County Registry of Deeds or for registering at the Land Court.

SECTION 4 DEFINITIVE PLAN REQUIRED

No person shall make a subdivision, within the meaning of the Subdivision Control Law, of any land within the town or proceed with the improvement or sale of lots in a subdivision or the construction of ways or the installation of municipal services therein, unless and until a definitive plan of such subdivision has been submitted to and approved by the Planning Board as hereinafter provided.

SECTION 5 COMPLIANCE WITH ZONING REQUIRED

No subdivision plan shall be approved unless all the building lots located therein comply with the Town of Sturbridge Zoning Bylaw as relates to size, width, area, access, frontage and all other requirements in effect at the time of plan submittal.

SECTION 6 PLAN BELIEVED NOT TO REQUIRE APPROVAL (a.k.a. ANR Plan)

- A. 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 his plan does not require approval under the Subdivision Control Law may submit his plan and Application Form A (see Appendix) to the Planning Board accompanied by the necessary evidence to show that the plan does not require approval and the filing fee as established by the Town of Sturbridge. Said person shall also file, by hand delivery or registered mail, a notice with the Town Clerk stating the date of submission for such determination and accompanied by a copy of said application
- B. Three paper prints shall be submitted to the Planning Board. If the plan has been prepared in CAD format, one digital copy of the plan shall also be submitted.
- C. Plan Contents. The plan shall be legibly drawn at an appropriate scale but no smaller than one (1) inch to one hundred (100) feet, and shall contain the following:
 - (1) Identification of the plan by name of owner of record and location of land in question, locus, the scale, north arrow, legend and date; and plan and deed references.
 - (2) The statement “Approval Under Subdivision Control Law Not Required” above the endorsement box and sufficient space for the date and signatures of the Board.
 - (3) Zoning classification and location of any zoning district boundaries that may lie within the locus of the plan. The Assessor’s map, block and lot numbers shall be shown.
 - (4) Notice of any proceedings and copies of decisions by the Zoning Board of Appeals, including but not limited to Special Permits and Variances, regarding the land or any buildings thereon.

(5) In the case of the creation of a new lot, any remaining land area and frontage in the ownership of the applicant shall be shown.

(6) Names and status of public or private street(s) and easements to include the surface materials and condition of the street(s); and the width of the right-of-way and traveled way of the street or easement. In cases where the accessibility of a roadway is in question, the applicant shall obtain a certification from the Director of Public Works.

(7) Location of all existing buildings, including setbacks on the land under consideration.

(8) Location of all bounds on land under consideration.

(9) Location of all wetland resource areas on the land under consideration, upland areas and percent; and notice of any matters submitted or to be submitted to the Sturbridge Conservation Commission.

(10) Slopes in excess of eight (8) percent where they may affect driveways or access to the structures

(11) Names of owners and deed references for abutting parcels

(12) Lot area, frontage and regularity factor

(13) All plans shall be annotated above a signature block with the following statement: "Planning Board endorsement is not a determination as to conformance with the Zoning Bylaw." If the plan is a revision or modification of a recently submitted plan, that previous plan shall be presented for reference.

(14) All plans shall bear the stamp and signature of a Massachusetts-registered Land Surveyor and a certification of conformance with the standards of the Worcester County Registry of Deeds.

D. The plan must be submitted at least five days in advance of the Board meeting for consideration at that meeting. It is strongly recommended that the owner or owner's representative attend the meeting to support the application; otherwise the plan review may be deferred to a later date.

E. If the majority of the members of the Board determines that the plan does not require approval, the Board shall forthwith, without a public hearing, endorse on the plan the words "Planning Board Approval Under the Subdivision Control Law Not Required." The endorsed plan shall be returned to the applicant, and the Board shall notify the Town Clerk of its action, both within twenty-one (21) days of submittal of the plan.

F. If the Board determines that the plan does require approval under the Subdivision Control Law, it shall, within twenty-one (21) days of submittal of the plan, so notify both the applicant and the Town Clerk and return the plan to the applicant.

G. The Applicant shall file the approved plan at the Registry of Deeds and shall notify the Board by presenting written evidence of recording of said plan documents within six (6) months of approval.

ARTICLE III PLAN SUBMISSION AND APPROVAL PROCEDURE
SECTION 7 PRELIMINARY PLAN

A. General. A preliminary plan must be submitted for any proposed non-residential subdivision and may be submitted for any proposed residential subdivision. The submission of such a preliminary plan will enable the subdivider, the Board and other municipal agencies and owners of property abutting the subdivision to discuss and clarify the problems of such subdivision before a definitive plan is prepared. Therefore, it is strongly recommended that a preliminary plan be filed in every case.

B. Submittals

(1) Planning Board Submittals. Any person who seeks approval of a preliminary plan of a subdivision shall submit to the Planning Board:

- (a) A Form B application (see appendix).
- (b) Twelve (12) copies of the preliminary plan.
- (c) A filing fee as established by the Town of Sturbridge. See Appendix
- (d) If required by the Planning Board, a Consultant Review Fee as established in Section 18 of these regulations.

(2) Board of Health Submittals Any person who seeks approval of a preliminary plan of a subdivision shall submit to the Board of Health:

- (a) A copy of the Form B application .
- (b) One (1) print of the preliminary plan.

(3) Town Clerk Submittals Any person who seeks approval of a preliminary plan of a subdivision shall submit to the Town Clerk, by hand delivery or certified mail, a copy of the Form B application and the preliminary plan.

(4) Other In addition to those items required to be submitted, it is requested that the following be furnished:

- (a) A locus plan of the subdivision, showing its street configuration in relation to the surrounding area within one thousand six hundred (1,600) feet of the perimeter of the subdivision and to zoning district boundaries, at a scale of one (1) inch equals eight hundred (800) feet.
- (b) In the case of a subdivision covering less than all of the land owned by the subdivider in the area of the subdivision, a plan showing in a general manner the proposed overall development of all of said land.
- (c) Preliminary findings, in a general way, of the environmental impact analysis, if expected to be required.

(5) Completeness Review The Planning Board's designee will be responsible for ensuring the completeness of all preliminary plan applications, and shall notify all applicants of any deficiencies with their preliminary plan application within fourteen(14) days of submission to the Planning Board. Applicants should be advised that failure to submit or provide any required item shall be deemed a deficiency, and the Board may act to deny the application based on its technical deficiencies. Submissions pertaining to Section 7 B (1) (d) Consultant Review Fee are not required prior to application acceptance.

C. Plan Contents Said preliminary plan should show sufficient information about the subdivision to form a clear basis for discussion of its problems and for the preparation of the definitive plan and shall show:

- (1) The subdivision name, boundaries, north arrow, date, scale, legend and the title "Preliminary Plan."
- (2) The name and address of the record owner, applicant, Massachusetts registered engineer and Massachusetts registered surveyor.
- (3) The names of all abutters within three hundred feet of the property from the most recent tax list.
- (4) Existing and proposed lines of streets, ways, easements and any public or common areas within the subdivision, in a general manner.
- (5) The proposed system of drainage, including adjacent existing natural waterways, in a general manner.
- (6) The approximate boundary lines of proposed lots, with approximate areas and dimensions.
- (7) The location, names, widths and condition of adjacent streets approaching or near the subdivision.
- (8) Topography at two-foot intervals and approximate location of any wetlands (as defined by MGL Chapter 131, Section 40 and by Sturbridge Conservation Commission Regulations) to include all abutting parcels within 200 feet.
- (9) Anticipated wetlands protection related issues, if any
- (10) The proposed system and preliminary analysis of water supply and septage management

D. Approval. Before approval of the preliminary plan, a public hearing will be held by the Planning Board. Notice of such hearing shall be given by the Board by advertisement in a newspaper of general circulation in the town fourteen (14) days before the day of the public hearing. A copy of said notice shall be mailed to the applicant and all owners within three hundred (300) feet of the subdivision as appears on the most recent tax list. Within forty-five (45) days after the date of submission of a preliminary plan, the Planning Board shall notify the applicant and the Town Clerk either that the plan has been approved or that the plan has been approved with modification 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 Planning Board shall state, in detail, its reasons therefore in accordance with Section 81-S of the Subdivision Control Law. Such approval does not constitute approval of a subdivision, but

does facilitate the procedure in securing final approval of the definitive plan.

E. Definitive Stage After approval of the preliminary plan, the applicant may proceed to the definitive plan stage. The definitive plan must be submitted with seven (7) months after the submittal of the preliminary plan and must be evolved from it to retain exemptions from zoning changes and amendments to the subdivision rules and regulations. The Planning Board must schedule a hearing and make a decision within ninety (90) days of the submission of the definitive plan.

SECTION 8 DEFINITIVE PLAN

A. Submittals

(1) Planning Board submittals. Any person who desires approval of a definitive plan of a subdivision shall submit twelve (12) copies of the following to the Planning Board, including the application cover sheet, Form C (see Appendix 3)

(a) The definitive plan, as described at Subsection B of this section. The original definitive plan drawing will only be needed if and when the actual endorsement of the plan takes place.

(b) Street plans and profiles of every proposed street, as described at Subsection C of this section.

(c) At the same scale as the definitive plan, a development plan of the premises plus adjoining land within three hundred (300) feet of the property line. The development plan shall show topography at two-foot intervals, graphic drainage analysis, including distinction between upland and wetland (as defined by MGL C. 131, Section 40 and the Sturbridge Wetland Bylaw) and location of tree cover, ledge outcroppings, outstanding individual trees of 10-inch diameter or greater within fifty (50) feet of all proposed rights-of-way, location of proposed trees, large boulders, existing structures, including fences and walls and proposed lot lines. If located within the Floodplain District, the location of the base flood elevation (one-hundred-year flood) shall be indicated. Wetlands delineation shall be based upon field identification and flagging by a botanist qualified for wetlands identification under the Wetlands Protection Act. It is strongly recommended that the wetlands identification be done in coordination with the Conservation Commission.

(d) A stormwater management plan indicating both on-site and off-site contributory areas, including calculations for the sizing of drainage pipes in accordance with Section 11. The stormwater management plan shall include a groundwater recharge comparison between pre and post-development conditions. The stormwater management and drainage calculations shall be prepared and signed by a registered professional engineer and be filed as part of the definitive plan. The stormwater management plan shall be drawn to scale and shall show the incremental areas contributing to each catch basin, ditch or watercourse, including contributory areas outside of the subdivision. The stormwater management plan shall also show existing and proposed contours as required above.

(e) An overlay at the same scale as the definitive plan, showing the Soil Conservation Service interpretation of suitability for on-site sewage effluent disposal or showing United States Geological Survey surficial geology, or both, except for areas proposed to be served by town sewerage.

(f) Test pit logs, with not more than one (1) pit required per four (4) proposed lots, selected to reveal general patterns of subsurface characteristics, after consultation with the Board of Health. Locations of test pits shall be indicated on the development plan.

(g) Where connection to the public water system is not proposed, description of provisions to be made for water for fire fighting and information adequate to allow determination of compliance with requirements of Section 12 Utilities, A. Water Supply regarding potable water quality and quantity.

(h) A comprehensive erosion and sedimentation control plan indicating the erosion control measures to be employed, including a description of locations of temporary stockpiles, spoil areas, temporary drainage systems, slope stabilization techniques and sediment basins and a narrative description of how erosion from individual lots onto streets and into drainage systems is proposed to be controlled.

(i) A locus plan of the subdivision showing its street configuration in relation to surrounding streets within one thousand six hundred (1,600) feet of the perimeter of the subdivision and to zoning district boundaries, at an appropriate scale.

(j) Prints, eight and one-half by eleven (8 ½ x 11) inches, showing an outline of the subdivision at a scale of one hundred (100) feet or three hundred (300) feet to the inch, showing all ways and lots, street names, lot numbers and street numbers.

(k) The environmental impact analysis, if not expressly waived by the Planning Board.

(l) Construction details and specifications and road cross sections for each cross-section variant, except that, where the proposed cross sections are identical with those shown in this regulation annotation to that effect may be placed on the definitive plan, and the cross-section drawing may be omitted.

(m) Landscape Plan, as required under Section 13 E.

(2) Other Planning Board submittals. Any person who desires approval of a definitive plan of a subdivision or modifications thereto shall submit the following to the Planning Board:

(a) North arrow references, references to plans of record, ties into the Mass. Coordinate System, ties into County layouts, evidence of ownership, language of any easements, covenants or deed restrictions applying or proposed to apply to the area being subdivided, rights and easements obtained for utilities or drainage outside of the subdivision and description of erosion control methods at all critical locations, showing existing and proposed grades for the width of the right-of-way and at a minimum, at least twenty-five (25) feet on each side, or to a point where the slopes return to original ground; and, if requested, traverse notes.

(b) Two (2) copies of properly executed Application Form C (see Appendix) and the definitive plan.

(c) A filing fee and a fee per lot potentially created by the plan as established by the Town of

Sturbridge. The application fees must accompany the application. See appendix

- (d) A Board of Assessors certified list of names and mailing addresses for all abutters as they appear on the most recent local tax list, including property owners on the opposite side of any streets abutting the subdivision.
 - (e) A description of the land and the proposal, suitable for advertising.
 - (f) Sight distance computations in accordance with Section 10B, (6).
- (3) Town Clerk Submittals Any person who desires approval of a definitive plan of a subdivision shall submit the following to the Town Clerk by hand delivery or registered or certified mail:
- (a) A notice stating the date of definitive plan submission to the Planning Board.
 - (b) A copy of the completed application Form C and plan.
- (4) Board of Health Submittals Any person who desires approval of a definitive plan of a subdivision shall file one (1) copy of each of the following with the Board of Health:
- (a) Definitive plan.
 - (b) Development plan.
 - (c) Environmental analysis as well as information required in this Section 8 (A) (l) (e) and (f) if applicable.
- (5) Completeness Review. The Town Planner will be responsible for ensuring the completeness of all definitive plan applications, and shall notify all applicants of any deficiencies with their definitive plan application within fourteen (14) days of submission to the Planning Board. Applicants should be advised that failure to submit or provide any required item shall be deemed a deficiency, and the Board may act to deny the application based on its technical deficiencies. Submissions pertaining to Section 18 (C) (1) Consultant Review Fee are not required prior to application acceptance.

B. Definitive Plan Contents

- (1) The definitive plan shall be prepared by a Massachusetts registered professional engineer and registered land surveyor project design team and shall be prepared utilizing AutoCAD Release 14 or another Town-approved drawing package. The plan shall be at a scale of one (1) inch equals forty (40) feet or other such scale as the Board may accept to show details clearly and adequately. Sheet sizes shall be twenty-four by thirty-six (24 x 36) inches. If multiple sheets are used, they shall show each lot in its entirety on one (1) sheet and shall be accompanied by an index sheet showing the entire subdivision at a scale of one (1) inch equals two hundred (200) feet. The index sheet shall correlate to match lines shown on individual sheets.
- (2) In addition, the proposed subdivision shall be tied into the Mass. Coordinate mainland plane of 1983-1988 (a minimum of three points at the third order of accuracy) and the nearest existing county layout plan within five hundred (500) feet. All horizontal surveys shall be made to second order accuracy of one to twelve thousand (1:12,000), and vertical surveys shall be to second order

accuracy. All surveys shall conform to the Massachusetts Board of Registration of Professional Engineers and Land Surveyors Procedural and Technical Standards for the Practice of Land Surveying and also the Land Court's latest instructions.

- (3) The definitive plan shall include:
 - (a) A title stating the date, scale and bench mark(s); the name and address of the record owner and subdivider, engineer or surveyor; the name of the subdivision, if any; the names of proposed streets; and the zoning classification.
 - (b) The meridian used, town meridian if required.
 - (c) The location and ownership of abutting property.
 - (d) The location and character of all rights-of-way or other easements, existing or proposed.
 - (e) The lengths and bearings of plan boundary lines.
 - (f) The lengths and bearings of all subdivision lot lines, including lot frontages on the streets.
 - (g) The location of all permanent monuments, identified as to whether existing or proposed.
 - (h) The lengths, radii, tangents and central angles of all curves in the lot lines.
 - (i) The location, names and present widths of all adjacent streets bounding, approaching or within reasonable proximity of the subdivision, sufficient to analyze the traffic flow.
 - (j) The area of lots, with street (house) numbers, and areas of other adjoining vacant land not included in the subdivision. Street numbers will be obtained as directed by the Sturbridge Assessors Office. An area shall be provided for inclusion of street numbers on each lot prior to endorsement.
 - (k) Details on one (1) or more of the plan sheets showing appropriate sewer, drainage, water and roadway sections; and other storm water, stabilization and fire protection structures, and lighting or sign installations and landscaping plantings in accordance with the Sturbridge Department of Public Works standards and details contained in the Appendix or after concurrence with the DPW Director. Where unusual site conditions require additional details, where the subdivider is proposing a unique construction solution, or where the Planning Board or Department of Public Works requests additional information, such as proposed flows and demands, details shall be submitted by the subdivider.
 - (l) Conformance with the upland area requirements in Chapter 4, Use Regulations, Section 4.03 of the Sturbridge Zoning Bylaw, unless the lots are serviced by Town water and sewer.
 - (m) The location of all sidewalks, driveway aprons, trees and grass plots.
 - (n) The street classification of all roads.

- (o) North arrow and north arrow reference.
- (p) Regularity factor for each lot. (see Appendix)
- (q) Assessor's map, block and parcel numbers.

C. Street Plan and Profile Contents For each street there shall be a separate plan at one (1) inch equals forty (40) feet and a profile at one (1) inch equals forty (40) feet horizontal, one (1) inch equals four (4) feet vertical, showing the following data:

- (1) The exterior lines of the way, with sufficient data to determine its location, direction and length.
- (2) The existing center-line profile to be shown as a fine, continuous line; existing center-line profile for intersecting streets to be shown for at least one hundred (100) feet each side of the intersection of the street center lines.
- (3) The proposed center-line profile, to be shown as a heavy, continuous line, with elevations shown every fifty (50) feet [twenty-five (25) feet on vertical curves].
- (4) Existing and proposed watercourses, ponds and wetlands and corresponding buffer areas.
- (5) Road center line stationing.
- (6) All sewer and drainage facilities, to be shown on the profiles indicating proposed pipe sizes, slopes and rim and invert elevations and, on the street plans, showing pipe sizes, and notations of demand and flow characteristics.
- (7) The plan location and size of existing and proposed ductile iron pipe water mains, hydrants and main gate valves.
- (8) The location of proposed streetlights.
- (9) The location of existing and proposed street paving, sidewalks and curbs.
- (10) Proposed grade stakes, to be set by a Massachusetts registered professional land surveyor at a minimum of fifty-foot stations for roadway right-of-way, centerline, sidelines and sidewalks.

D. Environmental Impact Analysis An environmental impact analysis shall be submitted for any subdivision proposing five (5) or more dwelling units and in all cases involving commercial and industrial development. The analysis shall be prepared by an interdisciplinary team, to include a civil engineer and an architect or landscape architect and wetland biologist/scientist. The Planning Board will require that the scope of such analysis include as many suggestions as provide for the greatest public benefit in the areas of environmental protection and preservation listed below:

- (1) Impact upon ground and surface water quality and level, including estimated phosphate and nitrate

loading on groundwater and surface water from septic tanks, lawn fertilizer, toxic wastes, storage of petroleum products and other activities within the development. For all developments located in whole or in part within Water Resource Districts, this shall include analysis of open and closed drainage system alternatives, examining effects upon the basic water budget and upon the speed of transport of contaminants.

(2) Material effects upon wildlife habitats, outstanding botanical features and scenic or historic qualities and character.

(3) Capability of soils, vegetative cover and proposed erosion control efforts to support proposed development without danger of erosion, silting or other instability.

(4) Relationship to the requirements of M.G.L. Ch. 131, Section 40 and 40A, the Wetlands Protection Act and the Town of Sturbridge Wetlands Protection Bylaw.

(5) Impact upon the existing water supply and distribution systems and well capacity of the town.

(6) Pretreatment of waste materials considered by the Department of Environmental Protection to be hazardous to the public, including but not limited to the proper containment and handling of petrochemical substances.

(7) Projected municipal water supply, demand, flows and pressure.

E. Community Impact Analysis

If the subdivision contains more than twenty-five (25) units, an impact analysis, quantitative and qualitative, shall be prepared showing the effect of the proposed project on school enrollments, police and fire services, traffic impacts and municipal services

F. Performance Guaranty

(1) Form of Guaranty Before the Planning Board endorses its approval of a definitive plan, the developer shall agree to complete, without cost to the town, all improvements required by this regulation and shall provide security that he will do so, either by covenanting not to sell or build upon any lots until completion of the improvements (which covenant must be referred to on the plan and registered or recorded with it) or by posting bond or other security which the town can utilize in the event that the improvements are not completed within two (2) years (unless a phasing plan has been approved) or by some combination of these. Such security shall provide, among other things, that no building permit shall be issued until streets or ways serving such structures have been graded to within one (1) foot of final subgrade and that no structure shall be occupied until streets or ways serving such structure have been surfaced with at least the two-inch (minimum) binder course. The Board may grant partial release from such security for partial completion of improvements, provided that the completed portion provides a reasonable system for circulation and utilities pending completion of the rest. The Board may release the developer from the covenant upon receipt of an agreement executed by the applicant and by the holder of a first mortgage on the premises providing for retention of funds and their availability to the town upon default. (See M.G.L. Ch. 41, Section 81-U, 11th paragraph.)

(2) Release of Guaranty Following request for final release of the guaranty (either bond or covenant) and at least thirty (30) days prior to granting same, the Planning Board shall give public notice of the

request for release by advertising, at the expense of the subdivider, in a newspaper enjoying substantial circulation in the community. Full security shall not be released until the integrity of road pavement and drainage has been verified following a full winter of use, December 21 to March 21, until trees and other vegetation have been established, until as-built plans are received and until a report, in writing, has been received by the Board from the Department of Public Works Director stating that the work has been fully completed in an acceptable manner. See appendix

(3) Bond Estimate and Bond Reductions

- a. Along with each request from a developer for a bond estimate or a bond reduction, a fee, as established by the Town of Sturbridge, shall be paid.
- b. Said fee represents the costs incurred by the Town of Sturbridge or its designee to review said bond estimate or bond reductions.
- c. Reductions for systems (water, sewer, drainage) shall not be granted until the system is complete, tested by a certified engineer or agent and operational.
- d. There is a twenty five percent (25%) contingency added to the total bond estimate for the entire subdivision and the Board retains a minimum of ten percent (10%) of the original bonding amount for maintenance of streets and systems. In the case of a non-private street, drainage and town utilities, if present, and the cleaning of structures of debris, this security is released only after the subdivision street(s) has been accepted by the Town Meeting. This retained sum is released for private streets at the Board's discretion.

(4) **Town Acceptance of Improvements** If a definitive plan shows streets or roadways that will become town streets or roadways, a nonrefundable fee, as established by the town, shall be paid to the Town of Sturbridge for each such street or roadway before the Planning Board releases security for the street or portion of the street. Said fee shall be used to defray the engineering, GIS mapping, legal, appraisal, recording and administrative costs related to the town's acceptance and acquisition of such streets or roadways and any underlying or related sewer, water, drainage or other easements or interests.

(5) No bond estimate or reduction shall be established or released without a DPW inspection and written memorandum of recommendations to the Planning Board.

G. Review by Board of Health

The Board of Health shall report to the Planning Board, in writing, its approval or disapproval of the plan and, in the event of disapproval, shall make specific findings as to which, if any, areas shown on such plan cannot be used for building sites without injury to the public health and include specific findings and the reasons therefor in such report and, where possible, shall make recommendations for the adjustment thereof. Particular attention shall be paid in those cases where the developer has proposed low-pressure sewerage systems. Recommendations shall be made as to the suitability of such systems instead of a gravity system. The Board of Health shall send a copy of such report, if any, to the person who submitted said plan. Any approval of the plan by the Planning Board shall then only be given on condition that no building or structure shall be built or placed upon the areas designated without written consent of the Board of Health which shall endorse on the plan such condition, specifying the lots or land to which said condition applies.

H. Public Hearing

(1) **Definitive Plan** Before approval of the definitive plan is given, a public hearing shall be held by the Planning Board. Notice of such hearing shall be given by the Planning Board by advertisement at

applicant expense in a newspaper of general circulation in the town, once in each of two (2) successive weeks, the first publication being not less than fourteen (14) days before the day of such hearing. A copy of said notice shall be mailed by the Planning Board at applicant expense to the applicant and to all owners within three hundred (300) feet of the subdivision as appearing in the most recent tax list.

(2) **Waivers** Requests for waivers from these Planning Board regulations shall be submitted with the definitive plan and either stated on the plan or contained in a separate instrument attached thereto and referred on said plan. All such requests for waivers shall be heard at the public hearing on the definitive plan. For each waiver requested, the applicant shall provide the following data for application review: the reason the waiver is requested, alternatives to granting the waiver, impact of waiver denial on the project, and reasons the applicant believes the granting of the waiver is in the best interests of the Town,

I. Decision After the public hearing, the Board will approve, modify and approve, or disapprove the definitive subdivision plan submitted. Criteria for action by the Board shall be the following:

- (1) Completeness and technical adequacy of all submissions and payment of all required fees.
- (2) Determination that development at this location does not entail unwarranted hazard to safety, health and convenience of future residents of the development or of others because of possible natural disasters, traffic hazard or other environmental degradation.
- (3) Conformity with the requirements of Article IV Design and Construction Standards of this regulation.
- (4) Determination, based upon the environmental analysis (where submitted), that the subdivision as designed will not cause substantial and irreversible damage to the environment, which damage could be avoided or ameliorated through an alternative development plan.
- (5) Conformity with all applicable zoning requirements, special permits or variances.
- (6) Consistency with the purposes of the Subdivision Control Law.
- (7) Notice of such action, or of an agreed extension of the time for such action, must be provided by the Planning Board to the Town Clerk within ninety (90) days following the date of submission of the plan if it follows a preliminary plan, or one hundred thirty-five (135) days following the date of submission in cases where no preliminary plan was submitted.
- (8) Condition of approval.
 - (a) Any definitive subdivision plan approved hereunder, or any modification of any such subdivision plan previously approved, shall receive an approval which shall be automatically limited to a period of two (2) years, unless a phased plan has been approved; or unless one of the following two events occurs within two years from the date of approval of such plan and not the date of endorsement nor the date of recording of such plan:

[1] Event 1. Issuance of a determination of completion by the Department of Public

Works Director in accordance with Section 16E and a vote of acceptance by the Planning Board of the determination of completion, which said determination shall then be recorded with the Town Clerk and binding on all parties.

[2] Event 2. Issuance of a one-year extension by the Planning Board, which extension may only be granted upon petition by the applicant before the initial term expires; such a request for extension shall be deemed to be a request for modification of the approved definitive subdivision plan.

(b) In the event than an applicant has failed to so perform within the requisite period, the previously issued conditional approval is deemed rescinded without any further action by the Planning Board and no extension or modification shall be granted. An applicant may apply for a new definitive subdivision plan approval for the site; however, the application will be subject to all the rules and regulations then in effect.

(c) In every event, the Planning Board shall retain jurisdiction over every subdivision until such time as the determination of completeness has been accepted by the Planning Board.

J. Certificate of Approval Any actions, approvals, certifications, endorsements and other votes taken under the Subdivision Control Law shall be by a majority of the members of the Board. Such majority shall be considered the quorum of the Board, and a concurring vote of such quorum shall be necessary to affect a favorable action.

(1) Certificate

- (a) The action of the Board in respect to such plan shall be by vote. Copies of the vote shall be certified and filed with the Town Clerk and sent by delivery or registered mail to the applicant. If the Board modifies or disapproves such plan, it shall state in its vote the reasons for its actions. Final approval, if granted, shall be endorsed on the original drawing of the definitive plan by the signature of a majority of the Board or by the signature of the person officially authorized by the Board, but not until the statutory twenty-day appeal period has elapsed following the filing of the certificate of the action of the Board with the Town Clerk and said Clerk has notified the Board that no appeal has been filed.
- (b) Prior to endorsement by the Planning Board, the applicant shall submit the approved version of the plan on a CD Rom in AutoCAD Release-14 format (or any subsequent release which the Sturbridge Town Planner adopts), to the Planning Board for review and approval. The digitized version of the definitive plan shall be identical, full size, and shall contain all
- (c) information included on the plan of land, topographic plan views, and plan and profile sheets. Layer names shall conform to Town Planner standards. Failure to submit such information shall be cause for the Planning Board to rescind approval or not to endorse said plans.
- (d) After the definitive plan has been approved, endorsed and registered, the applicant shall furnish the Board with five (5) prints thereof. Said plans shall contain the following: the title of the definitive plan, street numbers and street names and Worcester County Registry of Deeds references.

- (e) Final approval of the definitive plan does not constitute the laying out or acceptance of streets within the subdivision by the Town of Sturbridge.
- (1) Rescission Failure of the developer to record the definitive plan within a six-month period of its endorsement or to comply with the construction schedule of the performance agreement shall constitute sufficient reason for the Planning Board to consider rescission of such approval, in accordance with the requirements of M.G.L. Ch. 41, Section 81-W.

ARTICLE IV DESIGN AND CONSTRUCTION STANDARDS
SECTION 9 GENERAL

A. Base Requirements The subdivider shall observe all design standards for land subdivision as hereinafter provided. These standards shall be considered minimum standards and shall be varied from or waived only as provided for in Section 17.

B. Design Guides

(1) Requirements All subdivisions shall be designed and improvements made by the developer consistent with the requirements of Section 9 and the typical cross section details. See appendix. When in conflict, the design guidelines, as approved by the DPW Director and accepted by the Planning Board, shall prevail.

(2) Mitigation Design and construction shall reduce, to the extent reasonably possible, the following:

(a) The volume of cut and fill.

(b) The area over which existing vegetation will be disturbed, especially on land within two hundred (200) feet of a wetland, river, pond or stream or having a slope of more than fifteen percent (15%) or overlying easily eroded soils.

(c) A calculation of the number of trees to be removed.

(d) The extent of waterways and wetlands altered or relocated.

(e) The visual prominence of man-made elements not necessary for safety or orientation.

(f) The removal of existing stone walls.

(g) The visibility of building sites from existing streets.

(h) The number of driveways exiting into existing streets.

(i) The alteration of groundwater or surface water elevations or chemical constituents.

(j) The disturbance of wildlife habitats, botanical features and scenic or historic qualities and character.

(k) The soil loss or instability during and after construction.

(l) Dust and noise.

(3) Enhancement. Design and construction shall increase, to the extent reasonably possible, the following:

(a) Vehicular use of major streets to avoid traffic on streets providing house frontage.

(b) Visual prominence of natural features of the landscape.

(c) Legal and physical protection of views from public ways.

(k) Use of curvilinear street patterns.

(l) Public space and pedestrian linkages.

(m) Preservation of the natural vegetative cover and type and existing topography.

(n) Landscaping and tree plantings

(o) Neighborhood character that fosters community spirit and a sense of place.

C. Floodplain District. All subdivision proposals shall be reviewed to determine whether such proposals will be reasonably safe from flooding. If any part of a proposed subdivision is located within the Floodplain District established under the Zoning Bylaw it shall be shown on the plans and reviewed to assure that:

(1) The proposal is designed consistent with the need to minimize flood damage.

(2) All public utilities and facilities, sewer, gas, electrical and water systems, are located and constructed to minimize or eliminate flood damage.

(3) Adequate drainage systems are provided to reduce exposure to flood hazards.

(4) Base flood elevation (the level of the one-hundred-year flood) data is provided for proposals greater than five (5) acres for that portion within the Floodplain District.

D. Construction Standards To ensure high quality and uniformity of construction, and unless otherwise specified, all the work and the materials used shall conform to the requirements of the Commonwealth of Massachusetts, Department of Public Works, Standard Specifications for Highways and Bridges, the latest edition, as amended, hereinafter referred to as the "Standard Specifications," and to these regulations. Where in conflict, the provisions of these regulations shall apply.

SECTION 10, STREETS

A. Classification

(1) Streets within a subdivision shall be classified as follows:

(a) Major: A street which carries traffic equivalent to that generated by fifty (50) dwelling units or more or which serves property either used or zoned for commerce or industry.

(b) Collector: A street which carries traffic equivalent to that generated by more than twelve (12) but fewer than fifty (50) dwelling units, which has no abutting property either used or zoned for commerce or industry and which is not capable of extension to serve more than fifty (50) dwelling units.

(c) Minor: A street which carries traffic equivalent to that generated by twelve (12) or fewer dwelling units, which has no abutting property either used or zoned for commerce or industry and which is not capable of extension.

(2) In determining the classification of subdivision roads, the Board shall take into consideration abutting developable lands, the extension of utilities; and the traffic volumes and character of the roads to which they connect.

B. Location and Alignment

(1) Safety and attractiveness. All streets in the subdivision shall be designed so that, in the opinion of the Board, they will provide safe vehicular and pedestrian travel. Due consideration shall also be given by the subdivider to the attractiveness of the street layout in order to obtain the maximum livability and amenity of the subdivision.

(2) Conformance to study plans. The proposed streets shall conform to any master or study plan as adopted in whole or in part by the Board or the Town of Sturbridge.

(3) 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.

(4) Intersections and Access

(a) Streets shall be laid out so as to intersect, as nearly as possible, at right angles. The Board may disapprove any intersection less than ninety (90°) degrees. In no case may a street intersect any other street at less than seventy degrees (70°).

(b) Provision satisfactory to the Board shall be made for the proper projection of streets and for access to adjoining property which is not yet subdivided.

(c) Intersections of paved street side lines shall be rounded with a curve of not less than a thirty-foot radius, measured at the curb line.

(5) Center Line

(a) The minimum horizontal center-line radius of any curve on a collector or minor street shall be one hundred fifty (150) feet and two hundred (200) feet on a major street. The Planning Board may require a greater radius where deemed necessary for the public safety. In rare cases, a shorter radius may be allowed if the Planning Board and DPW determine that a shorter radius will result in the preservation of trees or other natural features without detriment to public safety.

(b) Center-line offsets for intersecting streets shall not be less than two hundred (200) feet.

(c) In all cases, the center line of the paved surface shall be coincidental with the center line of the right-of-way, unless specifically approved by the Board and DPW and notated on the plan submittal.

(6) **Sight Distances** Sight distance requirements along roadways and at intersections shall be evaluated under two categories as defined by the Massachusetts Highway Department in its most current Highway Design Manual: Stopping Sight Distance (SSD) and Intersection Sight Distance (ISD). At a minimum, stopping sight distance criteria shall be met along every roadway utilized for direct access/egress to and from a parcel; that is, along any internal site roadway/driveway, as well as existing or proposed off-site roadways providing direct access/egress to and from the parcel. On existing roadways utilized for direct site access/egress, the SSD criteria shall only be applicable in the area of an intersection with a proposed site roadway/driveway.

For larger subdivisions, in addition to the SSD criteria as detailed above, decision sight distance (DSD) shall also be met at any existing or proposed intersection utilized for direct access/egress to and from the parcel. That is, any intersection of an existing roadway and proposed site roadway/driveway and/or an intersection of two existing roadways in close proximity to proposed site access/egress. Larger subdivisions shall be defined as any proposed development which shall generate in excess of 120 trips per day as calculated utilizing the current edition of the Institute of Transportation Engineers (ITE) Trip Generation manual, or with more than twelve (12) single family dwelling units.

C. Width Requirements

(1) Street right-of-way and pavement widths, measured inside of curbs or berms, (face curb to face curb), shall be as follows:

Type of Right-of-way	Street Width (feet)	Pavement Width (feet)
Major	60	32
Collector	50	26
Minor	50	22

(2) A narrower right-of-way and/or traveled way may be allowed if the Planning Board determines that a narrower right-of-way or traveled way will result in the preservation of trees and other vegetation and will be consistent with the location and character of the subdivision. Private retaining walls and other permanent structures are not to be proposed or constructed within the right-of-way.

(3) **Standards of Adequacy** The Board may require, as a condition of its approval of a subdivision plan, that the developer dedicate a strip of land for the purpose of widening ways providing access to the subdivision and that he either make physical improvements within such ways or compensate the town for the cost of such improvements in order to meet the standards specified above.

D. Grade

(1) **Design** Street grades shall be designed in relation to existing grades such that the volume of cuts and fills made within the right-of-way approximately balances, except to offset peat, boulders or other unusable materials to be removed.

- (2) **Minimum and Maximum Grades** of streets shall not be less than one and five-tenths percent (1.5%). Grades shall not be more than six and zero-tenths percent (6.0%) for major streets nor more than eight and zero-tenths percent (8.0%) for all other roads.
- (3) **Leveling Area** On any street where the grade exceeds six and zero-tenths percent (6.0%) on the approach to an intersection, a leveling area with a slope of not more than three and zero-tenths percent (3.0%) shall be provided for a distance of not less than one hundred (100) feet, measured from the nearest exterior line of the intersecting street.
- (4) **Vertical Curves** All changes of grade exceeding one percent (1%) shall require vertical curves.
- (5) **Right of Way Grade** Proposed grades within the right-of-way shall not be more than five (5) feet above or below the existing grades unless specifically authorized by the Board in unusual topographical circumstances. At any time the proposed right of way grades are below the existing right of way grades, the Department of Public Works may request soil borings be performed to determine soil conditions and the annual high water table elevation. Based on the results, an under-drain system may be required by the Department of Public Works. The Department of Public Works shall observe all testing.
- (6) **Cul-de-sac (turnaround) Grades** Proposed cul-de-sac or turnarounds shall contain slopes of not more than three and zero-tenths percent (3.0%) starting from a distance of not less than fifty (50) feet measured from the throat of the cul-de-sac or turnaround area.

E. Dead-end Streets

- (1) Dead-end streets shall be provided at the closed end with a turnaround capable of serving a vehicle of a thirty-foot length and having an outside turning radius of no less than fifty-seven (57) feet. The right of way radius will be no less than sixty (60) feet; the pavement radius no less than fifty (50) feet and all pavement shall be kept within the right of way.
- (2) Dead-end streets shall serve no more than ten (10) dwelling units and shall be no longer than five hundred (500) feet but at least two hundred (200) feet, measured from the center of the turnaround to the side line of the closest connecting through street. The Planning Board may approve dead end streets of longer lengths if, in its opinion, such longer lengths are necessitated by topography, wetlands, or other local conditions, and the granting of which is in the interests of the community.
- (3) For the purposes of this section, any proposed street which intersects with a dead end street shall be deemed an extension of that street. Dead end streets in excess of 500 feet shall have looped water lines. An extension of a water line to the boundary of the land within a subdivision for the purposes of providing a physical loop at a later date shall not be considered "water looping".
- (4) Where through streets on the plan that are not to be initially constructed, the developer shall provide for paved temporary turnarounds suitable for snowplowing and other municipal purposes, to be approved by the Board, before any houses on such streets can be issues a certificate of occupancy.
- (5) Approval of dead-end streets may be contingent upon provision of easements and

necessary facilities to allow continuity of utility, drainage systems, dry hydrants and snow storage. Water mains shall normally be looped.

F. Construction

(1) Layout, Clearing and Grubbing Prior to starting any construction activities, a Massachusetts registered land surveyor shall set offset grade stakes along the roadway right-of-way, centerline, sidelines, and sidewalks at fifty foot (50') intervals. All trees to be preserved shall be flagged and protected during the construction period. The site shall be walked with the Tree Warden, acting as the designated representative of the Planning Board. Clearing and grubbing shall be performed to remove stumps, brush, roots, boulders and like material from the area of the traveled way, shoulders, sidewalks and utility trenches, but elsewhere, wherever feasible, existing vegetation shall be protected.

(2) Sub-grade

(a) When establishing the roadway subgrade, all existing material shall be removed to the subgrade plane as defined by the typical cross-section (see Appendix) for the entire width of the finished roadway. If, however, the soil is soft and spongy or contains undesirable material such as clay, sand pockets, tree stumps, stones over six (6) inches in diameter or any other material detrimental to the subgrade, a deeper excavation below the subgrade shall be made as required by the Department of Public Works Director.

(b) At this point all utilities, including drainage, water and sanitary sewer and cable (where applicable), shall be installed and brought to the property line in accordance with these regulations.

(c) Any excavated or natural area below the subgrade shall be filled to the subgrade with suitable granular material, to be approved by the Department of Public Works Director prior to its installation.

(d) The entire roadway width then shall be rolled with a roller having an effective force of twelve (12) tons, forming the subgrade with a three-eighths-inch-per-foot crown, as required on the cross-section plan.

(3) Gravel Base

(a) The gravel base of the roadway and sidewalks shall consist of unfrozen, hard, durable stone and coarse sand, free from loam and clay, uniformly graded, containing no stone having a diameter of more than three (3) inches and conforming to the requirements of the Standard Specifications (Section M1 .03.0 Type B).

(b) Gradation tests (sieve analysis) shall be performed by an independent testing laboratory on the material to be utilized as gravel base and shall be submitted to the Department of Public Works for review. This analysis, to be done at the expense of the subdivider in advance of applying or grading the material, shall certify that said material falls within the allowable limits for gravel borrow in accordance with the Standard Specifications. The Department of Public Works Director may, at any time during the roadway construction, require additional sieve analyses.

(c) The subdivider must demonstrate to the Department of Public Works Director that he has

sufficient suitable material on site, or he shall have to haul in gravel conforming to the Standard Specifications. His intent shall be made clear to the Director.

(d) Before the gravel is spread, the roadbed shall be sloped to a true surface, conforming to the proposed cross section of the road, and no gravel is to be spread until this subgrade is approved by the Department of Public Works Director.

(e) Gravel for base shall be spread in two (2) layers of equal thickness, each thoroughly rolled true to lines and grades with a roller having an effective force of at least twelve (12) tons so as to yield a total depth of twelve (12) inches after thorough compaction. Any depression or soft spots that appear during or after rolling shall be filled with crushed bank gravel and be re-rolled until the surface is true and even. Gradation and compaction tests shall be performed and submitted to the Department of Public Works for review. Testing shall be done by a certified laboratory; results shall be certified and be satisfactory to the Department of Public Works Director prior to placement of base course of pavement.

(f) All sidewalk areas shall be provided with a gravel base foundation consistent with that required for roadways, except that the compacted depth shall be eight (8) inches and the slope of the base shall be three-eighths (3/8) inch per foot, sloping from the back of the sidewalk towards the curb. Gradation and compaction tests shall be performed and submitted to the Department of Public Works for review.

(g) Each layer shall be compacted to not less than ninety-five percent (95%) of the maximum dry density of the material, as provided in the Standard Specifications. The rolled gravel shall be tested for compaction. All such tests shall be submitted to the Department of Public Works for review and shall be made at the expense of the developer.

(h) Before pavement is placed, the rolled gravel base and sidewalk base shall be surveyed by a registered professional land surveyor. As-built plans in plan view with an accuracy of one-tenth foot vertical at every 100-foot station along the centerline, sidelines and sidewalks shall be submitted to the Department of Public Works for review. They shall also include water, sewer, and storm drainage systems, inverts, services and service stubs. In addition, the topography of drainage facilities shall be provided at one-foot accuracy. All shall be approved by the Department of Public Works Director prior to paving.

(4) Pavement. A two-course bituminous concrete surface shall be applied to residential streets. A three-course bituminous concrete shall be applied to commercial and industrial streets. The first course for residential streets shall be a binder course as defined by the Standard Specifications, which, after compaction is two and one half (2 ½) inches thick. The first course for commercial and industrial streets shall be a base course as defined by the Standard Specifications, which, after compaction, is four (4) inches thick. The second course for commercial and industrial streets shall be a binder course as defined by Standard Specifications, which, after compaction is two and one half (2 ½) inches thick. Gradation (sieve analysis) and asphalt content tests shall be performed on the material utilized as base course and/or binder course after it has been placed, and submitted to the Department of Public Works for review. All pavement shall be machine placed and rolled with a tandem roller having an effective force of not less than twelve (12) tons. If requested by the Department of Public Works Director, compaction and plane of finished surface tests shall be performed on the base and/or binder course once in place. All requested testing shall be performed

by an independent testing laboratory at the expense of the subdivider. The binder course must remain through one (1) complete winter (December 1 to March 31). After wintering over and prior to the finished course of pavement being applied, the binder course shall be approved by the Department of Public Works Director; then the following steps shall be taken to complete the roadway pavement:

(a) Paving will not be allowed if it is raining or the roadway is wet, if frost is present, or when the air temperature is below forty degrees Fahrenheit (40° F.). The temperature of the bituminous concrete mixture shall be a minimum of 290° F prior to being placed and a minimum of 1700 after intermediate rolling, all in accordance with standard Specifications.

(b) All frames, grates, manhole covers and water gates shall be adjusted to the proper finished grade by setting the same in a two-thousand-five-hundred-pound-per-square-inch concrete bed. Any depressions or irregularities in the binder pavement are to be cut out to a depth of eight (8) inches and replaced with similar concrete and hot binder at least one (1) week before final paving.

(c) The binder course pavement must be swept clean of all loose material. A tack coat of emulsified asphalt shall be applied with a pressure distributor at a rate of ten-hundredths (0.10) gallons per square yard, immediately preceding the top course paving. An environmentally safe synthetic mat specifically designed for the purpose may be substituted for the tack coat of emulsified asphalt.

(d) The finished course of Type I-i bituminous concrete top course shall be applied to a one and one half (1 ½) inch thickness after compaction on residential, commercial and industrial streets, with a roller having an effective force of not less than twelve (12) tons. No greater than one percent (1%) of finished road shall have exposed aggregate defined as greater than one-eighth inch depression around the stone. Any sections of finished road surface with exposed aggregate that is greater than two feet square in area shall be removed and replaced with new finished surface. Loose aggregate is not allowed at any time.

(e) The developer shall make and maintain all subdivision roadways so that any and all occupied dwelling units within the subdivision are easily accessible to all municipal and emergency services. In addition to the above requirement, the developer must comply with the following conditions to the satisfaction of the Department of Public Works Director prior to the first day of December (the beginning of the wintering over period):

[1] All roadways shall be prepared in such a manner that all manholes, catch basins, valve gates or other structures in the roadway are installed with bituminous paving around the perimeter of each such structure such that a smooth transition is maintained between the top of each structure and the road surface.

[2] No curbing or any other material shall be left in the roadway(s).

[3] At the discretion of the Director of Public Works, temporary installation of catch basin gates may be required at levels lower than the base coat elevation so as to make them functional prior to application on the finish coat.

(f) If requested by the Department of Public Works Director, compaction and plane of finished surface tests shall be performed on the top course paving once in place. All requested testing shall be performed by an independent testing laboratory at the expense of the subdivider. The Director of Public Works may request remedial repairs or replacement of any portion of the pavement system if it fails to meet these and/or the Standard Specifications.

G. Driveways

- (1) **Location** Driveway cuts shall not be allowed within sixty (60) feet of the intersection of the center line of intersecting streets. In no instances shall catch basins be located along a driveway curb opening. Driveway openings shall be shown on the definitive plan.
- (2) **Paving** Driveways shall be paved from the curb to the right-of-way property line. That portion of all driveways within the street right-of-way limits shall be constructed to the same specifications as the roadway: twelve-inch gravel base binder at two and one half (2 ½) inches after compaction and top coat at one and one half (1½) inches after compaction. Sidewalk grades shall be continuous across driveway openings. Transition in grade of no more than two inches will be allowed.
- (3) **Width** Driveways shall be at least ten (10) feet wide and shall have an opening of at least sixteen (16) feet in the curb at the gutter line. Driveways of more than three hundred (300) feet in length shall be twelve (12) feet wide and shall provide a turnout for emergency access.
- (4) **Grade** At all driveways the grade at the back of the sidewalk shall be at least six (6) inches higher than the grade at the gutter line.
- (5) **Other** The junction of sidewalks, driveways and roadways shall be constructed in such a manner as to prevent recessed areas where puddles may form.
- (6) **Access** Driveways serving the premises shall provide access through the required frontage of the serviced lot.

H. **Curbing** The Department of Public Works shall determine the curbing material: granite, pre-cast concrete or bituminous concrete.

- (1) **Type** Curbing shall be placed the full length of all streets. The type shall be VA4 (Massachusetts Department of Public Works Specification M9.04.1) vertical granite where high-frequency parking is anticipated, such as where multifamily units are to be near the street or at drop-off points in nonresidential development. At all other locations, curbing shall be Type SB sawn (smooth) top slant granite (Massachusetts Department of Public Works Specification M9.04.2).
- (2) **Slant Granite**
 - (a) Slant granite curbing shall be of lengths determined by the Department of Public Works to be adequate to serve the situation (Massachusetts Department of Public Works Specification M9.04.2). It shall be set on a compacted gravel at some angle not less than forty five degrees (45°) and not greater than sixty degrees (60°). In addition it shall have a reveal of seven (7) inches plus or minus three quarters inches (3/4"). It shall be supported in place by blocks or undisturbed earth. The granite shall be set in a concrete base approximately six (6) inches square

which shall abut against the binder course. The concrete shall be placed in front and under the granite during an initial pour. The concrete shall be placed in back and under the granite during a second pour. The top course of paving will cover the concrete and key the granite in place. Joints on the face and top of the granite curb shall be mortared.

(b) The angle, alignment and reveal shall be uniformly maintained.

(3) Vertical granite. Vertical granite curbing shall be upright four-foot-minimum lengths, finished side facing the traveled way, with a reveal of eight (8) inches. It shall be installed in accordance with the specifications of the Massachusetts Department of Public Works (Section 50i).

(4) Driveways

(a) Two foot vertical granite radius corner-pieces shall be placed at all driveway openings along vertical granite curbing.

(b) Transition pieces shall be placed at all driveway openings along slant granite curbing. The

transition shall be a piece of slant granite curbing (minimum length four feet) that starts with proper angle reveal and tilts downward to be flush with finish grade at the driveway opening.

SECTION 11 STORMWATER MANAGEMENT

A. General Approach

1. Protection The definitive plan shall provide adequate drainage facilities within the subdivision for collecting, conveying and disposing of stormwater in a manner which will ensure proper protection of the roadway and the areas adjacent thereto. The definitive plan shall provide for recharging groundwater with pre-treated (if applicable) stormwater in an amount equal to or exceeding pre-development conditions.

2. On-site Recharge Developers will submit a detail of the stormwater treatment facility showing side stabilization, depth and soil character. Stormwater treatment facilities shall be employed to trap possible pollutants and handle peak stormwater flow into any off-site wetland, water body or drainage facility so that said flow will, in a ten-year and also a one-hundred-year storm, be no higher following development than it was previously. The grading for these components must blend in naturally with existing contours. Subdivisions may not increase the peak rate and volume of stormwater flow, or increase the contaminant burden from stormwater flows. The Board may authorize an increase following applicant demonstration that such increase will cause no environmental harm or damage to public or private property. Where the only method of drainage is via public or private property, the subdivider shall furnish plans, obtain easements where necessary in the town's behalf and assume all financial responsibility for drainage of the area. All drainage facilities proposed shall utilize Best Management Practices as outlined in the current stormwater management policy promulgated by the Commonwealth of Massachusetts.

3. Stormwater management components must be located on individual parcels with access, to be conveyed to the town through Town Meeting action.

4. Closed systems. Drainage system design shall provide for a closed drainage system (stormwater carried on the street surface to catch basins to storm sewers discharging to surface

waters). No catch-basin-to-catch-basin connections will be allowed.

(5) Lot Drainage Lots shall be prepared and graded in such a manner that development of one shall not cause detrimental drainage on another. If provision is necessary to carry drainage to or across a lot, an easement or drainage right-of-way of a minimum width of twenty (20) feet and proper side slope of at least three to one (3:1) shall be provided. Storm drainage shall be designed in accordance with the specifications of the Board. Where required by the Planning Board, the applicant shall furnish evidence as to any lot or lots for which adequate provision has been made for the proper drainage of surface and underground waters from such lot or lots.

B. Construction

(1) General Culverts shall be designed to accommodate a fifty-year-frequency storm; underground storm drains, catch basins and related installations shall be designed to accommodate a twenty-five-year-frequency storm with a design velocity of between two and five-tenths (2.5) feet and ten and zero-tenths (10.0) feet per second. In high volume conditions [greater than fifteen (15) cubic feet per second (CFS)], the maximum design velocity shall not exceed eight (8) feet per second.

(2) Piping

(a) The drainage pipe shall be N-12 or reinforced concrete, with bell and spigot gasketed joints. The pipe shall be Class III in accordance with ASTM C-76. The gaskets shall be O-ring type in accordance with ASTM C-443. The minimum diameter shall be twelve (12) inches. The pipe shall be laid in undisturbed trenches below the grade of pipes, starting with the downstream end on a firm bedding. All bells shall be facing upstream. Reference bench marks shall be clearly marked to enable the Department of Public Works Director to check the grade and invert elevations. The joints of all concrete pipes shall include a pre-molded neoprene continuous O-ring flexible compression gasket. No backfilling of pipes or culverts shall be done until the installation has been inspected and approved by the Department of Public Works Director. Backfilling shall be in layers not exceeding twelve (12) inches, with each layer compacted by an appropriately sized plate vibrator, regardless of the method of final compaction at the subbase or gravel base level. The minimum cover is thirty-six (36) inches above the top of the pipe.

(b) If required by the Department of Public Works Director, side under-drains shall be installed on both sides of all streets, except in fill sections, and connected to the surface drainage system. In circumstances where the groundwater table is not within four (4) feet of the finished grade and each linear foot of under-drain would serve a surface drainage area of not more than twenty (20) square feet, or in other circumstances which would render such under-drains superfluous, the Department of Public Works may waive such requirement. The side drains shall be shown in cross-section detail.

(c) At each outfall of a drain line, a Type B winged headwall of reinforced concrete shall be constructed according to the detail shown in the [Appendix](#).

(3) Catch Basins and Drain Manholes

(a) Catch basins shall be installed on both sides of the roadway on continuous grades at intervals not exceeding three hundred (300) feet, at low points on the roadway, at the corners of intersecting streets, within each turnaround and at such other locations as required by the Board.

Three (3) catch basins and two (2) manholes are required in turnarounds sloped towards the bulbed end. Two (2) catch basins and one (1) manhole are required in turnarounds sloped towards the entering roadway. No catch basins are allowed in driveway openings.

(b) Catch basins and drain manholes shall be constructed of pre-cast concrete eight (8) inches in thickness with an inside diameter of four (4) feet or more. They shall be built with horizontal and vertical mortared joints. The arch or cone section shall be twenty-four (24) inches in height consisting of a first row, second row, third row and a ring row (either round or square as appropriate). The cone section shall be mortared on the exterior. The faces of all pipes shall be flush with or project not more than four (4) inches into the basin or manhole. Precast catch basins and manholes may be used in lieu of concrete-block-masonry structures. Flat-topped structures are not allowed, unless with written authority of the Department of Public Works Director.

(c) Catch basins shall have a minimum sump of forty-eight (48) inches. They shall have a floor of pre-cast concrete plates, four (4) inches thick, laid flat with no weep holes.

(d) Drain manholes shall have a four-inch-thick concrete base. At least one (1) row of blocks shall be set on the base to allow the construction of a brick invert within the manhole. Arched inverts of one-half ($\frac{1}{2}$) the pipe diameter shall be sloped upward to the sides of the manhole. The tops of the main drain lines entering and leaving a manhole shall be matched.

(e) No more than four (4) pipe openings shall be allowed in any one (1) manhole. Four-foot-diameter manholes will be used for drains up to twenty-four (24) inches in diameter. Five-foot-diameter manholes are necessary for pipe diameters between thirty (30) and forty-eight (48) inches. All flows into a manhole shall be in the same direction (no reverse flows allowed), with a maximum angle between the main and any connecting line of ninety degrees (90°). All connecting lines shall have bricked inverts rounded into the direction of flow.

(f) Drain manholes shall be installed at all catch basin connections, at changes in grade, size and alignment, but in no event shall the distance between manholes exceed three hundred (300) feet.

(g) Catch basins and drain manholes shall be constructed with cast-iron frames and covers or grates. Frames must be set in a full bed of cement mortar. Bricks shall be used between the frame and top course for grade adjustment. They shall be laid in a radial fashion with full bearing on the ring row. A maximum of two (2) brick courses will be allowed. Frames shall be at least two hundred sixty-five (265) pounds. Covers or grates shall be no less than two hundred ten (210) pounds, in accordance with the Standard Specifications and shall be of North American manufacture. The word "drain" shall be cast into the solid cover in letters at least three (3) inches in height.

(h) Manhole casting shall be set flush with the designed finish grade of the pavement. Catch basin grates shall be set one (1) inch below the finished gutter grade and shall be of the egg-box variety (square openings). Manhole castings and catch basin grates shall not be raised until thirty days prior to final paving. If paving does not occur within said thirty days, they shall be lowered immediately. Ramping is prohibited.

- (i) Details of standard manhole, catch basin, frame and grate and curb inlet are shown in the Appendix.
- (j) Drain manholes shall have rung manhole steps fifteen (15) inches on center built into the vertical side.

SECTION 12 UTILITIES.

A. Water Supply

(1) Design

(a) **Public Supply Standards** Where feasible, water supply shall be provided from a public water supply system. In such cases, the water supply system will be considered adequate only if it is capable, without booster pumps, of providing each proposed fire hydrant with a minimum flow of seven hundred fifty (750) gallons per minute at twenty (20) pounds per square inch residual pressure for single-family residential developments, or at some other capacity approved by the DPW Director and Fire Chief.

(b) **Public Supply Responsibility** If connection to a public water system is proposed but it is determined by the Board that the above standards will not be met in part or all of the subdivision, the Board may nevertheless approve the plan subject to a condition that any lot not adequately served shall not be built upon until service has been made adequate.

(c) **Private Supply Standards** Where connection to an adequate public water supply is infeasible prior to the time that lots will be built upon, the Planning Board shall approve a subdivision only upon making the following determinations:

[1] That adequate water supplies are available for fire safety through reserved access to an existing or created fire pond, dry hydrants piped to such a pond or other means to be determined following consultation with the Fire Department; and

[2] That water supplies for domestic use are likely to be able to meet Board of Health or DEP regulations for yield and quality.

(2) Construction

(a) Public water mains shall be not less than eight-inch diameter Class 52 cement-lined ductile-iron pipe with push-on gasket joints.

(b) Connection to existing town water mains shall be the subdivider's responsibility but shall be made only under the direction of a Department of Public Works Director. A water permit must be obtained from the Department of Public Works prior to tapping any main.

(c) Water mains shall be laid in a dry trench on a twelve-inch bed of sand or approved material. Construction pipe shall be manually tamped with sand the full length of the pipe up to one-half (1/2) the diameter of the pipe so as to eliminate any voids under the pipe.

(d) Water mains shall be laid to provide a minimum cover of five (5) feet below the finished grade and a maximum of seven (7) feet.

(e) A hydrant shall be located at each street intersection, and between intersections hydrant spacing shall not exceed five hundred (500) feet. Each hydrant shall be served directly from a water main through a six-inch mechanical joint connection with mega-lug restraint glands or approved equal. Hydrants shall be set in thrust blocks and of the type currently in use or approved by the Sturbridge Department of Public Works. A drainage sump of one-half (1/2) cubic yard's volume of one-and-one-half-inch stone shall be located at the base of the hydrant. Hydrants shall be located at the back of the sidewalk, with the breakaway hydrant flange at the finished grade or higher with a four-foot clear zone radius from the center nut and four inch steamer connection center line shall be a minimum of eighteen inches (18") off the ground. Hydrants shall be M+H 929 or approved equal and shall be located on lot lines where possible. If only one (1) sidewalk is to be installed, hydrants should be on the opposite side of the street. All hydrants shall be painted by the developer (color as determined by the Department of Public Works) after installation, prior to the first occupancy permit, once per year, and within six months of the release of final bonding moneys.

(f) All water gates and hydrant gates shall be epoxy coated. They are to be left to the finished grade in paved traveled ways and shall have a minimum of five (5) feet and a maximum of six (6) feet depth of cover. Service boxes are to be placed at the property line and to the finished grade, with a maximum depth of six (6) feet and a minimum depth of five (5) feet. Gate valves, of the type currently in use by the Department of Public Works, resilient seat openings left, shall be installed on each outlet of all tees and crosses, every one thousand two hundred (1,200) feet of main and on hydrant branches. Water main gates shall be located approximately six (6) feet from all road tees.

(g) All elbows, bends, tapping sleeves and tees shall be of ductile iron and designed for a working pressure of two-hundred (200) pounds per square inch. They shall be installed with concrete thrust blocks of poured-in-place two-thousand-five-hundred-pounds-per-square-inch concrete suitable in size to prevent pipe movement due to internal pressure changes or restrained joints approved by the Department of Public Works.

(h) House service shall be obtained by the subdivider for each dwelling unit. The Sturbridge Department of Public Works will provide a water meter pending the payment of fees, of its specification with outside register and inspect the house service. House service connections shall be Type K copper tubing of one-inch-minimum diameter. Service connections shall include a corporation stop [American Water Works Standards (AWWA) thread inlet] at the main and a curb stop with service box located behind the sidewalk at the property line. Corporation stops, curb stops and service boxes shall be of a type approved by the Department of Public Works. The subdivider shall provide the Department of Public Works with suitable sketches showing ties to all water gates, stops and curb stops before acceptance of the system. On field inspections, the developer shall supply manpower to assist the Department of Public Works in the inspection of all water service boxes and water main gates to assure that all are in working order. Before final bonding moneys are released, the developer must submit all ties to water gates and service boxes to the Engineering Department for filing. Failure to provide proper service ties will be cause for rejection. The system shall be pressure tested to 180 pounds or twice the working pressure.

(i) The installation of water pipes or related equipment shall not be backfilled until inspected by the Department of Public Works. Backfilling and compaction techniques are the same as those for drainage.

(j) Upon completion of the water main and prior to putting it into service, leakage and pressure tests are

to be conducted in accordance with AWWA standards by a competent independent testing company approved by the Department of Public Works. After successful testing, mains shall be chlorinated according to AWWA specifications by a competent third party. Before mains are put into service, written test results for leakage and chlorination must be presented to the Director of the Department of Public Works. Chlorination tests are to be conducted by a laboratory approved by the Department of Environmental Protection. Both leakage and chlorination tests are to be witnessed by a Department of Public Works Director. Any defects shall be corrected immediately.

(k) In the absence of town water or where water pressure is inadequate, the developer may be required by the Board to provide a dry hydrant (s) or farm pond to allow for fire protection. Such systems shall be approved by the Fire Chief and shall be conveyed to the Town as public infrastructure.

B. Sanitary Sewers

(1) Design.

- (a) Sanitary sewers, including all appurtenances, shall be designed to serve all lots in a subdivision and to provide connection to the municipal sewerage system wherever possible. Where no municipal system exists to tie into, on-site sewage disposal facilities shall only be installed and constructed in conformity with the rules, regulations and requirements of the Sturbridge Board of Health, DPW and state regulations.
 - (b) No portion of a sewerage system shall be approved if it requires a connection to the municipal system over land of other owners, unless appropriate easements are first obtained.
 - (c) Sewer grades shall be designed to allow sewer entrances below basement floor grades, where feasible.
 - (d) Public sewers shall be designed according to professional engineering practices by a registered professional engineer.
 - (e) The minimum design velocity of flow shall be two (2) feet per second.
 - (f) Manholes shall be located at every change in grade, change of horizontal alignment, change in pipe size and where two (2) mains intersect, but not more than three hundred (300) feet apart.
 - (g) All sewer tie-ins must be approved by the Board of Selectmen as soon as practical but no later than the Planning Board's close of the Public Hearing of the Definitive Subdivision Plan.
 - (h) All sewerage disposal systems shall be designed on a gravity system; however, when not feasible, a low-pressure system may be employed, with the approval of the Board of Selectmen under the Town's Sewer Regulations and Bylaws, Section 5.32, after review and recommendations by the Board of Health and DPW Director. A sewer pumping station may require a standby generator or other appurtenances as necessary, and is subject to design approval by the DPW Director.
- (2) Construction in All Locations.
- (a) Sewer pipes shall not be less than eight (8) inches in diameter and shall be Class SDR-35 polyvinyl chloride, ductile iron or reinforced concrete. The joining method shall be with o-ring

rubber gasket joints or other equals approved by the Department of Public Works. A six-inch bed of three-fourths ($\frac{3}{4}$) inch screen gravel stone shall be provided for the pipe, and an additional layer shall be provided to a height of one-half ($\frac{1}{2}$) the diameter of the pipe. To ensure proper installation of pipe laid to a minimum slope of one-half ($\frac{1}{2}$) foot per one hundred (100) feet, laser instruments shall be used to control the grade.

- (b) Manholes shall be a minimum of four (4) feet in diameter and shall be precast reinforced concrete. A four-inch-minimum base shall be constructed, on top of which a brick table inverted arch shall be built with the bricks laid on edge as stretchers. Rung manhole steps, fifteen (15) inches on center, shall be built into the vertical side of the eccentric cone section. A typical sanitary manhole section is shown in the [Appendix](#). Sewer manhole covers shall be flush with the finished grade and shall be constructed in accordance with applicable requirements of Section 11 B(3) (g) and (h) regarding drain manholes.
 - (c) Where sewer lines intersect with a manhole, brick invert arches are to be rounded into the flow line.
 - (d) The frame and cover for a sanitary manhole is similar to a drain manhole in every respect except that the name “sewer” shall be cast into the solid cover in letters at least three (3) inches in height.
 - (e) Standard Y-tees shall be installed in the main line for each residence or lot. The subdivider shall install the building sewer in accordance with the sewer regulations of the Town of Sturbridge from the main to the residence. A separate sewer permit shall be obtained from the Department of Public Works for each dwelling unit.
 - (f) The installation of public sewers or building sewers shall not be backfilled until inspected by the Department of Public Works. Backfilling procedures are the same as for drainage. The pipe must be properly tamped by hand with sand or suitable material up to one-half ($\frac{1}{2}$) the diameter of the pipe for the full length of the pipe, to eliminate any voids under the pipe. No sewer pipe shall be laid on a ledge. Where a ledge is encountered, the pipe shall be laid on a twelve-inch bed of sand or approved material.
 - (g) Before a new public sewer is accepted or placed in service, a low-pressure air test conforming to ASTM C828 and an infiltration/exfiltration measurement shall be performed to demonstrate the integrity of the sewer line and manholes. Lines demonstrating leakage of less than fifty (50) gallons per day per inch per diameter per mile shall be accepted or placed in service.
- (3) Construction within a Well Head Protection District
- (a) Sewer pipes shall be of material deemed watertight and corrosion-resistant. Solid-wall plastic pipe (polyvinylchloride (PVC) (Class SDR-35 minimum), ductile-iron pipe (Class 52 minimum), reinforced concrete cylinder pressure pipe and reinforced concrete pipe (RCP), or material of equal strength and durability according to ASTM standards and as approved by the Sturbridge Department of Public Works, shall be considered adequate for purposes of this section. In areas where a force main is required, only SDR-21 or -26 shall be used. Where a sewer line is to cross a creek, brook, stream or other body of surface water, the line shall be placed no less than two (2) feet below the creek, brook or stream bed, and the pipe shall be enclosed in concrete [four thousand (4,000) pounds per square inch] for all creek, brook or stream crossings, and the pipe must be

ductile-iron pipe, Class 53 minimum.

(b) Sewer joints shall be compression gasket joints. In areas where a force main is required, ductile-iron mechanical joints shall be used at all bends.

(c) Trenches shall be as narrow as engineering considerations allow, and bentonite dams shall be installed in all trenches. Bedding and backfill shall be a combination of both coarse and fine aggregate, and filter fabric shall be used in fine sands, silts or clay in bedding preparation. Construction shall proceed only in dry conditions.

(d) Manholes shall be precast concrete and designed with as fewer construction joints as possible, and all joints shall be sealed with neoprene O-rings or bitumastic sealant. In areas of the Water Resource District which lie within the Floodplain District, only watertight or bolt-down manhole covers shall be used.

(e) Before a new public sewer is accepted or placed in service, a low-pressure air test conforming to ASTM C826 and an infiltration/exfiltration measurement shall be performed to demonstrate the integrity of the sewer line and manholes. Within the Water Resource District, only lines demonstrating leakage of less than fifty (50) gallons per day per inch per diameter per mile shall be accepted or placed in service.

- (4) Sewer pump/lift stations shall be designed in accordance with the current standards and specifications of the Department of Public Works. Sewer pump stations shall be placed on a separate parcel with access easements, and shall be the responsibility of the developer and subsequently the home owner's association until such time as the town may assume ownership. Said pump stations with appurtenances shall be guaranteed from defect in construction and operation by the posting of a performance or defect guarantee for a minimum period of twenty years in an amount not to exceed twenty percent of the value of said improvement.

C. Other utilities.

- (1) Wiring. Electrical, telephone and television community cable conduits shall be placed underground. Size and materials of these conduits and lateral spacing between conduits shall meet the requirements of the respective utility company. The utilities shall not be located under the sidewalks. Poles and any associated overhead structures, of a design approved by the Planning Board, shall be provided for use for police and fire alarm boxes and any similar municipal equipment and for use for street lighting.
- (2) Street lighting. It is the responsibility of the developer of any subdivision within the Town of Sturbridge to provide for the installation of street lighting within that subdivision in accordance with National Grid/Massachusetts Electric Company "Street Lighting – Underground – Division of Ownership S-3" standards, as may be amended or updated from time to time by the Massachusetts Electric Company. In those situations where a dwelling unit is completed, the developer shall install all roadway lighting in those designated locations along the roadway that would be considered the normal path of ingress and egress to that dwelling. A developer may select either of the following options:

[1] Unaccepted street lighting. Where the town has not agreed or is likely not to accept future payment for street lighting, the developer, contractor or association of customers shall:

[a] Provide, install and retain ownership of all street lighting equipment, including underground conductors, conduits, foundations, poles and luminaries; and

[b] Contract directly with Massachusetts Electric Company to provide electricity for light operation and to service and maintain all equipment on a long-term basis.

[2] Accepted street lighting.

[a] Where the Town has accepted a roadway or is likely to accept street lighting, the developer, contractor or association of customers shall provide and install all street lighting, including underground conductors, conduit and foundations on which poles and luminaries are set; and provide and install such pole or enter into an arrangement with Massachusetts Electric Company to provide and install such poles at the developer's, contractor's or association's expense.

[b] In case of accepted street lighting, the town shall contract with Massachusetts Electric Company to provide electricity for light operation and to service and maintenance of equipment.

(3) Installation Street lighting shall be installed as follows: Within a subdivision, each intersection, intersecting way, cul-de-sac, curve [with a radius of sixty degrees (60°) or greater over a linear distance of two hundred (200) feet] or other road hazard shall be illuminated by a lighting fixture(s) which is to be installed on a structure(s) (pole, post, etc) nearest the road hazard identified.

The quantity, type and location of lights within a proposed subdivision shall be subject to Planning Board approval and shown on the definitive plan. The lighting fixture and structure specification is as follows:

[1] Fixture lumen rating: four thousand (4,000).

[2] Nominal structure mounting height above street grade: twenty-five (25) feet.

(4) Other Requirements

[1] All underground utilities shall be installed prior to application of the gravel base.

[2] All other utilities installed in a subdivision shall be shown on the as-built plans.

[3] All underground utilities shall be installed in a parallel fashion. The sewer line shall be in the center of the road and drainage and water on either side, with at least ten (10) feet separating the water and sewer lines.

(5) Detention Basins

Where employed, detention basins shall be designed in compliance with the following.

[1] Depth and grading. Basin overflow height shall be not less than one (1) foot above the highest water surface projected for the design storm, and shall not exceed five (5) feet above bed elevation. The slope of detention basin walls shall not exceed one (1) foot vertical in three (3) feet horizontal.

[2] Base Determination. The base of the detention basin shall be a minimum of two (2) feet above the maximum water table as defined by the Town of Sturbridge Board of Health regulations. (Deep tests shall be made between February 15 and May 15). Groundwater level shall be certified by a Massachusetts Registered Professional Engineer. The detention basin base must be entirely below the existing grade, not constructed on fill material.

[3] Inflow Inflow pipe invert shall be high enough that there will not be substantial backwater in the pipe with the detention basin at maximum depth. The downstream end of the inflow pipe shall be suitably protected against scour and shall protect the bed and sides of the basin.

[4] Outflow An outflow drain with trash interceptor shall be provided, with a design assuring that outflow will not exceed existing flows for any event up to the design storm, and that the basin will empty in not more than four (4) days in the design storm. In no case shall an outflow pipe shall be less than eight (8) inches in diameter. Outflow invert shall be not less than one-half (0.50) foot above bed elevation. An overflow weir protected against erosion shall be provided for accumulations exceeding those of the design storm.

[5] Planting. All disturbed areas including basin side slopes and bottom shall be provided with four (4) inches of loam, and seeded.

[6] Ownership Where the detention basin is to be owned by the town, it shall be located on a separate parcel that provides direct access from the nearest roadway. The developer shall provide easements for both the parcel and detention basin access before construction commences, and convey ownership to the town at the time of acceptance at Town Meeting.

[7] Maintenance. Maintenance of detention facilities, other off-street drainage elements and access shall be assured at no expense to the Town, until accepted at Town Meeting

SECTION 13 OTHER IMPROVEMENTS

A. Sidewalks

(1) Number and Location. In residential subdivisions, sidewalks are generally required on one side of the road, unless the Board determines that two (2) sidewalks are necessary to adequately service pedestrian traffic. The Board shall also consider the preservation of natural features in making its determination concerning the number of sidewalks required. In the interests of good design and enhancement of pedestrian ways, the Board may also consider sidewalks that follow along or around natural features and do not parallel the roadway. Commercial and Industrial subdivisions require sidewalks on both sides of the road.

(2) Construction.

(a) In residential areas, sidewalks shall be four (4) feet wide. In commercial and industrial areas, sidewalks shall be six (6) feet wide. In all areas all materials shall be removed or filled to a depth of thirteen (13) inches below the finished design grade. In areas of high groundwater, as determined by

soil borings, all materials shall be removed or filled to a depth of seventeen (17) inches below the finished design grade. Any soft spots of undesirable materials shall be removed and replaced with gravel. The sidewalk area shall be filled with gravel and rolled or compacted with a vibratory plate of a suitable size to a compacted depth of eight (8) inches with a slope of three sixteenths (3/16) inch per foot towards the curb. In areas of high groundwater as previously determined, the compacted depth of gravel shall be increased to twelve (12) inches.

(b) Sidewalks shall extend to the paved roadway at intersections to provide convenient walk-off for crossings and shall be ramped for the handicapped to the gutter with no curb. Handicap ramps shall be shown on the plan and shall be constructed in accordance with the latest revision of the Massachusetts Architectural Access Board codes.

(c) If concrete, a five-inch-thick Class A [four thousand (4,000) pounds per square inch (psi)] concrete shall be applied to the prepared gravel base. A slump test shall be performed by an independent testing lab for every other truck. The slump shall vary between two and four inches. Department of Public Works personnel shall observe and accept or reject the concrete delivery based on test results. Sidewalk grade shall be continuous across driveways openings. Transition in grade will not be allowed. Four-by-four-inch welded wire mesh or equal shall be installed at all driveway aprons. The welded wire mesh or equal shall be supported in place such that a minimum two-inch concrete coverage is maintained in all locations. The concrete shall be a plant mix, placed, floated, troweled and then finished with a broom. Curing and sealing compound shall be applied. Preformed expansion joints shall be installed fifteen (15) feet on center for five-foot-wide sidewalks and eighteen (18) feet on center for six-foot-wide sidewalks. Finished sidewalks shall be sloped three-sixteenths (3/16) inch per foot towards the curb. Troweled joints shall be installed five (5) feet on center in residential areas and six (6) feet on center in commercial and industrial areas. Plant mix design data and delivery slips shall be submitted to the Department of Public Works for review. All construction and concrete repair (if necessary) shall be in accordance with Massachusetts Highway Department Standards. Finished concrete sidewalks shall be inspected by the Department of Public Works Director and will not be accepted until the surface is uniform and contains no defects.

(d) When in the opinion of the Planning Board bituminous concrete sidewalks are adequate, they shall consist of three (3) inches of bituminous concrete applied in a base two-inch layer and a top one-inch layer.

B. Grass Plots

- (a) Location. A vegetated area of at least four (4) feet in width shall be located between the sidewalk and the curbing, maintained in grass or retained natural vegetation, unless the Board approves an alternate sidewalk placement.
- (b) Maintenance. All grass strips shall be maintained by the owner(s) until such time as the town may accept the public infrastructure at Town Meeting.
- (c) Planting areas and shoulders shall pitch toward the traveled way not less than one-fourth ($\frac{1}{4}$) inch nor greater than two (2) inches to the foot. The area between the sidewalk and traveled way shall have six (6) inches of loam which, when rolled, shall match with the top course of the sidewalk and the top of the front face of the slant granite.

- (d) All disturbed unpaved areas within the street right-of-way shall be loamed to a minimum of six-inch thickness and seeded.
- (e) Grass seed shall be spread during the growing season at the rate of four (4) pounds per one thousand (1,000) square feet. It shall be a mixture of creeping red fescue and perennial rye grass. It shall be properly fertilized, limed and watered. A guaranty period of one (1) year from full growth and final bond release shall be honored by the subdivider.

C. Slopes

(1) Design The area in back of the sidewalk or shoulder shall be sloped at not more than the ratio of three (3) feet horizontal to one (1) foot vertical to a point where it precisely coincides with the surrounding ground or abutter's lawn. Side slopes shall be loamed and seeded or retained in existing vegetation exactly the same as grass strips.

(2) Terracing

- (a) Terracing and/or sloping of grades to the roadway will be required when the normal runoff from a lot onto another has been made greater by new construction or by man-made land changes.
- (b) Terracing shall be done with earthen embankments, and each terrace shall have no more than a three-foot vertical drop. Natural slopes or terraces will be no steeper than one (1) foot horizontal to one (1) foot vertical, although no slopes steeper than three (3) feet horizontal to one (1) foot vertical shall be allowed within ten (10) feet of the lot line.
- (c) "Terrace" shall mean a raised flat mound of earth with sloping sides, and should be used for slopes greater than seventy-five (75) feet in length

D. Bounds

(1) Location.

- (a) Bounds shall be installed at all street intersections, at all points of change in direction or curvature of street side lines, arcs on curves at intervals of 300 feet, all easement boundaries, and at other points where, in the opinion of the Planning Board, permanent bounds are necessary. Such bounds shall be granite not less than thirty-six (36) inches in length and six (6) inches square. Other than bounds that exist, bounds shall be installed at all turning points for parcels designated as open space.
- (b) Each lot shall have at least one (1) side line marked by a bound of pre-cast reinforced concrete, and not less than thirty-six (36) inches in length and six (6) inches square.

(2) Installation. Bounds shall be set to the finish grade and installed only after all construction which would destroy or disturb them has been completed. Furthermore, a Massachusetts registered land surveyor shall certify to the Planning Board that the location of such bounds has been verified by him, following all earthwork and paving before any lots are released. All bounds must be shown on as-built plans before building permits are issued.

E. Landscape Plan The applicant and/or his agent shall submit a shade tree and landscaping plan to the Planning Board. This plan shall indicate all arboricultural details, including, but not limited to,

trees that are to be retained, the planting schedule and the maintenance program. The Planning Board shall approve said plan, with or without conditions, if said plan conforms to the standards set forth below. Said plan, upon approval, shall be filed with the Planning Board and shall constitute a condition of approval.

(1) Retention. Outside of the street lines but within twenty (20) feet of the right-of-way no trees over six-inch caliper shall be removed or have the grade level underneath them altered more than six (6) inches without approval by the Planning Board during the definitive plan review process.

(2) Planting.

(a) Existing trees shall be preserved and new trees planted so that, at the time a subdivision is completed, at least three (3) trees of approved caliper shall be located on each lot within fifteen (15) feet of the nearest exterior line of the street. Shade trees shall not be planted where their growth will interfere with utility lines or entrances. New trees shall be planted at approximately fifty-foot intervals and shall be planted not closer than five (5) feet and not more than twenty (20) feet from the right-of-way line unless otherwise approved by the Planning Board.

(b) The subdivider shall be responsible for all approved trees for a minimum period of two (2) years. Any unhealthy or dead tree shall be replaced with another that again shall be guaranteed for two (2) years. Trees approved for planting are Flowering and Green/Red Ash; Littleleaf and Silver Linden; Shademaster, Honey and Skyline Locust; Crimson King and Columnar Maple; White, Scarlet, Pin and Northern Red Oak. Other species may be planted if approved in advance by the Tree Warden. They shall be three-inch caliper measured four (4) feet above grade and planted in at least one-half (½) cubic yard of topsoil. At least three (3) species shall be planted in every subdivision and they shall be staggered so that no one species shall be next to a like species.

(c) The Planning Board may (1) require landscaping for screening or other purposes, (2) require existing trees and other vegetation be preserved in accordance with other sections of this bylaw, and/or (3) require the planting of additional trees as prescribed under this section. Any tree which is designated to be preserved by the Planning Board or Tree Warden, and which is subsequently damaged during construction of the project, shall be repaired or replaced at the subdivider's expense.

(3) Trees: Number and Size

Trees shall be placed so that there is not less than two (2) trees for every 100 feet of roadway length or portion thereof. For the purpose of this calculation, roadway length shall include all new roadways proposed in addition to all existing road frontage for which new building lots are proposed. The diameter of the trunk measured (1) foot above the base shall be not less than two (2) inches.

(4) Landscape Plan Content

After seeking input from the Tree Warden, the subdivider shall provide ten (10) copies of a landscape plan at a 1:40 scale to the Planning Board for its approval. The landscape plan shall show, as a minimum, (1) paved road layout; (2) road right-of-way; (3) location, diameter and species of all existing trees measured one foot above the base (4) location, diameter and species

of all new trees; (5) illustration of the planting technique to be used for each species of tree subject to the general soil conditions found on the site; (6) location of all underground and above ground utilities and proposed driveway cuts and; (7) other natural and man made distinguishing features which are located in the road right-of-way or lands to be presented to the Town.

(5) Specie

Tree species which are proposed for planting shall be listed by species and variety on the landscape plan. The proposed list of trees shall be reviewed by the Tree Warden who shall make a recommendation to the Planning Board as to the adequacy and acceptability of the proposed species for the proposed project. The Planning Board after obtaining the Tree Warden's input, shall approve the species which are acceptable for planting ("Approved Species List").

(6) Existing Trees

The existing trees remaining in the road Right-of-Way shall be pruned and trimmed to conform to the specifications of the National Arborists Association Class 1 Prune and Trim. Upon completion of pruning and trimming, the subdivider shall request the Tree Warden to inspect the trees and certify that they conform to the specifications.

(7) New Plantings

All new trees shall be planted in accordance with the landscape plan as approved under section (4) above, and shall be planted:

(a) After the street construction has been completed, including the installation of (a.) all underground and above ground utilities, (b.) base course of pavement; and (c.) all sub-grade fills and cuts within the road layout have been made; and

(b) Before the subdivider requests acceptance and/or release of the subdivision.

(8) Guarantee

Each new tree shall be guaranteed by the subdivider for a period of two (2) growing seasons. Any tree deemed by the Planning Board or Tree Warden to be unsatisfactory within two (2) growing seasons shall be removed and replaced with a tree of a species which is acceptable to the Tree Warden and approved by the Planning Board at the expense of the subdivider .

(9) Waivers

If the subdivider and/or Tree Warden determine that the total number of trees shown on the landscape plan cannot be planted within the area of the subdivision due to site and/or development conditions, the subdivider may request a waiver from the tree planting regulations. The request shall be made to the Planning Board and the Planning Board shall approve or deny such request after seeking input from the Tree Warden.

(10) Fees

For each tree waived by the Planning Board, the subdivider shall pay a fee of \$250.00 .

F. Street Signs

- (1) **Location** The subdivider shall furnish and install double faced extruded-aluminum street signs, mounted on two-inch-diameter posts equal to those in use by the Sturbridge Department of Public Works, at each street intersection within the subdivision. At T-intersections, one (1) sign post shall be sufficient; at four-way intersections, two (2) posts and sets of signs are required.
- (2) **Installation** Street signposts shall be ten (10) feet in length, three (3) feet of which shall be buried in the ground. An anchor rod shall be installed with the underground portion to prevent turning or removal.
- (3) **Other** Any street not yet accepted by the Town of Sturbridge shall be so indicated by a sign stating "Private Way" mounted on the same post just below the street sign. Prior to the issuance of an occupancy permit for a dwelling fronting a street within a subdivision, a sign indicating the name of that street shall be installed at the beginning of the street and at every intersecting way along that street.

SECTION 14 OTHER REQUIREMENTS

Open Spaces Before approval of the definitive plan, the Board may require the plan to show a park or parks suitably located for playground or recreation purposes. The park or parks shall not be unreasonable in area in relation to the land being subdivided and to the prospective uses of such land. The Board may, by appropriate endorsement on the plan, require that no building be erected on such park or parks for a period of not more than three (3) years without its approval. This shall in no way prohibit the gift of such land to any public or private cooperative nonprofit organization for recreational and open space use to improve community life and social welfare.

1. Open Space Maintenance Program

- (a). For all proposed subdivisions, the applicant shall propose a maintenance program which provides a mechanism, acceptable to the Planning Board, Public Works Manager, and Town Engineer for the future maintenance of any public open space, park, or playground which are proposed as part of the Definitive Plan.
- (b) For Open Space within a subdivision, to be owned by an association or land trust, the applicant shall submit an Open Space ownership and Maintenance Program, which shall describe how the open space will be owned and maintained in perpetuity, and meet standards acceptable to the Planning Board.

When restrictions are involved, as may be the case where open space is proposed to be in private ownership of individual lot owners, such restrictions should conform to standards of the State Division of Conservation Services for Conservation Restrictions. Such restrictions included in the Maintenance Program must require that the open space shall be kept in its natural state, or acceptable recreational uses, or used for woodland or agricultural operations, (including but not limited to the cultivation of crops, flowers, fruit, hay, planting of trees, shrubs, mowing grass or other activities necessary to and appropriate for good woodland and agricultural practices), or any combination thereof.

If the open space, or a portion of the open space, is to be conveyed to a homeowners association, acceptable proof that all owners of building lots in the development shall be bound to maintain in

perpetuity the common open land or community facilities shall be submitted with the definitive plan, guaranteeing continuing maintenance of such common land and facilities, and assessing each lot a share of maintenance expenses. Such a “homeowners association agreement” shall be subject to the review and approval of the Planning Board. Provisions shall be included in the agreement that in the event the lot owners fail to maintain the open space, the lot owners shall be bound by deed to permit the Town, or a non-profit conservation corporation acceptable to the Board of Selectmen, to maintain the common open land in accordance with the Maintenance Program and Homeowners Association Agreement. The Cost of such work by the Town shall be borne by the lot owners as a lien upon their lots. Provision for future revision of the Open Space Ownership and Maintenance Program should also be included.

2. Open Space, Parks and Playgrounds

Areas for open space, parks and/or playgrounds will normally be required to be set aside in accordance with Chapter 41, Section 81U of the General Laws as amended. Such areas shall be of reasonable size, but generally not less than five percent of the total parcel area, depending upon the location and quality of the land being set aside. The minimum area acceptable, for later neighborhood or public acquisition, shall be 50,000 sq. ft. The land shall be of a character and location suitable for use as a playground, playing field, or for recreational purposes/ and shall be relatively level and dry. No building shall be erected or placed on such an area for a period of three years without the approval of the Board. The Planning Board shall determine the utility and appropriateness of all open space areas within a proposed subdivision. open space parcels created simply to avoid zoning violations or conflicts (for example: corner lot requirements) shall not be permitted. Designation of a parcel of land as “open space” will only be permitted upon approval of the Planning Board. open space parcels must serve a purpose. This purpose shall be determined based upon parcel size, location within the subdivision, and utility (i.e. landscape amenities, recreational use, scenic value, etc.). In all subdivisions, the Planning Board shall make the final determination regarding open space parcels. This shall include the location, size, shape and use of all proposed open space. If the land set aside for public use is excessively steep or wet, is not safely accessible, or is not dry for at least 9 months out of the year, the Board may consider this an inappropriate contribution of open space, and may require additional land to satisfy this requirement

Before approval of a plan the Board shall require it to show parks, playground, recreation areas, or other open spaces to serve the future residents of the subdivision and by appropriate endorsement require that no building shall be erected on such site for three years without the approval of the Planning Board.

Any open space park or playground shall provide at least two hundred feet of continuous frontage on a street, and pedestrian ways will normally be required to provide access from each of the surrounding streets, if any, to which the open space, park or playground has no frontage. Further, such parks and/or playgrounds shall be required to have maintenance provided for by covenants and agreements acceptable to the Board, until acquisition by a homeowners association or the Town.

In areas designated as open spaces in a definitive plan, if such areas have been environmentally damaged prior to the completion of the development as a result of soil or gravel removal, harvesting of trees, refuse disposal, or any other activity deemed inappropriate with proposed uses of the open space, the Planning Board may require the developer to restore or improve the condition and appearance of the open space area, and may require the posting of a performance guarantee to ensure such restoration or improvement.

A. Easements

- (1) Utilities. Where utilities cross lots or are centered on the rear or side of lot lines, easements with a width of at least thirty (30) feet shall be provided. Signed and notarized documentation for recordation shall be submitted with the as-built plan.

(2) Drainage. Where a subdivision is traversed by a watercourse, drainage-way, channel or stream or contains a water storage area detention basin or other facility, the Board may require that there be provided a stormwater easement, drainage right-of-way and maintenance access of adequate width to conform substantially to the lines of said features and to provide for the possibility of flooding, protection of banks and adjacent properties, future maintenance or construction and other necessary purposes.

C. Cleanup Before issuance of an occupancy permit, the subdivider shall remove from the street and adjoining property all temporary structures, debris, tree stumps, loose rocks and surplus materials which may have accumulated during, leaving the subdivision in a neat and orderly condition. Prior to final completion of work, the applicant shall clean the entire stormwater management system, both on-site and off-site to its point of discharge, including man holes and catch basins.

D. As-built Plans

(1) Contents After all street construction is completed and before the release of the final bond or covenant, the subdivider shall file with the Board three (3) prints of the definitive plan, corrected and certified by a Massachusetts registered professional engineer or registered land surveyor, in proper form for recordation or registration at the Worcester County Registry of Deeds, to show the following as built conditions:

- (a) Side-line locations of roadways and sidewalks.
- (b) Center-line elevations, at fifty-foot intervals, of all roadways.
- (c) Profiles and plans of the drainage system, with sewer and drain invert elevations.
- (d) Bounds as installed.
- (e) Main gates and utilities as installed, including ties to all services.
- (f) Catch basins and man holes; bends and tee's.

(2) Certificate A certificate stamped and signed by the engineer or surveyor preparing such as-built plan shall be endorsed on the plan in the following form:

I hereby certify that this plan shows the actual as-built locations, profiles and elevations of the roadways, drainage facilities and utilities, based upon a field survey.

Date: _____

Registered Land Surveyor

Registered Engineer

(3) The applicant shall submit the approved version of the plan on a CD-Rom disc, in AutoCAD Release-14 (or any subsequent release which the Sturbridge Town Planner adopts), to the Planning Board for review and approval. The computer version of the definitive plan shall be identical, full size, and shall contain all information included on the plan print. Layer names shall conform to Town Planner standards. Failure to submit such diskette shall be cause for the Planning Board not to release any bond funds being held or for the Town not to accept the roadway(s).

E. Maintenance of Improvements Upon completion of the required improvements and release of all security by the Board, the developer shall properly maintain all roads and other municipal utilities within the subdivision until such time as they may be accepted by the Town.

F. Safety

(1) Precautions. All precautions should be taken by the developer and his subcontractors to observe common sense safety requirements. The Board designates the Building Inspector to report to the Board all unsafe activities in preparation of the subdivision.

(2) Holes and piling of materials. Holes greater than five (5) feet in depth and soil piles higher than five (5) feet or materials stacked in an unsafe manner shall not be allowed unless the area is adequately protected. The contractor and his representatives shall comply with OSHA requirements.

G. Construction Timing

(1) Any definitive subdivision plan approved hereunder, or any modification of any such subdivision plan previously approved, shall require that construction of the ways, utilities and other infrastructure in the proposed subdivision shall be completed within two (2) years of the date of said approval or as contained in an approved phasing plan, and not from the date of endorsement nor from the date of recording of such subdivision plan. Failure to so complete shall constitute a default of a condition of approval as set forth in Section 8G (8).

(2) Once construction is begun, all construction of the ways, utilities and other infrastructure shown on such subdivision plan shall be completed within two (2) years unless a development phasing plan has been approved by the Planning Board.

ARTICLE V ADMINISTRATION

SECTION 15 PRECONSTRUCTION MEETING Following approval of the definitive plan and before actual construction begins on the roadway or utilities, the subdivider is required to submit a revised definitive plan to the Planning Board and the Department of Public Works, showing Planning Board approvals, waivers and conditions, and to schedule a meeting with the Department of Public Works Director and his staff. The subdivider is urged to bring his engineer and his roadway contractor to this meeting. The subdivider's attorney is also welcome to attend. Any problems contemplated in the construction phase, as well as inspection stages, contact persons, etc., will be discussed, as well as procedures to be followed. A summary of said meeting, as prepared by the Town Planner, shall be initialed by the Town Planner and the subdivider and forwarded to the Planning Board.

SECTION 16 INSPECTIONS

A. General The Department of Public Works Director or his designee shall act as the Planning Board's inspector to ensure that the construction of roadways and utilities is carried out in accordance with these Subdivision Regulations and the Sturbridge Department of Public Works construction specifications. All elements of work are to be at all times subject to inspection. The Director shall require tests and interim as-builts to be done by the subdivider, at his expense, to demonstrate that these

regulations and the construction specifications contained herein have been met. These tests shall include, as applicable, but are not limited to, the following: pressure and bacteriological test of the water lines; pressure and mandrill test of the sewer lines; vacuum test of the sewer manholes; thickness, gradation and compaction of the gravel road base; thickness, gradation and compaction of the binder coarse of pavement; certification by a licensed engineer or surveyor, in writing or on a plan, at any time during construction. The Director may approve deviations indicated by these tests or interim as-built's if they fall within acceptable engineering tolerances, if it maintains the intent of the Planning Board approval and the Department of Public Works Director informs the Planning Board in writing. The Planning Board may retain independent consultants, at the expense of the developer, in accordance with Section 18, to ascertain whether these regulations and construction specifications have been met.

B. Inspection Form The Department of Public Works Director or his designee shall maintain an inspection form, (see Appendix 4, Form P), for each subdivision. At each critical step, the Director shall initial and date it to indicate completion and approval. Where appropriate, additional written reports shall be filed with the Planning Board.

C. Notification A minimum of forty-eight (48) hours' notice shall be given to the Department of Public Works Director by any subdivider requesting an inspection.

D. Failure to Comply Failure to comply with the inspection procedure may necessitate removal of improvements, at the expense of the applicant, or rescission of the approval of the plan in accordance with M.G.L. Ch. 41, Section 81-W, or withholding of the subdivider's posted bond. If work is not "authorized to proceed" the contractor will be notified. It will be the subdivider's responsibility to prove quality of work through testing and/or certification.

E. Determination of Completion The Department of Public Works Director shall, upon request of the subdivider and payment of any fees attendant thereto, cause the subdivision to be inspected for compliance with the Subdivision Rules and Regulations and the decision(s) of the Planning Board. If the Director is satisfied that the subdivision is in full compliance, he shall so certify on the determination of completion form, to which shall be appended the engineer's certification, and shall forward them to the Planning Board for acceptance.

SECTION 17 WAIVER OF REQUIREMENTS Strict compliance with the requirements of these rules and regulations may be waived when, in the judgment of the Board, such action is in the public interest and not inconsistent with the Subdivision Control Law.

SECTION 18. FEE STRUCTURES AND REGULATIONS Reasonable fees shall be imposed for the review of applications which come before the Planning Board, as set forth in Appendix 4, List of Service Fee Rates, in Chapter 82 of the Code of the Town of Sturbridge, and as set forth below.

(A) Administrative Fees.

(1). **Applicability** An Administrative Fee shall be assessed to offset the expense of review by the Planning Board and its office with regard to all applications set forth in Appendix 4, Schedule of Administrative Fees.

(2) **Submittal** Administrative Fees shall be paid at the time of the submittal of the application. Any application filed without this fee shall be deemed incomplete and no review work shall commence

until the fee has been paid in full.

(3) Fees for Revised Applications Where an Administrative Fee has been calculated by the number of lots or units proposed, and the application is revised after payment of said fee, the following rules shall apply:

a. If the number of proposed lots or units increases, the applicant shall pay a fee equivalent to the difference between the fee originally paid and the fee that would have been paid had the original submission included these additional lots or units. No review of these additional lots or units shall take place until this additional fee is paid to the Planning Board office, and failure to make this payment after requesting additional lots shall be grounds for denial of the application.

b. If the number of proposed lots or units decreases, a refund of that portion of the application fee predicated on those lots or units shall be granted only if, in the judgment of the Planning Board, no cost associated with the review of those lots or units has been yet incurred.

(4) Fee Waivers The Planning Board may waive or reduce any Administrative Fee, if, in the opinion of the Board, unusual circumstances exist regarding the subject property or the applicant.

(5) Refund Once the review process has been commenced, the Planning Board shall not refund Administrative Fees, including the case of withdrawal of the application by the applicant, except as provided in (3) b. above.

(B) Project Review and Inspection Fees

(1) Applicability The Planning Board, at its sole discretion, may determine that a proposed project's size, scale, complexity, potential impact or use of the land warrants the review by outside consultants (such as engineers, planners, lawyers, hydro-geologists, traffic engineer or others). Such consultants shall assist the Planning Board, or any town board or commission to which a matter is referred for review and comment prior to action by the Planning Board in plan review, impact analysis, inspection or other technical assistance necessary to ensure compliance with all relevant laws and regulations. Such assistance may include, but shall not be limited to, analyzing an application, monitoring or inspecting a project or site for compliance with the Board's decisions or regulations, or inspecting a project during construction or implementation. Such consultants shall be selected and retained by the Planning Board, with the actual and reasonable costs for their services to be paid by the applicant.

(2) Submittal. Project Review Fees shall be submitted upon receipt of notice of estimated consultant review cost for deposit in an account established pursuant to M.G.L. c. 44, Section 53G (53G Account). Any application filed without this fee shall be deemed incomplete and no review work shall commence until the fee has been paid in full.

(3) Those Projects which are deemed by the Planning Board to require review by outside consultants shall be delivered to the selected consultant or consultants, who will submit a cost to the Planning Board. Where more than one type of application has been submitted for Planning Board action, only the largest of the applicable Project Review Fees shall be collected for deposit into the Section 53G Account, and not the sum of those fees.

(4) Replenishment When the balance in an applicant's 53G Account falls below twenty-five percent

(25%) of the initial Project Review Fee, as imposed above, the Planning Board shall consider whether to require a supplemental Project Review Fee to cover the cost of the remaining project review.

(5) Inspection Phase After the granting of a Definitive Plan approval, the Planning Board may require a Supplemental Project Review Fee for the purpose of ensuring the availability of funds during the inspection phase of the review process.

(6) Handling of Project Review Fees The Project Review Fee is to be deposited into a special account as set forth in M.G.L. Ch. 44, Section.53G.

a. Outside consultants retained by the Planning Board to assist in the review of an application shall be paid from this account.

b. Project Review Fees shall be turned over to the Town Treasurer by the Planning Board for deposit into a 53G Account.

c. A copy of the latest statement from the banking institution handling the 53G Account shall be forwarded from the office of the Town Treasurer to the Planning Board Office as soon as it is received for timely and accurate accounting.

d. The Town Treasurer or Town Accountant shall prepare a report on activity in the 53G Account on an annual basis.

[1] This report shall be submitted to the Planning Board for its review.

[2] This report shall be printed in the Annual Report for the Town of Sturbridge.

e. An accounting of an applicant's funds held in the 53G. A count may be requested by the applicant.

[1] The Planning Board Office shall respond to the request in a timely fashion.

[2] This accounting shall include the following information:

[a] The latest statement from the banking institution handling the account, which should include an accurate accumulated interest portion to the closing date of the statement if such statements are subdivided into individual applicants' account. Otherwise, a statement of principal and interest, prepared by the Planning Board office, based on the latest statement from the banking institution.

[b] A report of all checks authorized for issuance since the last banking statement.

f. An applicant may request an estimate of bills pending from consultants for work completed, or in progress, but not yet invoiced.

g. Excess fees in the 53G Account, including accumulated interest, shall be returned to the applicant or the applicant's successor in interest, at the conclusion of the review process, as

defined below. For the purpose of this section, any person or entity claiming to be an applicant's successor in interest shall provide the Board with documentation establishing such succession in interest.

[1] With the approval or disapproval of a Preliminary Subdivision Plan.

[2] With the disapproval of a Definitive Subdivision Plan.

[3] With the release of the performance bond at the end of construction of an approved Definitive Subdivision Plan.

(7) Selection Appeal The applicant shall be notified in writing of consultant selection at least seven (7) days prior to the initiation of consultant efforts, unless this notice period is waived in writing by the applicant. As provided in M.G.L. Chapter 44, Section 530, the applicant may administratively appeal the selection of the consultant to the Sturbridge Town Council, on grounds that the proposed consultant selected has a conflict of interest (A consultant shall not have a financial interest in the project under review, or be in a position to financially benefit in some way from the outcome of the pending review process. Consultants must be in compliance with the Massachusetts Conflict of Interest Law, G.L. Ch. 268A.) or does not possess the minimum required qualifications of an educational degree or three (3) or more years of practice in, or closely related to, the field at issue. Such an appeal may be initiated by the applicant filing notice with the Town Clerk within seven (7) days of notice of the selection. Consultant efforts shall not begin until any appeal has been decided or until one (1) month passes without Council decision, in which case the selection made by the Planning Board shall stand. The required time limits for action upon an application by the Planning Board shall be extended by duration of the appeal. This appeal shall not preclude further judicial review, if otherwise permitted by law, on the grounds provided for in this section.

(8) Remedy Failure of an applicant to pay the consultant review fee determined by the Planning Board, or to replenish the special account when requested, shall be grounds for plan disapproval, denial of the application or permit or refusal to release development security.

SECTION 19 MATTERS NOT COVERED For matters not covered by these rules and regulations, reference is made to M.G.L. Ch. 41, Section 81-K to 81-0 inclusive.

Appendix 1 STREET CROSS SECTION

Street Design and Construction Standards
Typical Cross Sections

Appendix 2 CONSTRUCTION DETAILS

Typical Collector Roadway Cross Section
Typical Pre-Cast Catch Basin
Pre-Cast Catch Basin
Typical Drop Manhole
Typical Pre-Cast Manhole
Typical Pre-Cast Catch Basin
Typical Stub For Future Connection
Thrust Block Plan View
Sanitary Sewer Manhole
Hydrant Detail
Site Entrance Mat
Pavement Blend Detail
Setting Sloped Granite Edging
Concrete Curb Bit. Conc. Berm
Granite Block Curb Detail
Modified Cape Cod Type Berm
Single Area Light

Appendix 3 LANDSCAPING DETAILS

Typical Street Tree Detail
Evergreen Tree Planting Detail
Shrub Planting Detail

Appendix 4 SCHEDULE OF ADMINISTRATIVE AND PROJECT REVIEW FEES

ANR Plans: \$50 for the first two lots and \$25 for each additional lot created.

Subdivision Plans:

Preliminary Subdivision	\$200 filing and \$25 per proposed lot and advertising fees
Definitive Plan	\$500 filing and \$150 per proposed lot and advertising fees

Other Administrative and Inspection Fees as contained in Section 18

Roadway Inspection \$2 per lineal foot of new roadway

Note: All fees are due with application submittal. Advertising and postage are due before filing of decision with Town Clerk. Non payment may be grounds for rejection of application or for a denial of approval. Other fees may apply

Appendix 5 FORMS

Form A	Application for Endorsement of Plan Believed Not to Require Approval
Form B	Application for Approval of a Preliminary Plan
Form C	Application for Approval of Definitive Plan
Form C-1	Certificate of Approval of a Definitive Plan
Form C-2	Certificate of Disapproval of a Definitive Plan
Form F	Performance Bond Surety Company
Form G	Performance Bond Secured by Deposit
Form H	Performance Bond Secured by Bank Passbook
Form I	Covenant
Form J	Release Form
Form O	Receipt for Subdivision Plan
Form P	Inspection Form

Appendix 1

STURBRIDGE PLANNING BOARD SUBDIVISION CONTROL STREET DESIGN AND CONSTRUCTION STANDARDS

	Minor Street	Collector Street	Major Street
Right of Way	50'	50'	60'
Approximate Number of lots served	less than 9	9 to 25	greater than 25
Paved Width	22'	26'	32'
Grade Minimum	0.6%	0.6%	0.6%
Maximum	8.0%	8.0%	6.0%

Note: 50 foot leveling area and 1½ % grade at intersections

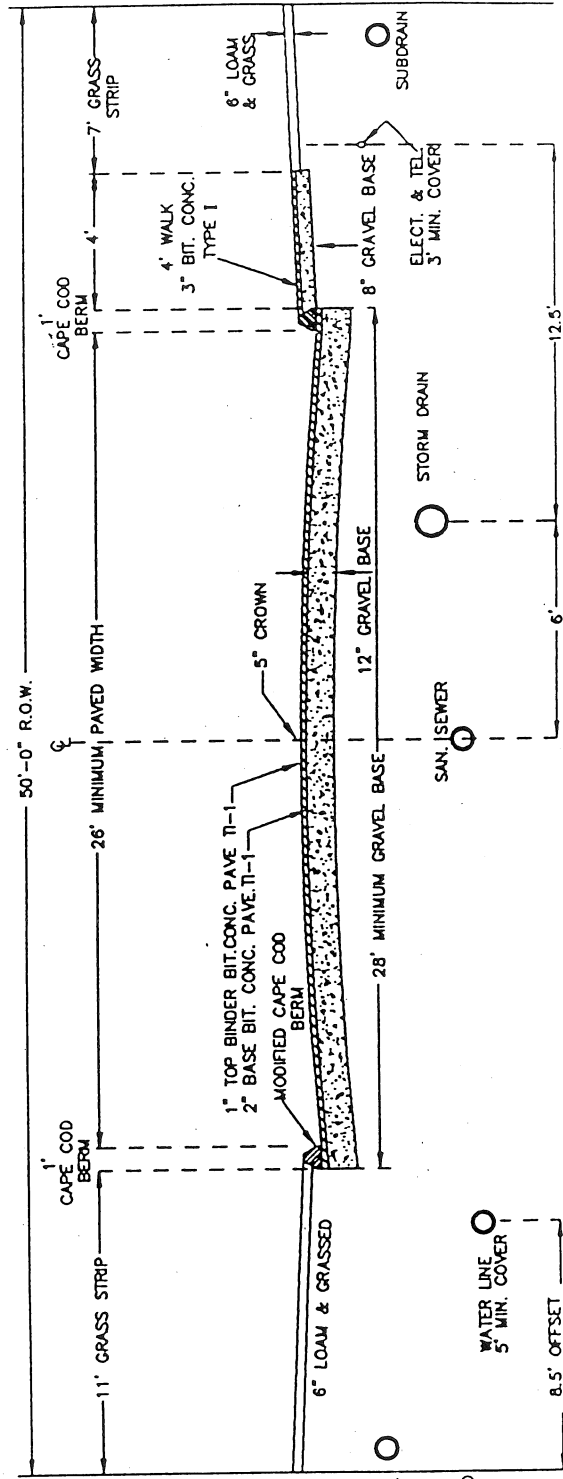
Transverse Grade	3/8 inch per foot		
Sidewalks	one	one	two
Roadway Base	12 inch gravel - screened, graded and rolled per MDPW		
Roadway Surface	4 ½ inch Bituminous concrete		
Sidewalk Base	6 inch gravel - screened, graded and rolled per MDPW		
Sidewalk Construction	5 inch concrete or 4 inch bituminous concrete per SDPW		
Sidewalk Width	4 feet	4 feet	5 feet
Grass Lot	3' walk to street 5' walk to roadway	3' walk to street 5' walk to roadway	9' between walk and road
Loam	6 inch deep seeded		
Curbing	Cape Cod	Cape Cod	Granite

Note: See Typical Cross Sections. Granite required in all non-residential zones and at intersections at DPW Discretion

Curb Inlets	Granite 6" recessed		
Guard Rails	On all slopes greater than 1:1 Slopes greater than 2½:1 require Sturbridge DPW approval		
Street Signs	5 inch letters on 9 inch blue blank background at 8½ feet high.		

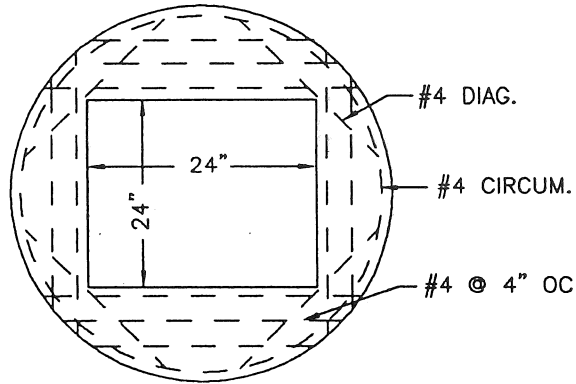
Maximum roadside slope to sidewalk or pavement 2½:1 horizontally, except in ledge, it shall be 6:1. Stone masonry retaining walls to be used where grade difference would require a steeper slope.

Appendix 2: Construction Details



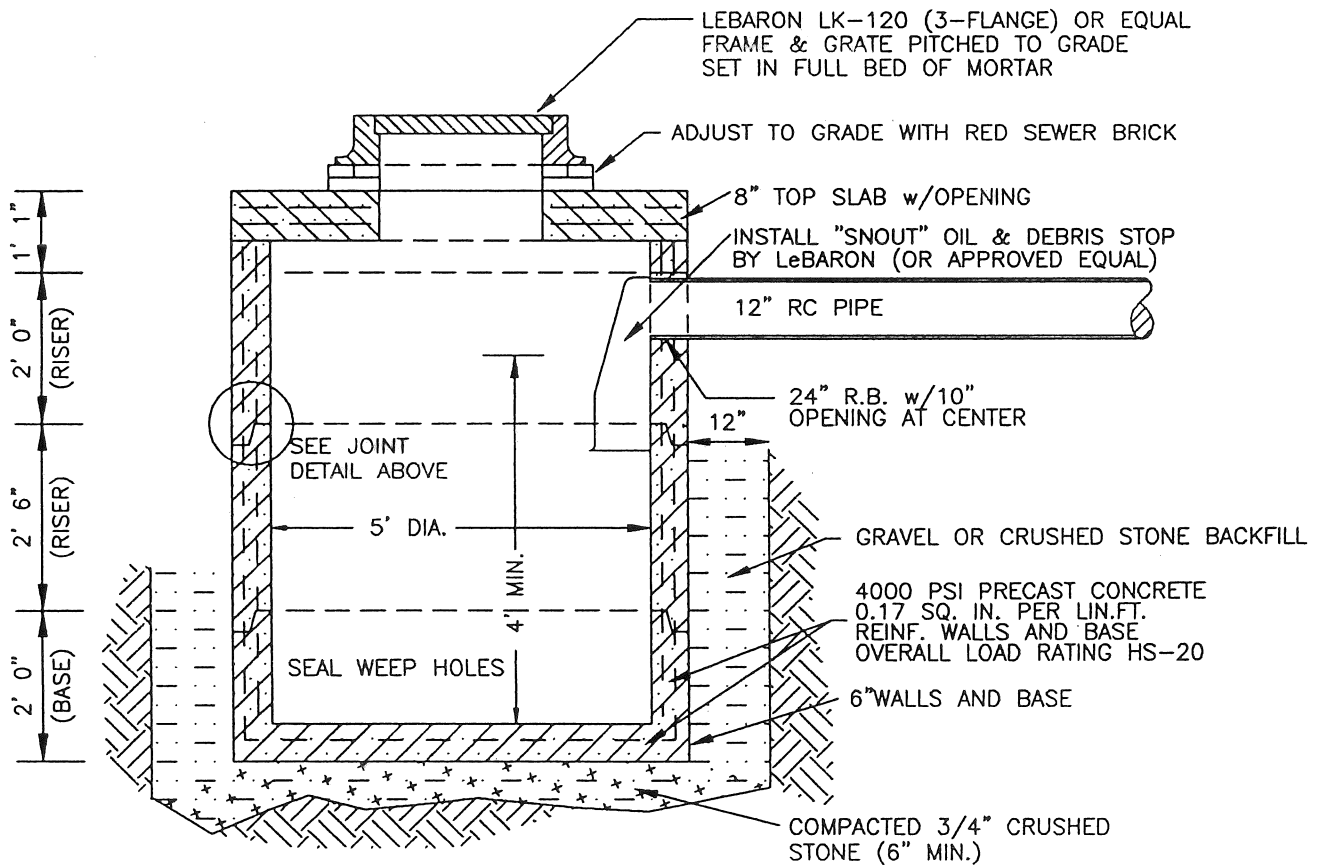
SUBDRAIN(S) SHALL BE INSTALLED IN AREAS WHERE THE PROPOSED ROADWAY GRAVEL BASE IS LOCATED WITHIN CUT AREAS GREATER THAN 3'. SUBDRAIN DISCHARGES SHALL BE CONNECTED TO PROPOSED CATCHBASINS. (TYP.)

TYPICAL COLLECTOR ROADWAY CROSS SECTION
(NOT TO SCALE)

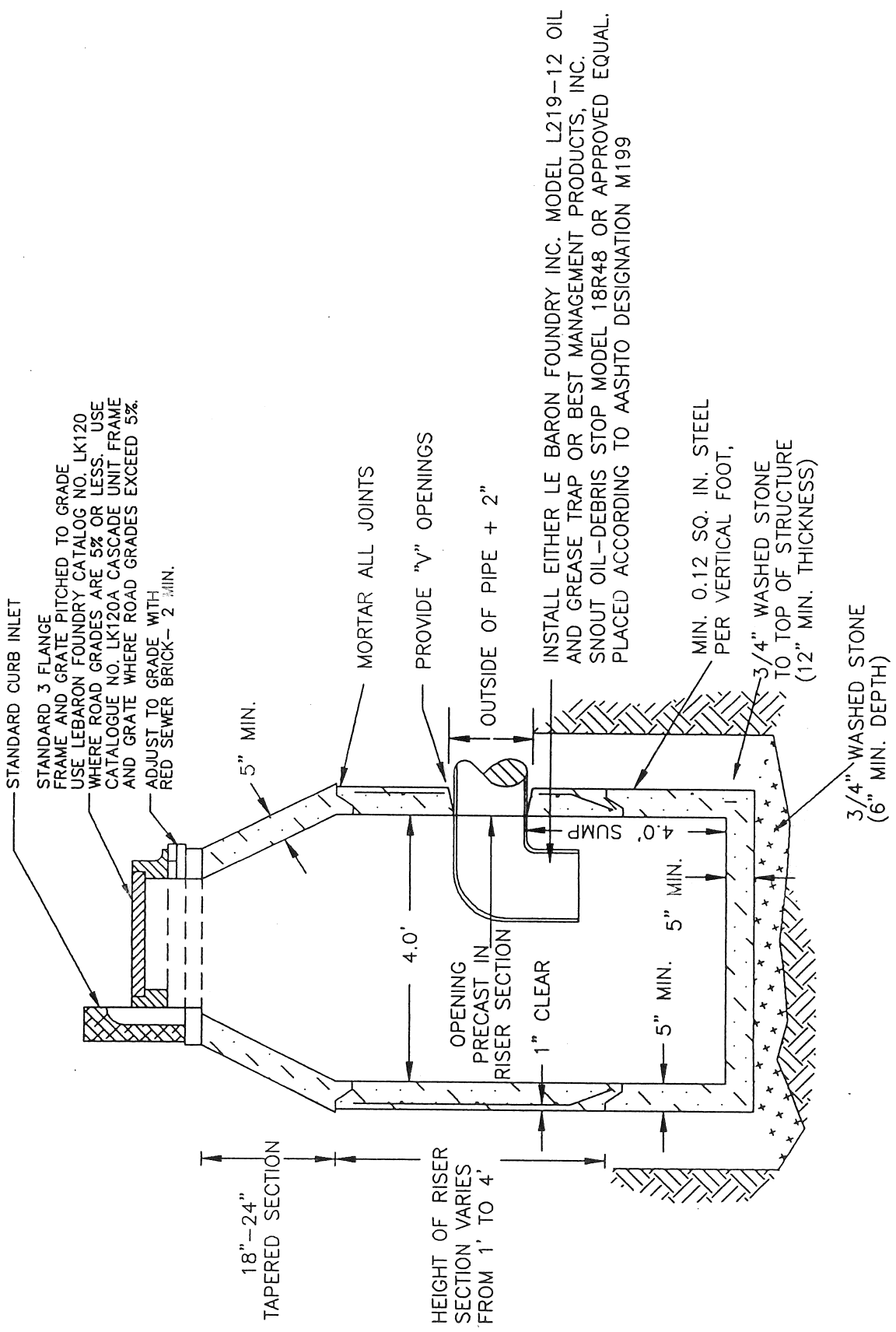


CONTRACTOR SHALL VERIFY DIMENSIONS
AND SUBMIT SHOP DRAWINGS

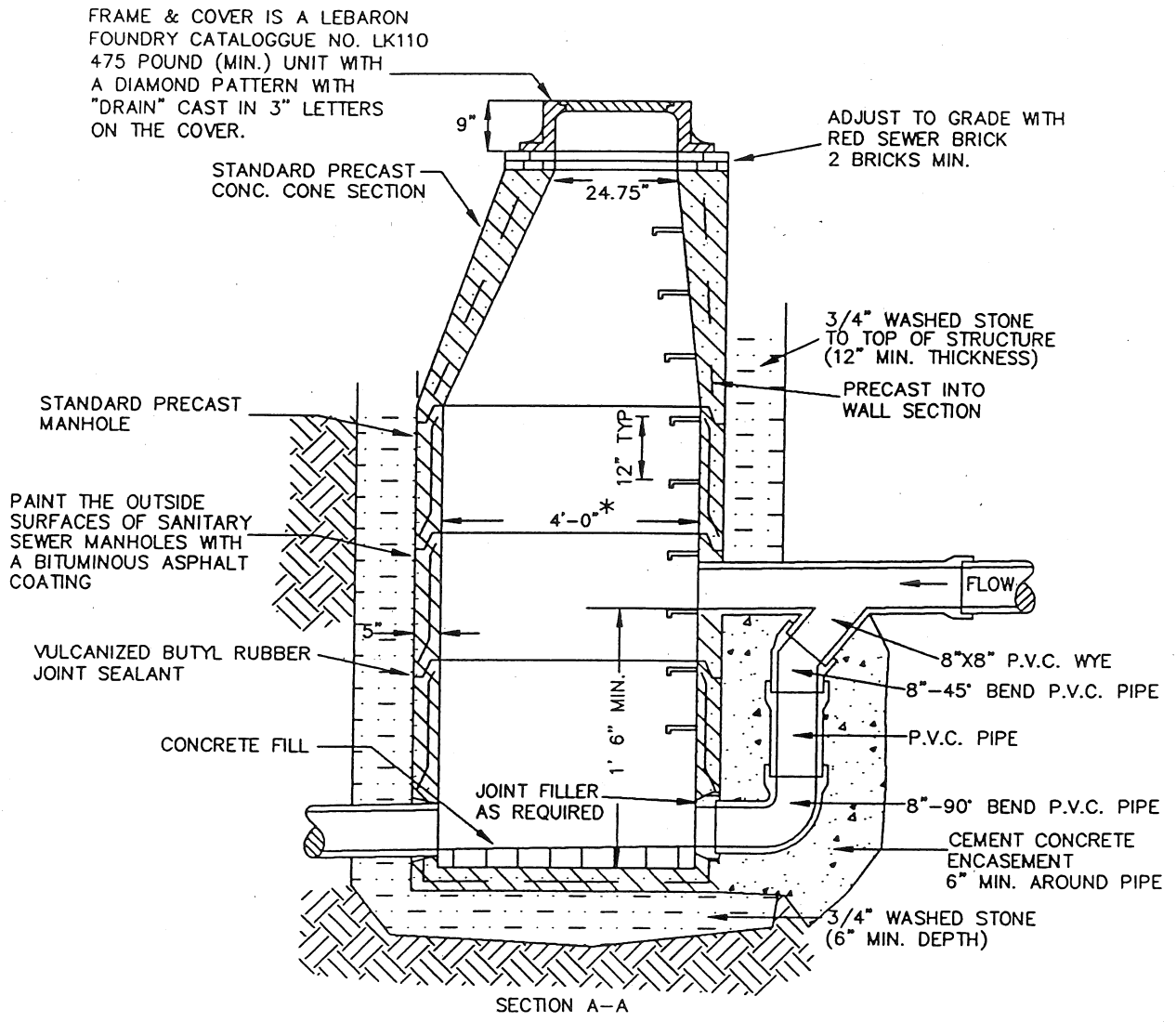
8" TOP SLAB



TYPICAL PRE-CAST CATCH BASIN
(NOT TO SCALE)

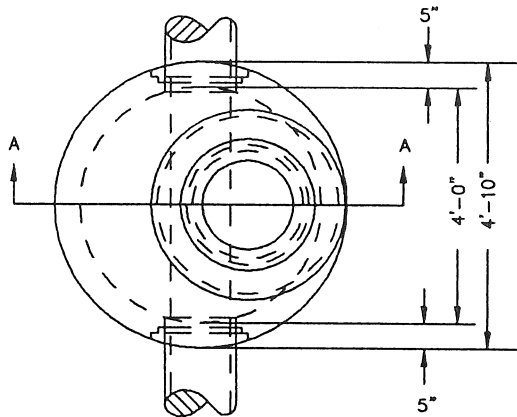


PRECAST CATCHBASIN
(NOT TO SCALE)



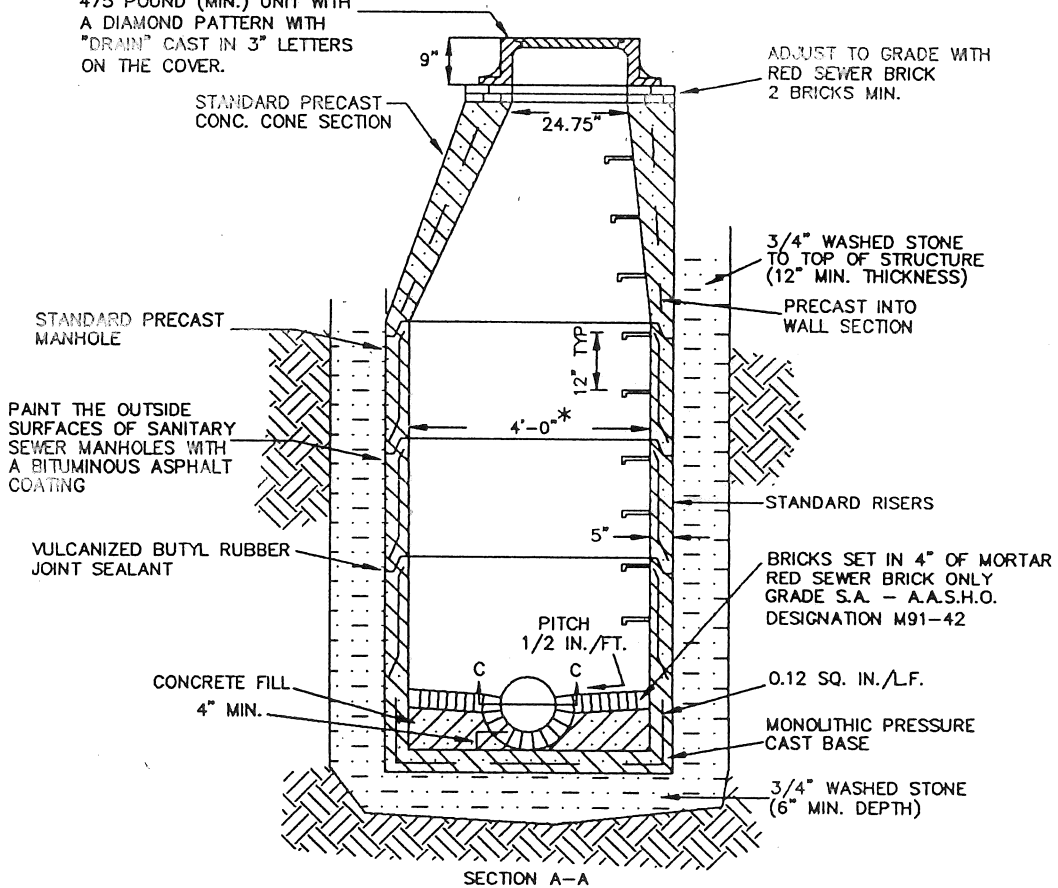
TYPICAL DROP MANHOLE
(NOT TO SCALE)

ALL SANITARY SEWER OR DRAIN MANHOLES GREATER THAN 12 FEET DEEP
SHALL HAVE A MINIMUM INSIDE DIAMETER OF FIVE FEET.



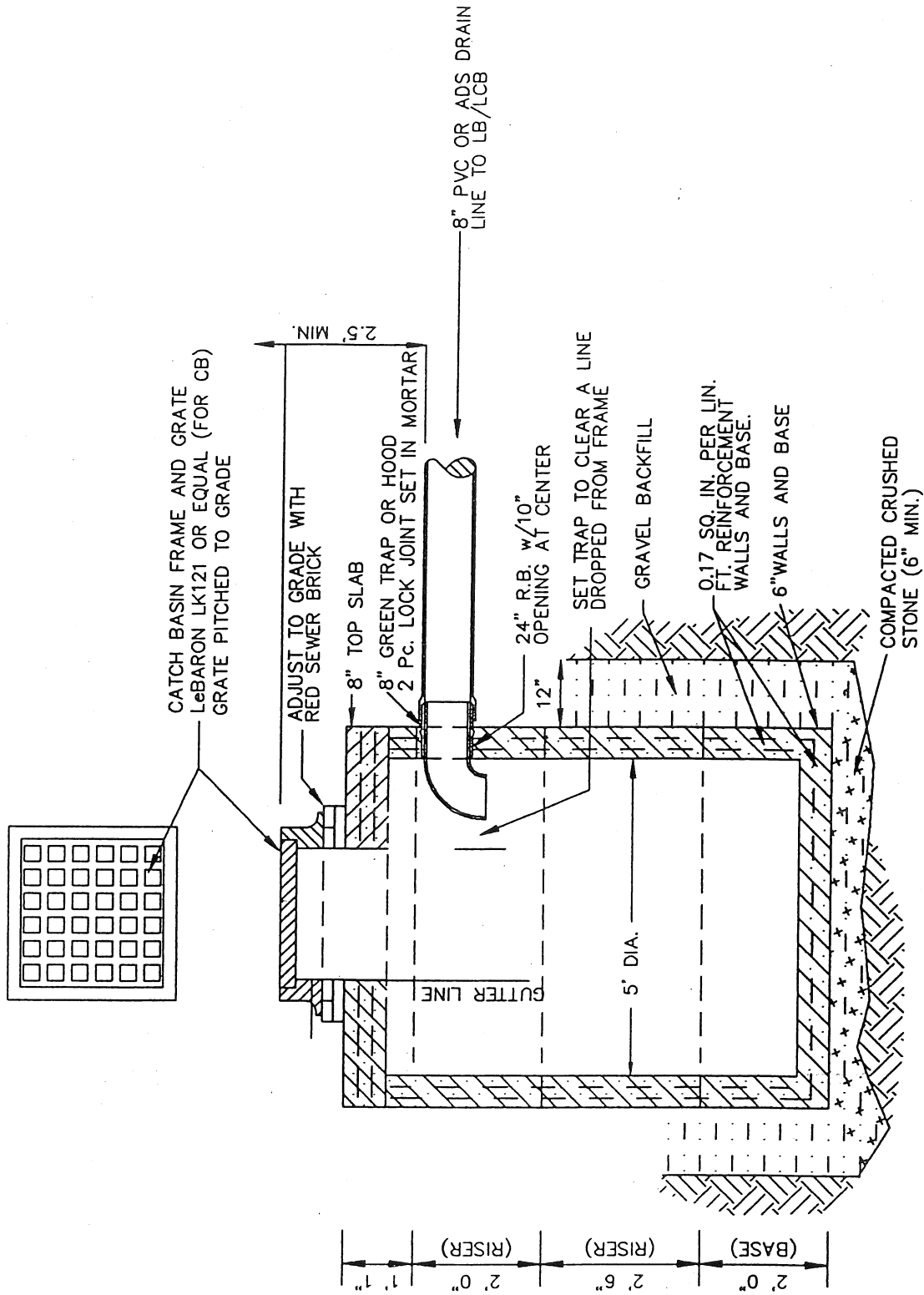
PLAN VIEW OF
TYPICAL PRE-CAST MANHOLE
(NOT TO SCALE)

FRAME & COVER IS A LEBARON
FOUNDRY CATALOG NO. LK110
475 POUND (MIN.) UNIT WITH
A DIAMOND PATTERN WITH
"DRAIN" CAST IN 3" LETTERS
ON THE COVER.

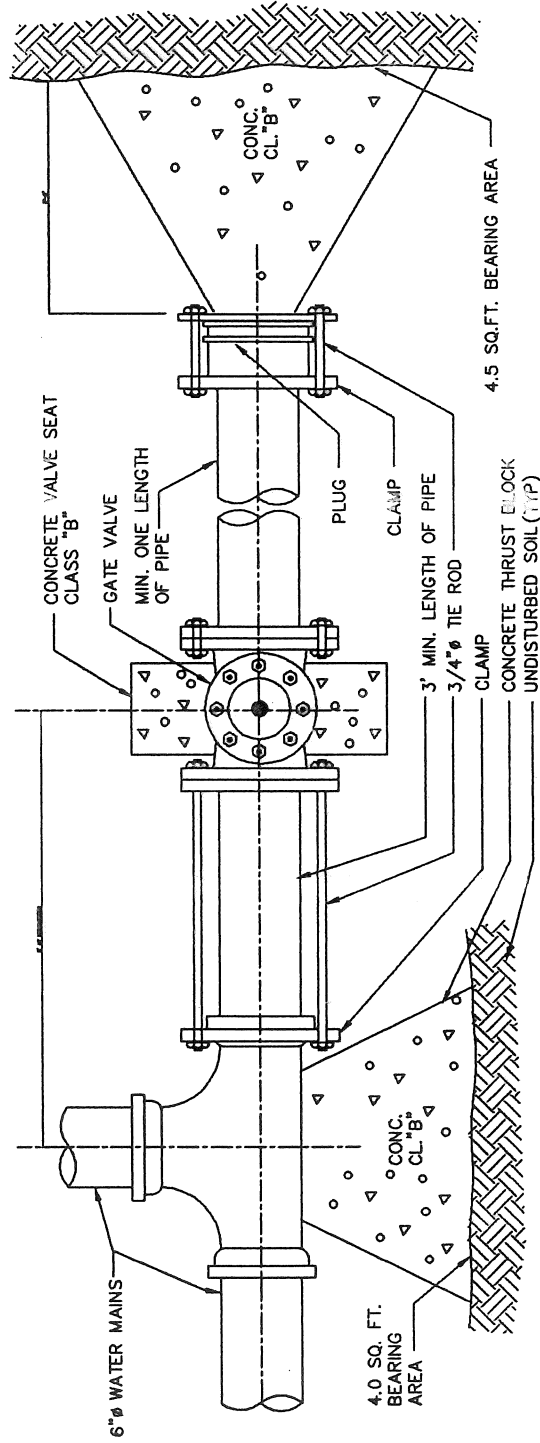


TYPICAL PRE-CAST MANHOLE
(NOT TO SCALE)

* ALL SANITARY SEWER OR DRAIN MANHOLES GREATER THAN 12 FEET DEEP
SHALL HAVE A MINIMUM INSIDE DIAMETER OF FIVE FEET.

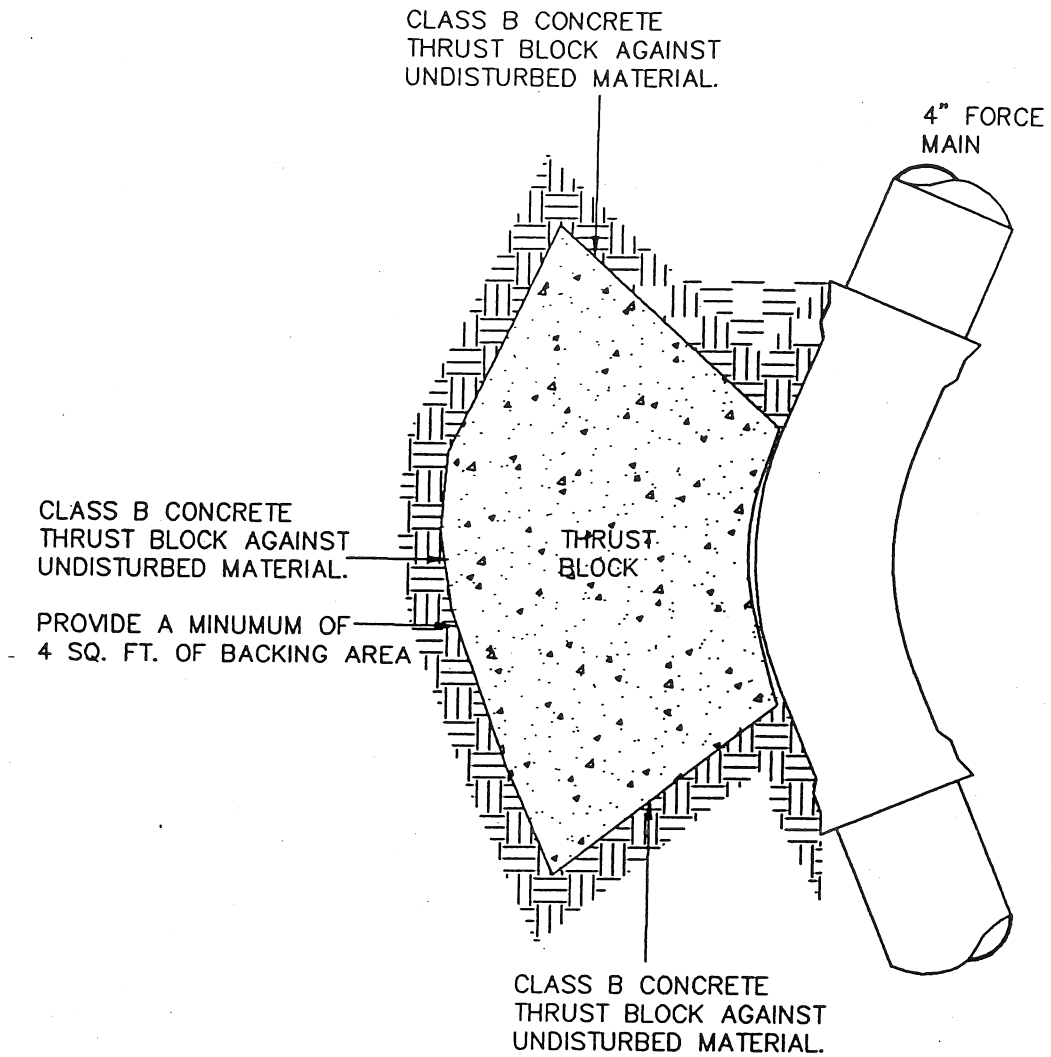


TYPICAL PRE-CAST CATCH BASIN
(NOT TO SCALE)



TYPICAL STUB FOR FUTURE CONNECTION NOT TO SCALE

TOWN OF STURBRIDGE DPW JUNE 2002

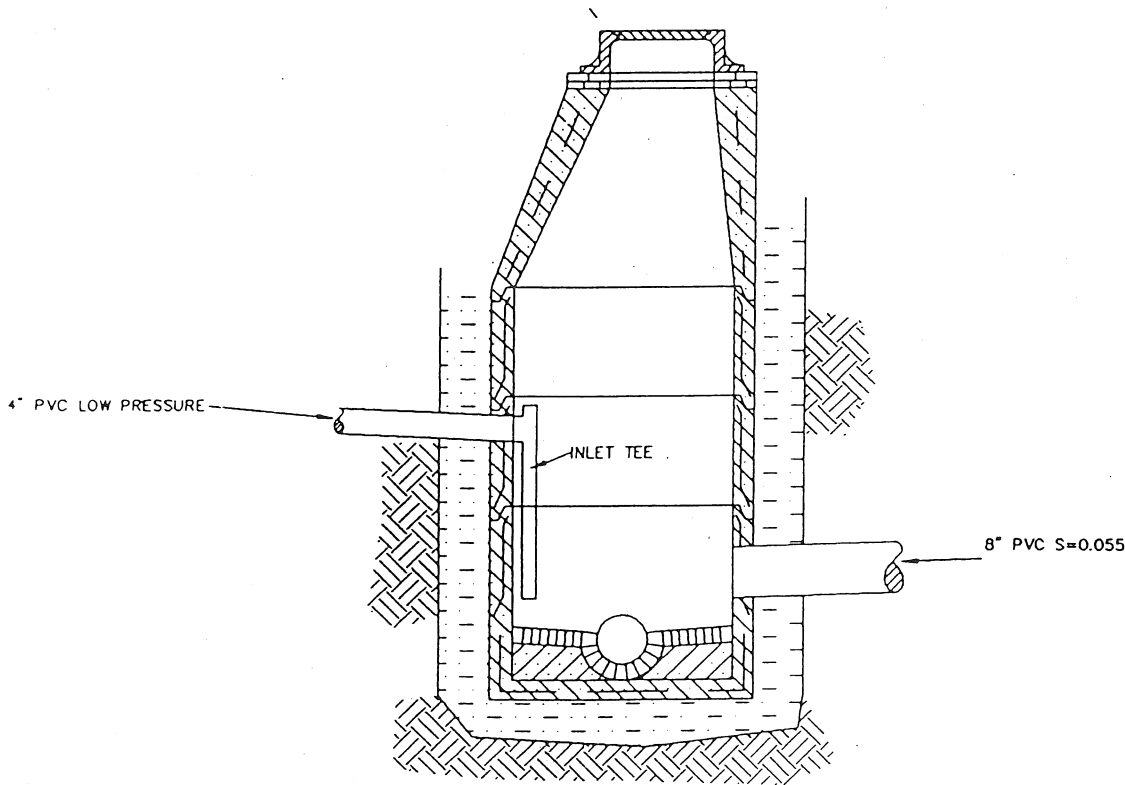


THRUST BLOCK PLAN VIEW
NO SCALE

NOTE: ALL SEWER PIPING AND/OR STRUCTURES CROSSING UNDER OR WITHIN 100 FEET OF ANY SURFACE WATERBODY, STORMWATER IMPOUNDMENT OR WETLAND SHALL BE BUILT USING WATERTIGHT CONSTRUCTION METHODS AND MATERIALS.

NOTE: SANITARY SEWER SHALL BE INSTALLED WITH A MINIMUM HORIZONTAL SEPARATION OF 10 FEET TO ALL WATER SUPPLY LINES. WHEN A 10 FOOT HORIZONTAL SEPARATION BETWEEN THE SEWER AND WATER CANNOT BE MAINTAINED, THE WATER MAIN SHALL BE INSTALLED IN A SEPARATE TRENCH ABOVE THE SEWER WITH AN 18 INCH VERTICAL SEPARATION BETWEEN THE CROWN OF THE SEWER AND THE INVERT OF THE WATER MAIN.

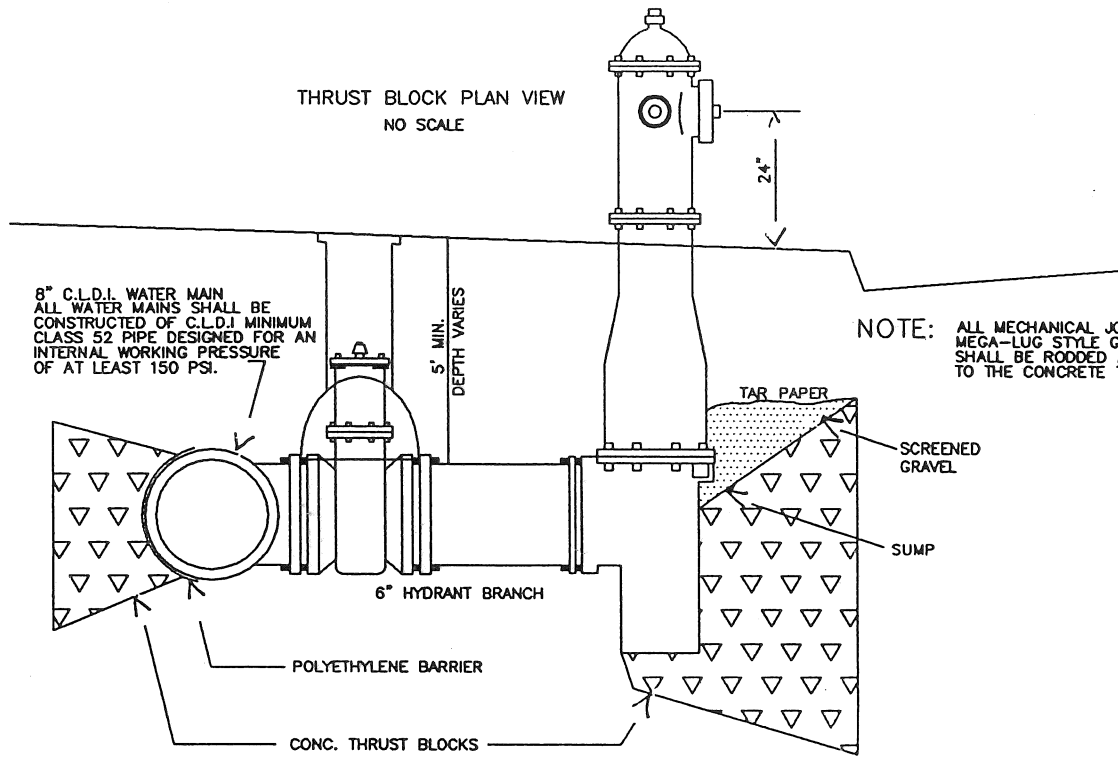
NOTE: ALL ROADWAY FILLS SHALL BE BROUGHT UP IN UNIFORM ONE FOOT LAYERS AND SHALL BE COMPACTED TO A RELATIVE COMPACTION OF NOT LESS THAN 95% AS DETERMINED BY AASHTO TEST DESIGNATION T-99, METHOD C. MATERIAL SHALL BE TESTED FOR COMPLIANCE TO ABOVE REGULATION BY A MATERIALS AND TESTING FIRM IN AREAS WHERE FILL IS FIVE FEET OR MORE. COPIES OF THE TEST RESULTS SHALL BE SUBMITTED TO THE TOWN IN REPORT FORM.



SANITARY SEWER MANHOLE

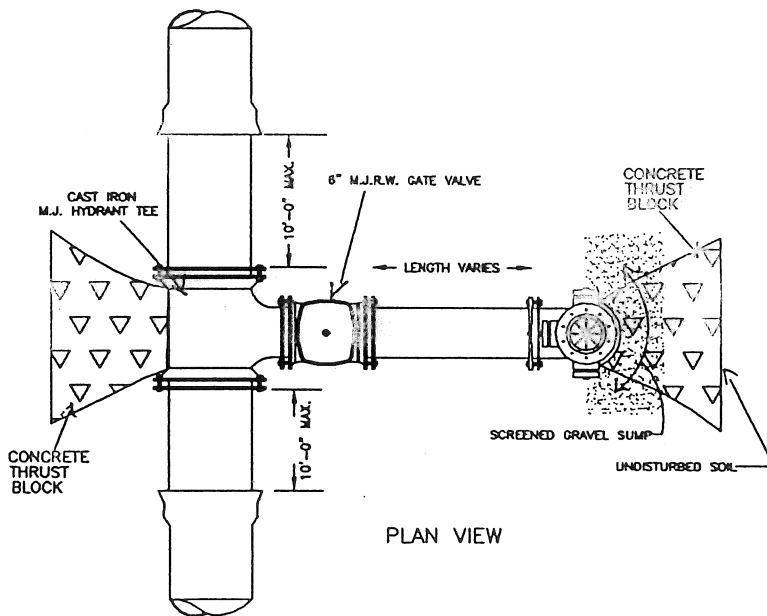
(NOT TO SCALE)

* IF INLET TEE IS DISCONNECTED OR MISSING, IT MUST BE REPLACED BEFORE MAKING NEW SANITARY SEWER CONNECTION FROM PRESERVE WAY.



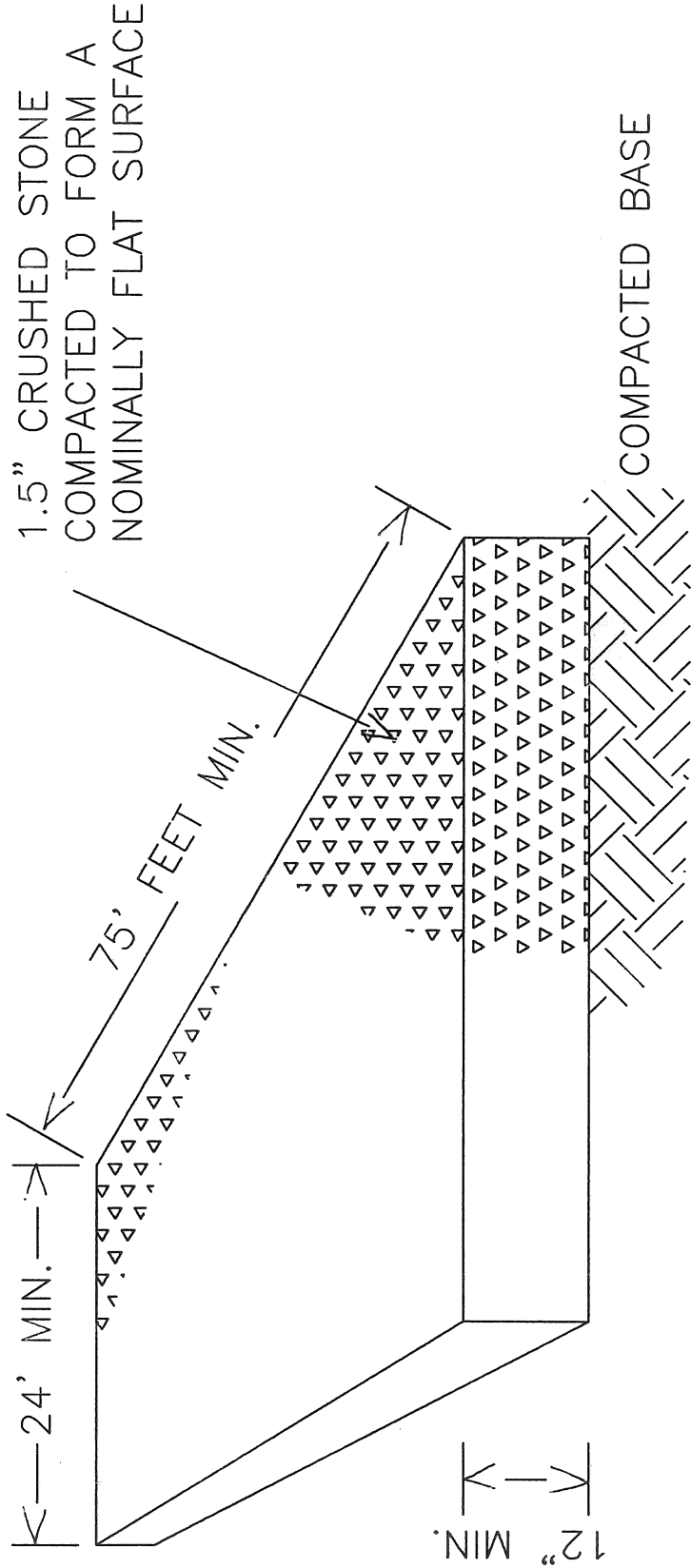
NOTE: VALVES AND HYDRANTS TO OPEN
COUNTER CLOCKWISE

ELEVATION



PLAN VIEW

HYDRANT DETAIL (NOT TO SCALE)

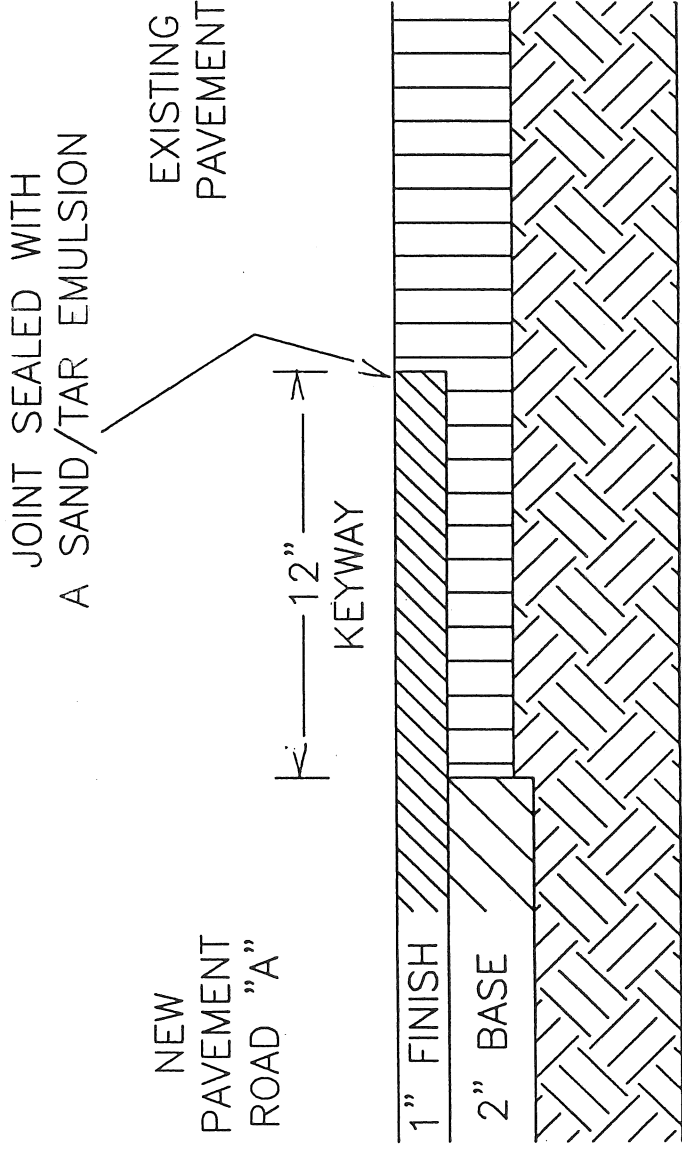


SITE ENTRANCE MAT

(NOT TO SCALE)

THE TOWN ROAD WILL BE SWEEPED DAILY
WHEN HAULING IS IN PROGRESS.

CRUSHED STONE SHALL BE REPLACED WHEN
DEPOSITED SOILS ACCUMULATE TO THE EXTENT
THAT THEY LESSEN THE EFFECTIVENESS OF THE MAT



JOINT SEALED WITH
A SAND/TAR EMULSION

EXISTING
PAVEMENT

NEW
PAVEMENT
ROAD "A"

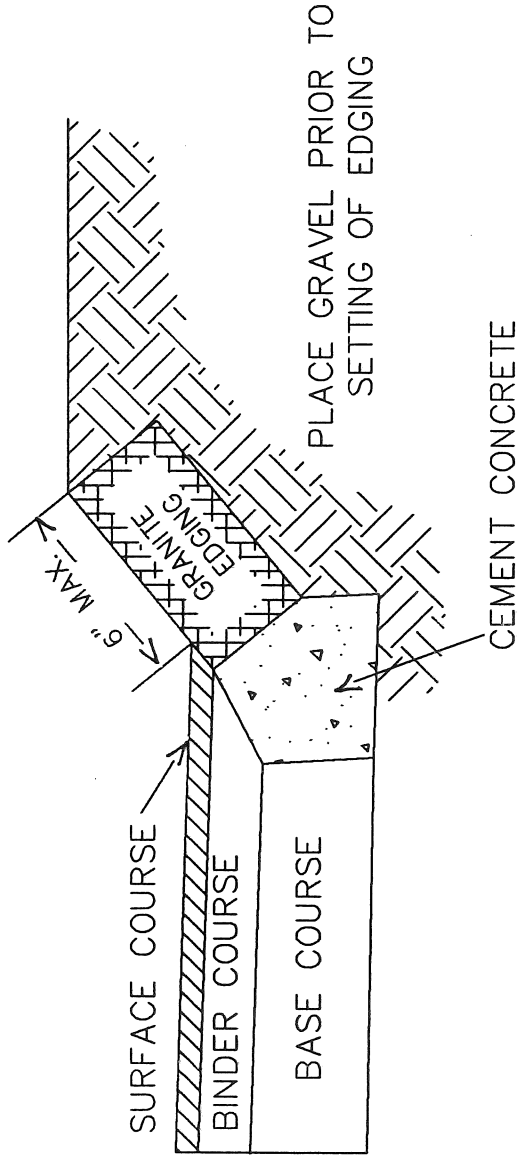
12"
KEYWAY

1" FINISH

2" BASE

PAVEMENT BLEND DETAIL

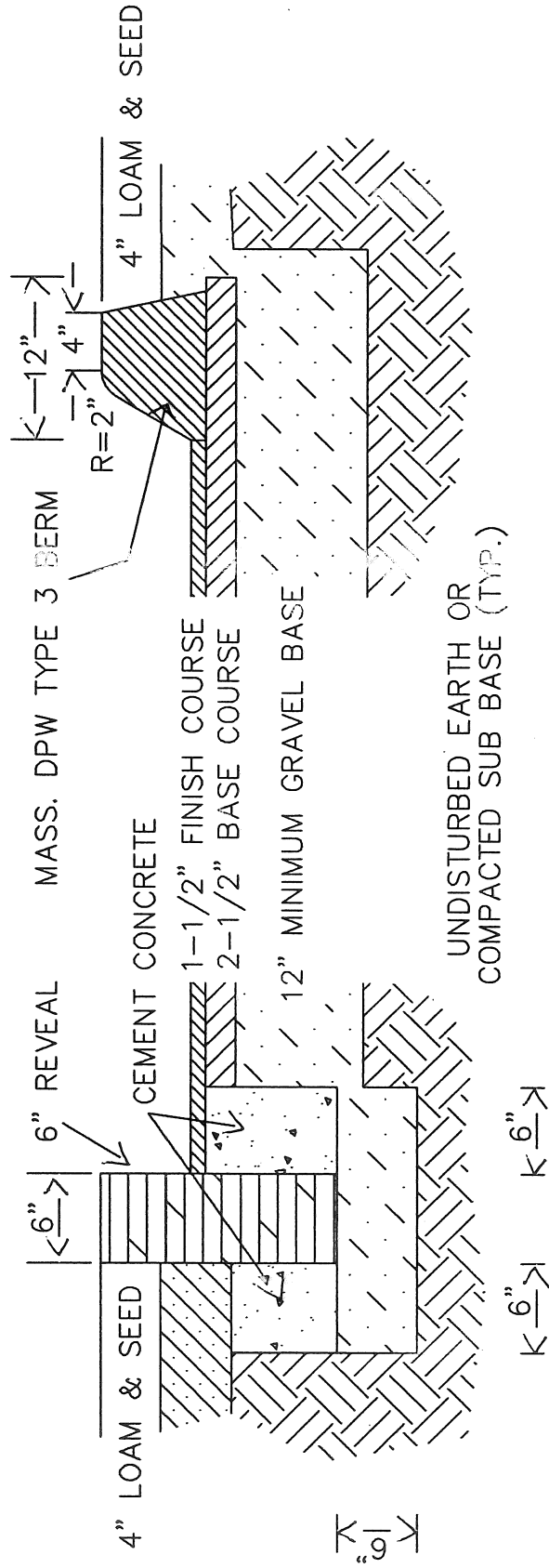
(NOT TO SCALE)



GRAVEL SUB-BASE

SETTING SLOPED GRANITE EDGING

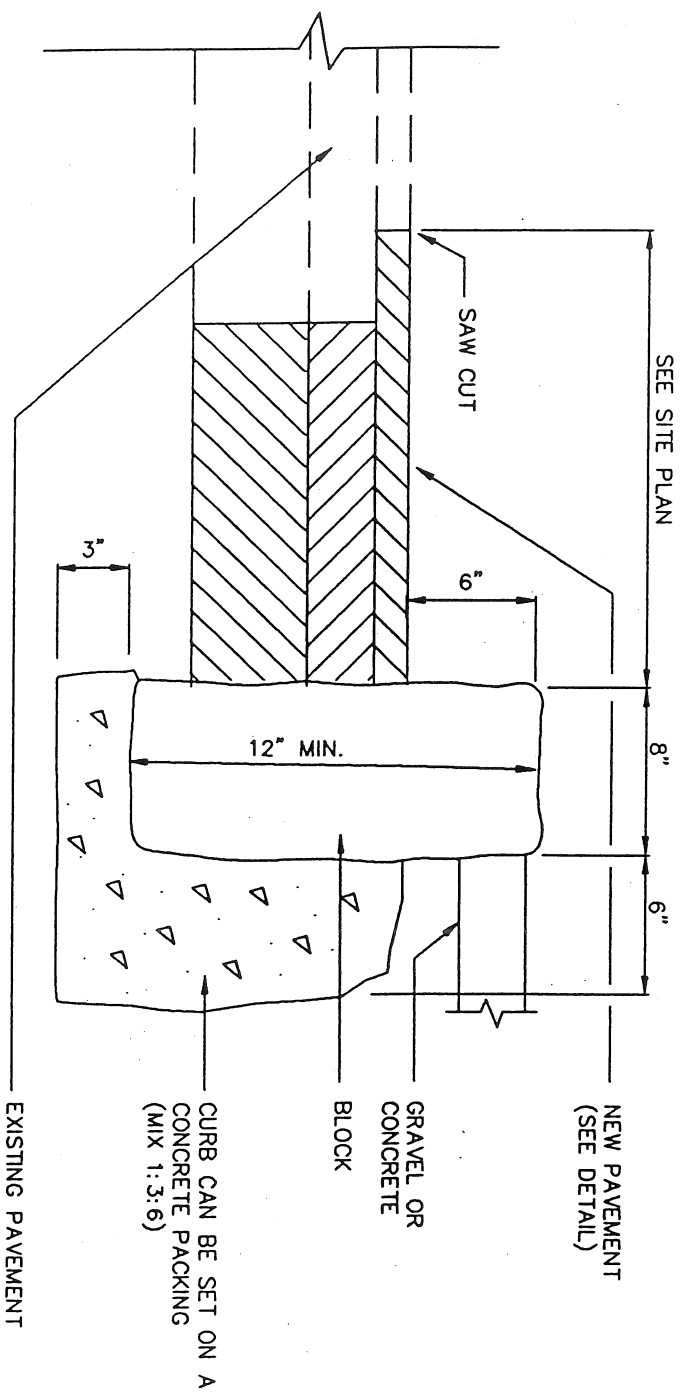
(NOT TO SCALE)



GRANITE CURB
(NOT TO SCALE)

BIT. CONC. BERM
(NOT TO SCALE)

TOWN OF STURBRIDGE DPW JUNE 2002



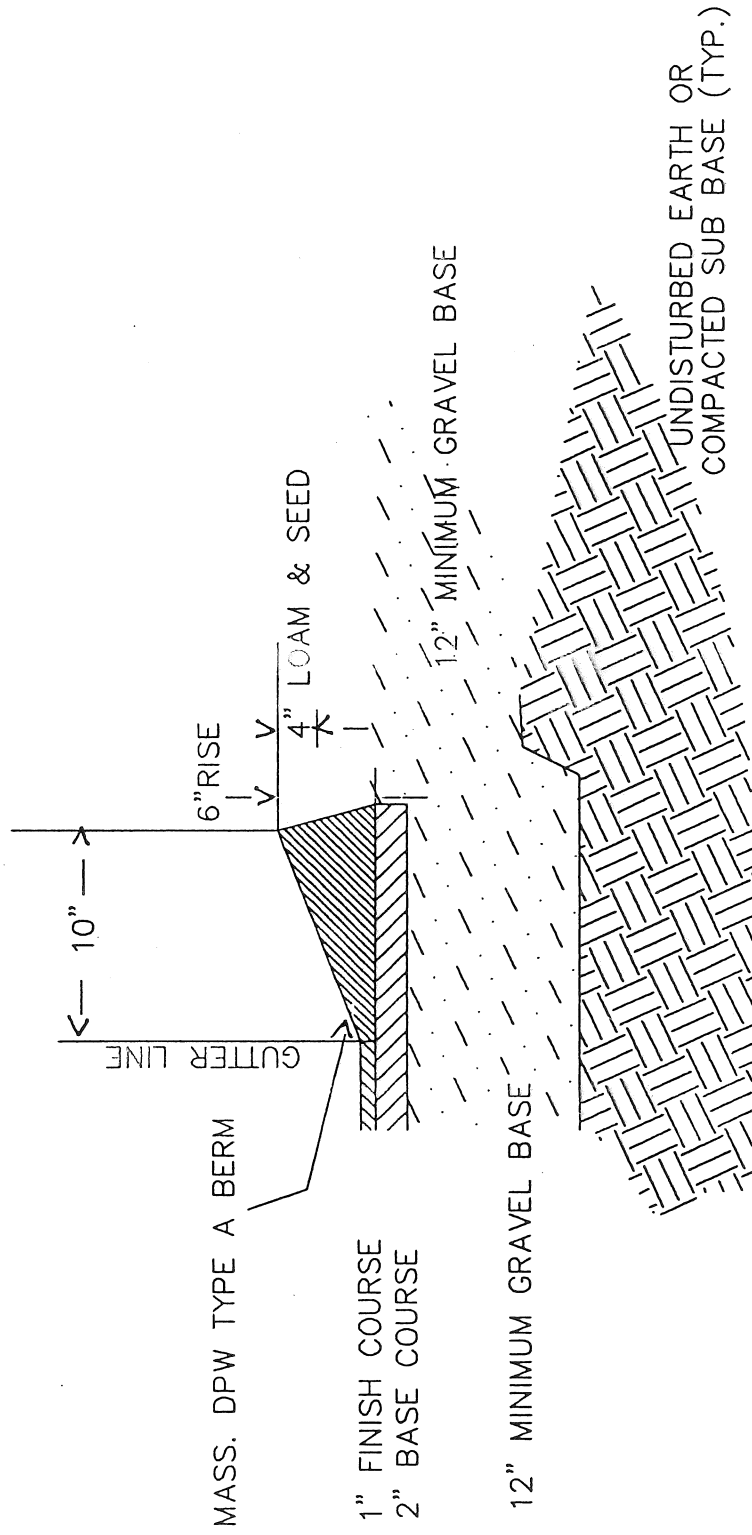
GRANITE BLOCK CURB DETAIL

NOT TO SCALE

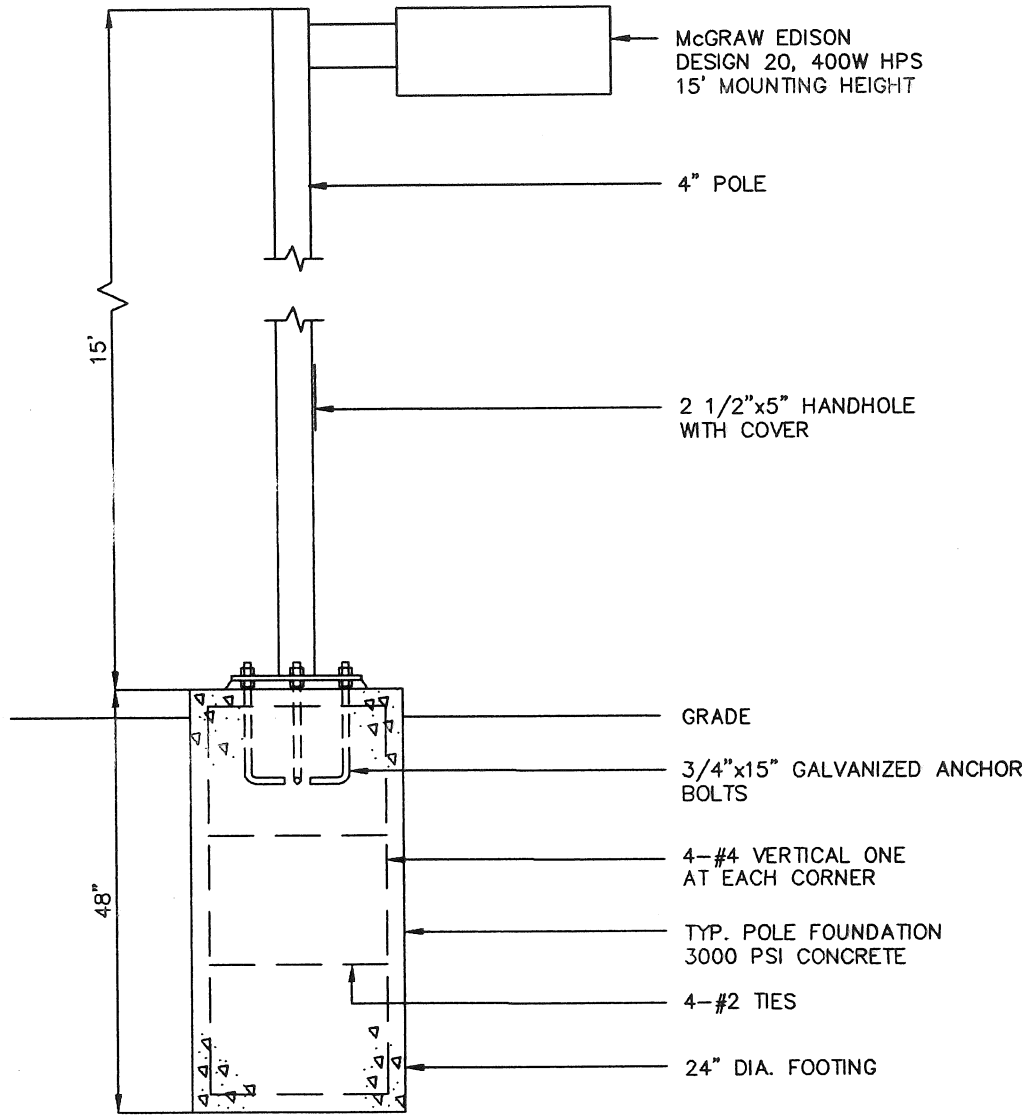
TOWN OF STURBRIDGE

DPW

JUNE 2002

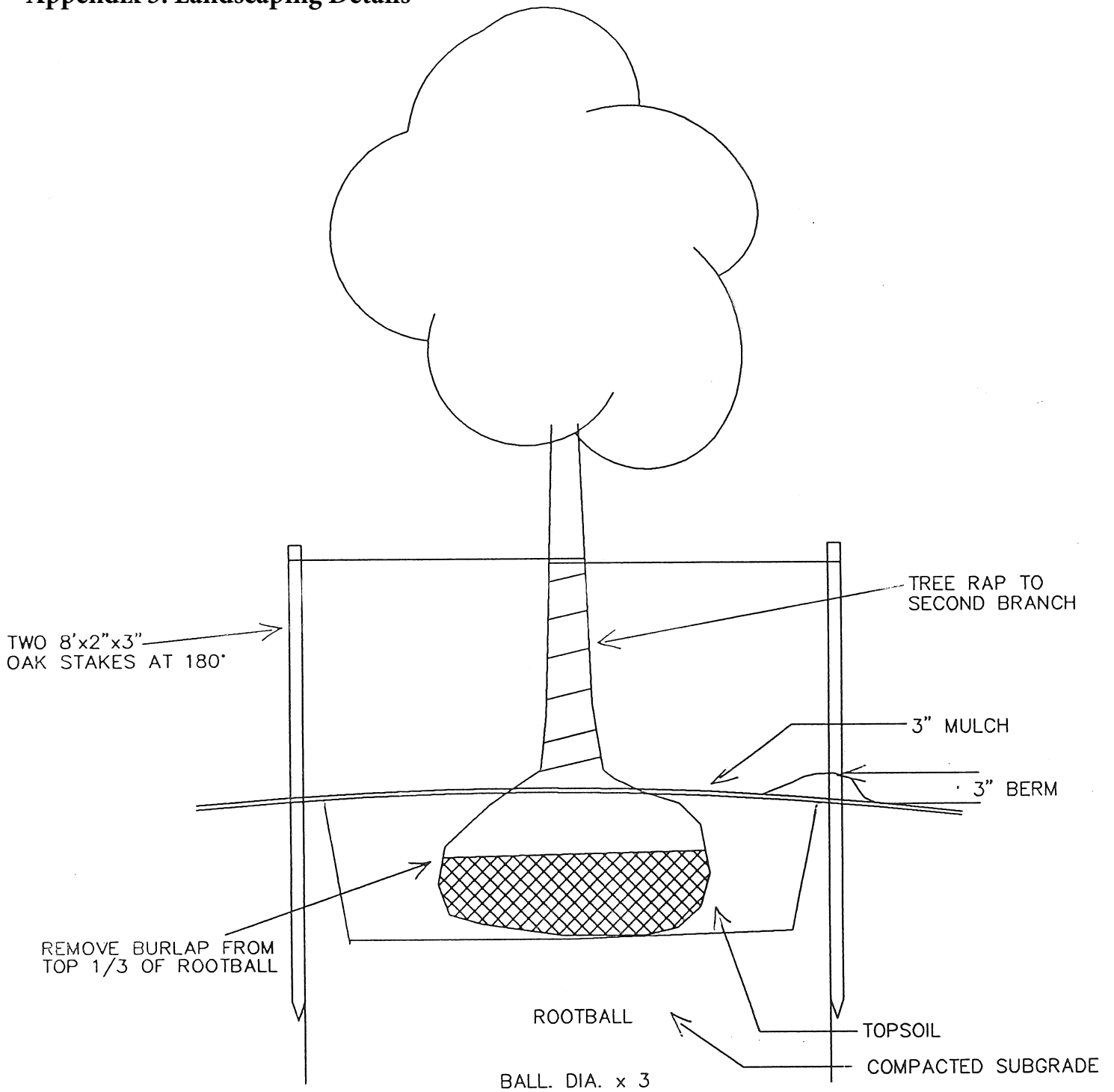


MODIFIED CAPE COD TYPE BERM
(NOT TO SCALE)

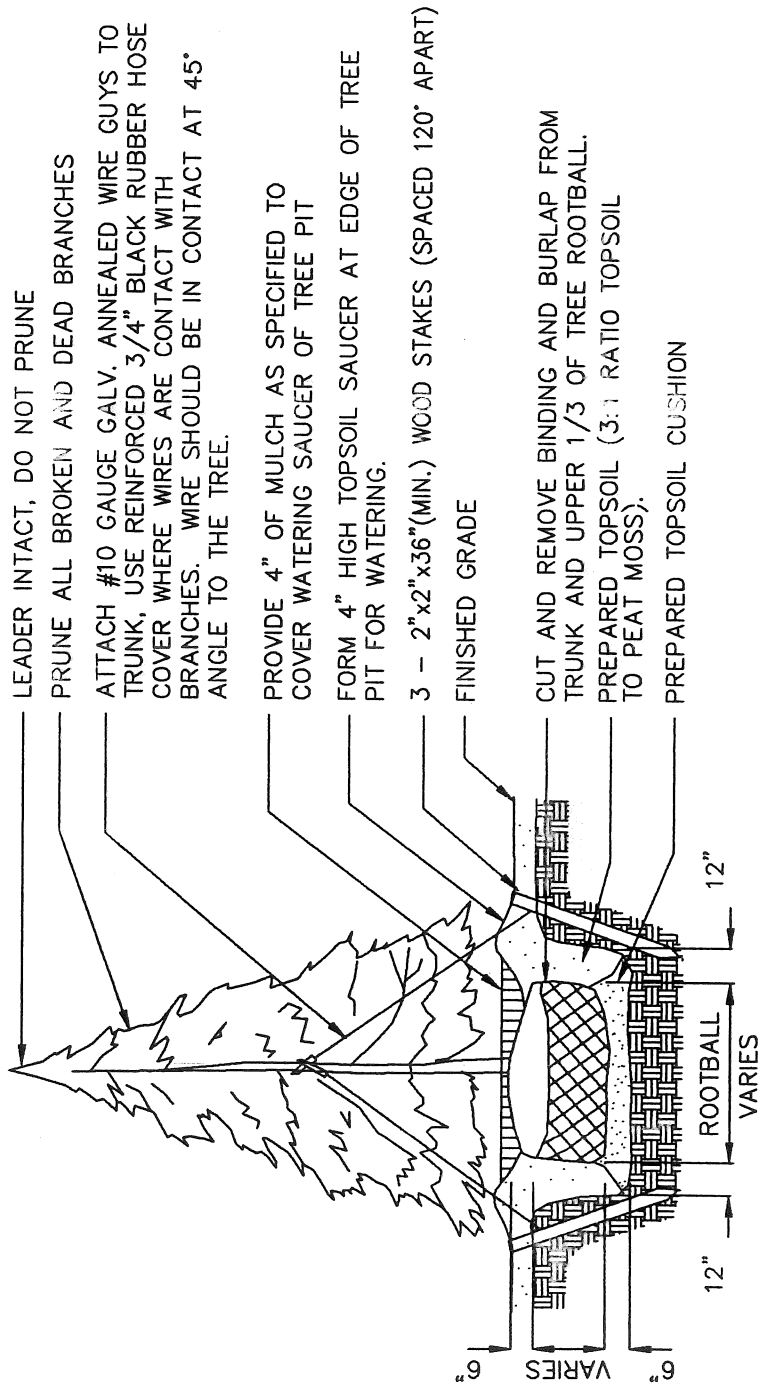


SINGLE AREA LIGHT NOT TO SCALE

Appendix 3: Landscaping Details



TYPICAL STREET TREE DETAIL
(NOT TO SCALE)



- LEADER INTACT, DO NOT PRUNE
- PRUNE ALL BROKEN AND DEAD BRANCHES
- ATTACH #10 GAUGE GALV. ANNEALED WIRE GUYS TO TRUNK, USE REINFORCED 3/4" BLACK RUBBER HOSE COVER WHERE WIRES ARE CONTACT WITH BRANCHES. WIRE SHOULD BE IN CONTACT AT 45° ANGLE TO THE TREE.
- PROVIDE 4" OF MULCH AS SPECIFIED TO COVER WATERING SAUCER OF TREE PIT
- FORM 4" HIGH TOPSOIL SAUCER AT EDGE OF TREE PIT FOR WATERING.
- 3 - 2"x2"x36"(MIN.) WOOD STAKES (SPACED 120° APART)
- FINISHED GRADE
- CUT AND REMOVE BINDING AND BURLAP FROM TRUNK AND UPPER 1/3 OF TREE ROOTBALL.
- PREPARED TOPSOIL (3:1 RATIO TOPSOIL TO PEAT MOSS).
- PREPARED TOPSOIL CUSHION

EVERGREEN TREE PLANTING DETAIL NOT TO SCALE

TOWN OF STURBRIDGE DPW JUNE 2002

**TOWN OF STURBRIDGE
PLANNING BOARD**

FORM A
APPLICATION FOR ENDORSEMENT OF PLAN
BELIEVED NOT TO REQUIRE APPROVAL

_____, 20____

To The Planning Board of the Town of Sturbridge

The undersigned wishes to record the accompanying plan and requests a determination by said Board that approval by it under the Subdivision Control Law is not required. The undersigned believes that such approval is not required for the following reasons:

1. The division of land shown on the accompanying plan is not a subdivision because every lot shown thereon has the amount of frontage, area and depth required by the Zoning By-law/Ordinance) and is on a public way, namely, or a private way, namely
2. The division of land shown on the accompanying plan is not a subdivision for the following reason(s):

3. The owner's title to the land is derived under deed from _____, dated _____, 20____, and recorded in _____, Registry of Deeds, Book _____, Page _____ or Land Court Certificate of Title No. _____, registered in _____ District Book _____, Page _____ and _____ Assessors' Book _____, Page _____.

Received by Town Clerk: Applicant's signature _____

Date _____ Applicant's address _____

Time _____

Owner's signature and address if not the applicant

Signature _____

TOWN OF STURBRIDGE
PLANNING BOARD

FORM B
APPLICATION FOR APPROVAL OF A PRELIMINARY PLAN

_____, 20__

To the Planning Board of the Town of Sturbridge
The undersigned, being the applicant as defined under Chapter 41, Section
81-L, for approval of a proposed subdivision shown on a plan entitled

By _____ dated _____, _____

(being land bounded as follows:

hereby submits said plan as a Preliminary subdivision plan in accordance with the Rules and
Regulations of the _____ Planning Board and makes application to the Board for
approval of said plan.

The undersigned's title to said land is derived from _____

_____ by deed dated _____ and recorded in the _____ District Registry of
Deeds Book _____, Page _____, registered in the _____
_____ Registry District of the Land Court,
Certificate of Title No. _____.

Applicant's signature _____

Received by Town Clerk: Applicant's address _____

Time _____

Signature _____ Owner's signature and address if not the applicant

TOWN OF STURBRIDGE
PLANNING BOARD

FORM C
APPLICATION FOR APPROVAL OF DEFINITIVE PLAN

_____, 20__

To the Planning Board of the Town of Sturbridge

The undersigned, being the applicant as defined under Chapter 41, Section 81-L, for approval of a proposed subdivision shown on a plan entitled _____ by _____ dated _____, 20 ____ being land bounded as follows:

_____ hereby submits said plan as a DEFINITIVE plan in accordance with the Rules and Regulations of the _____ Planning Board and makes application to the Board for approval of said plan.

The undersigned's title to said land is derived from _____

_____ by deed dated _____ and recorded in the _____ District Registry of Deeds Book _____, Page _____, registered in the _____ Registry District of the Land Court, Certificate of Title No. _____ and said land is free of encumbrances except for the following:

_____ Said plan has () has not () evolved from a preliminary plan submitted to the Board on _____, 20 ____ and approved (with modifications) () (disapproved) () on _____, 20 ____.

The undersigned hereby applies for the approval of said DEFINITIVE plan by the Board, and in furtherance thereof hereby agrees to abide by the Board's Rules and Regulations. The undersigned hereby further covenants and agrees with the Town of _____, upon the approval of said DEFINITIVE plan by the Board:

1. to install utilities in accordance with the rules and regulations of the Planning Board, the Water Department, the Highway Superintendent, the Board of Health, and all general as well as zoning (by-laws/ordinances) of said Town, as are applicable to the installation of utilities within the limits of ways and streets;
2. to complete and construct the streets or ways shown thereon in accordance with Section of the Rules and Regulations of the Planning Board and the approved DEFINITIVE plan, profiles and cross sections of the same. Said plan, profiles, cross sections and construction specifications are specifically, by reference, incorporated herein and made a part of this application. This application

and the covenants and agreements herein shall be binding upon all heirs, executors, administrators, successors, grantees of the whole or part of said land, and assigns of the undersigned; and

3. to complete the aforesaid installations and construction within two (2) years from the date hereof.

Received by Town Clerk: _____

Signature of Applicant

Name _____

Date: _____

Address _____

Time: _____

Signature: _____

TOWN OF STURBRIDGE
PLANNING BOARD

FORM C-1
CERTIFICATE OF APPROVAL OF A DEFINITIVE PLAN

_____, 20 ____

It is hereby certified by the Planning Board of the Town of Sturbridge Massachusetts, that at a duly called and properly posted meeting of said Planning Board, held on _____, 20 _____, it was voted to approve a definitive plan entitled:

submitted by: _____
originally filed with the Planning Board on _____
concerning the property located _____

with the following conditions:

A copy of this certificate of approval is to be filed with the Town Clerk and a copy sent to the applicant.

A true copy, attest:

Clerk, _____, Planning Board _____
_____ Planning Board

TOWN OF STURBRIDGE
PLANNING BOARD

FORM C-2
CERTIFICATE OF DISAPPROVAL OF A DEFINITIVE PLAN

_____, 20 _____

It is hereby certified by the Planning Board of the Town of Sturbridge, Massachusetts, that at a duly called and properly posted meeting of said Planning Board, held on _____, 20 _____, it was voted to disapprove a definitive plan entitled:

submitted by: _____
originally filed with the Planning Board on _____
concerning property located _____

for the following reasons:

A copy of this certificate of disapproval is to be filed with the Town Clerk and a copy sent to the applicant.

Planning Board

_____	_____
_____	_____
_____	_____
_____	_____

A true copy, attest:

Town Clerk

TOWN OF STURBRIDGE
PLANNING BOARD

FORM F
PERFORMANCE BOND
SURETY COMPANY

Know all men by these presents that _____
as Principal, and _____ a corporation duly
organized and existing Under the laws of the State of _____ and having a
usual place of business in _____, as Surety, hereby bind and obligate
themselves and their respective heirs, executors, administrators, successors and assigns Jointly and
severally, to the Town of Sturbridge, a Massachusetts municipal corporation, in the sum of
_____ Dollars.

The condition of this obligation is that if the Principal shall fully and satisfactorily observe and perform
in the manner and in the time therein specified, all of the covenants, conditions, agreements, terms
and provisions contained in the application signed by the Principal and dated _____, 20
_____ under which approval of a definitive plan of a certain subdivision, entitled

_____ and dated _____, 20 ____ has been or is hereafter granted by the _____ Sturbridge Planning
Board, then this obligation shall be void; otherwise, it shall remain in full force and effect and the
aforesaid sum shall be paid to the Town of Sturbridge as liquidated damage.

The Surety hereby assents to any and all changes and modifications that may be made of the aforesaid
covenants, conditions, agreements, terms and provisions to be observed and performed by the Principal,
and waives notice thereof.

IN WITNESS WHEREOF we have hereunto set our hands and seals this _____ day of
_____, 20 _____.

Principal _____

By: _____
(Title)

Surety _____

By: _____
Attorney in Fact

TOWN OF STIRBRIDGE
PLANNING BOARD

FORM G
PERFORMANCE BOND
SECURED BY DEPOSIT

Know all men by these presents that _____

_____,
hereby binds and obligates himself/himself/his/its executors, administrators, devisees, heirs, successors and assigns to the Town of Sturbridge a Massachusetts municipal corporation, in the sum of _____ Dollars, and has secured this obligation by the deposit with the treasurer of said Town of Sturbridge of said sum in money or negotiable securities.

The condition of this obligation is that if the undersigned or his/its executors, administrators, devisees, heirs, successors and assigns shall fully and satisfactorily observe and perform in the manner and in the time herein specified, all of the covenants, conditions, agreements, terms and provisions contained in the application signed by the Principal and dated _____, 20 _____, under which approval of definitive plan of a certain subdivision, entitled

_____ and dated _____, 20 _____ has been or is hereafter granted by the Sturbridge Planning Board, then this obligation shall be void; otherwise, it shall remain in full force and effect and the aforesaid security for said sum shall become and remain in full force and effect and the aforesaid security for said sum shall become and be the sole property of said Town of Sturbridge as liquidated damage. IN WITNESS WHEREOF the undersigned has hereunto set his hand and seal this _____ day of _____, 20 _____.

Principal _____
By: _____
Title _____

TOWN OF STURBRIDGE
PLANNING BOARD

FORM H
PERFORMANCE BOND SECURED BY BANK PASSBOOK

_____, 20 ____

AGREEMENT made this date between the Town of Sturbridge and

KNOW ALL MEN by these presents that _____
_____ of _____ hereby binds and
obligates himself/itself/his or its executors, administrators, devisees, heirs, successors and assigns to the
Town of Sturbridge a Massachusetts municipal corporation, in the sum of
_____ Dollars, and has secured this obligation by the deposit with the
Treasurer of the Town of Sturbridge Bank Book No. _____ drawn on the
_____ Bank of _____
Dollars (all), or _____ of said sum to be used to insure the performance by the obligor of
all the covenants, conditions, agreements, terms and provisions contained in the application signed by
_____ and dated _____, 20 _____, under which
approval of a definitive plan of a certain subdivision entitled _____ and
dated _____, 20 _____, has been or is hereinafter granted by the Sturbridge Planning Board.

In the event the obligor should fail to perform his obligations on said project in accordance with the
rules and regulations of the Sturbridge Planning Board, the Town of Sturbridge may use these funds, or
any part thereof, to satisfy and complete the obligor's obligations on said project.

Upon completion of all the work required to be completed by the obligor aforesaid on or before
_____ (date) the said Bank Book shall be returned to the obligor with all
interest accrued thereon.

The Town of Sturbridge acting by and through its Planning Board hereby agrees to accept the aforesaid
Bank Book as security for the performance of the project as aforesaid.

Planning Board

OWNER, AND/OR CONTRACTOR, AND/OR DEVELOPER

COMMONWEALTH OF MASSACHUSETTS

_____, ss _____, 20 _____

Then personally appeared _____ one
of the above named members of the Planning Board of Sturbridge
Massachusetts and acknowledged the foregoing instrument to be the free
act and deed of said Planning Board, before me

Notary Public

My commission expires _____

The _____ Bank of _____ hereby recognizes
and accepts the conditions of this notice of agreement.

Authorized Signature _____

To be executed in 4 copies, all of which are to be considered originals. (Note: two (2) copies of Form H
are to be forwarded to the above Bank and one (1) signed copy returned to the Planning Board.)

TOWN OF STURBRIDGE
PLANNING BOARD

FORM I
COVENANT

Know all men by these presents that whereas the undersigned has submitted an application dated _____, 20 _____, to the Sturbridge Planning Board for approval of a definitive plan of a certain subdivision entitled _____ and dated _____, 20 _____, and has requested the Board to approve such plan without requiring a performance bond,

NOW THEREFORE, THIS AGREEMENT WITNESSETH that in consideration of the Sturbridge Planning Board approving said plan without requiring a performance bond, and in consideration of one dollar in hand paid, receipt whereof is hereby acknowledged, the undersigned covenants and agrees with the Town of Sturbridge as follows:

1. The undersigned will not sell any lot in the subdivision or erect or place any permanent building on any such lot until the construction of ways and municipal services necessary to serve adequately such lot has been completed in the manner specified in the aforesaid application, and in accordance with the covenants, conditions, agreements, terms and provisions thereof.
2. This agreement shall be binding upon the executors, administrators, devisees, heirs, successors and assigns of the undersigned.

It is the intention of the undersigned and it is hereby understood and agreed that this contract shall constitute a covenant running with the land included in the aforesaid subdivision and shall operate as restrictions upon said land.

It is understood and agreed that lots within the subdivision shall, respectively, be released from the foregoing conditions upon the recording of a certificate of performance executed by a majority of said Planning Board and enumerating the specific lots to be so released.

3. The undersigned represents and covenants that undersigned is the owner* in fee simple of all the land included in the aforesaid subdivision and that there are no mortgages of record or otherwise on any of said land, except such as are described below, and the present holders of said mortgages have assented to this contract prior to its execution by the undersigned.

*If there is more than one owner, all must sign.

IN WITNESS WHEREOF the undersigned, applicant as aforesaid, does hereunto set his hand and seal this _____ day of _____, 20 ____.

Applicant's signature _____

Applicant's address _____

Owner's signature and address if not the applicant _____

Description of Mortgages: _____

(Give complete names and Registry of Deeds reference.)

Assents of Mortgagees:

COMMONWEALTH OF MASSACHUSETTS

_____ ss _____, 20 ____

Then personally appeared the above named _____

_____ and acknowledged the foregoing instrument to be _____ free act and deed, before me.

Notary Public

My commission expires: _____

TOWN OF STURBRIDGE
PLANNING BOARD

FORM J
RELEASE FORM

The undersigned, being a majority of the Planning Board of the Town of _____ Sturbridge, hereby certify that:

A The requirements for the construction of ways and municipal services called for by the Performance Bond or Surety and dated _____, 20 ____ (and/or) by the Covenant dated _____, 20 ____ and recorded in the Districts Deeds, Book _____, Page _____, (or registered in _____ Land Registry District as Document No. _____ and noted on Certificate of Title No. _____

_____ in Registration Book _____, Page _____,) has been completed/partially completed), to the satisfaction of the Planning Board to adequately serve the enumerated lots shown on Plan entitled “ _____ ”

recorded by the _____ Registry of Deeds, Plan Book _____, Plan _____ (or registered in said Land Registry District, Plan Book _____, Plan _____) and said lots are hereby released from the restrictions as to sale and building specified thereon.

Lots designated on said Plan as follows:

B. The Town of Sturbridge a municipal corporation situated in the County of Worcester Commonwealth of Massachusetts, acting by its duly organized Planning Board, holder of a Performance Bond or Surety, dated _____, 20 _____, (and/or) a Covenant dated _____, 20 _____, from _____ of the Town of Sturbridge, Worcester County, Massachusetts recorded with the _____ District Deeds, Book _____, Page _____,) (or registered in Land Registry District as Document No. _____ and noted on Certificate of Title No. _____ in Registration Book _____, Page _____,) acknowledges satisfaction of the terms thereof and hereby releases its right, title and interest in the lots designated on said plan as follows: _____

Executed as a sealed instrument this _____ day of _____, 20 _____.

Majority of Planning Board

COMMONWEALTH OF MASSACHUSETTS

_____ ss _____, 20 _____

Then personally appeared _____, one of the
above named members of the Planning Board of the Town of
_____ Massachusetts, and acknowledged the foregoing
instrument to be the free act and deed of said Planning Board, before me

Notary Public

My commission expires _____

TOWN OF STURBRIDGE
PLANNING BOARD

FORM 0
RECEIPT FOR SUBDIVISION PLAN

Sturbridge, Massachusetts

Received from _____

a copy of a () Preliminary/ () Definitive Subdivision Plan entitled

_____ application for approval for which has been made to the Sturbridge Planning Board.

Town Clerk - Signature _____

Date _____

A copy of this Form, signed by the Town/City Clerk, together with any accompanying maps, shall be filed forthwith with the Planning Board.

TOWN OF STURBRIDGE
PLANNING BOARD

FORM P
INSPECTION FORM*

Name of Subdivision _____ From Sta. _____ To Sta. _____

Name of Applicant _____ Phone of Applicant _____

Subject	Responsible Agency	Initials of Agent	Date of Inspection		
1. Clearing of Right-of-Way		Plan. Bd. Agent	_____	_____	_____
2. Sub-grade Preparation		Plan. Bd. Agent	_____	_____	_____
3. Drainage (Below-grade) Installation		Plan. Bd. Agent	_____	_____	_____
4. Water Installation		Water Dept.	_____	_____	_____
5. Fire Alarm Installation		Fire Dept.	_____	_____	_____
6. Gravel Base		Plan. Bd. Agent	_____	_____	_____
7. Curb Installation		Plan. Bd. Agent	_____	_____	_____
8. Binder Course		Plan. Bd. Agent	_____	_____	_____
9. Drainage (At surface) Installation		Plan. Bd. Agent	_____	_____	_____
10. Berm Installation		Plan. Bd. Agent	_____	_____	_____
11. Finish Course		Plan. Bd. Agent	_____	_____	_____
12. Sidewalk Construction		Plan. Bd. Agent	_____	_____	_____
13. Street Trees and Planting		Tree Warden	_____	_____	_____
14. Grass Strips		Plan. Bd. Agent	_____	_____	_____
15. Street Lights		Plan. Bd. Agent	_____	_____	_____
16. Street Signs and Monuments		Plan. Bd. Agent	_____	_____	_____
17. Final Clean-up		Plan. Bd. Agent	_____	_____	_____
18. Maintenance		Plan. Bd. Agent	_____	_____	_____

*Responsible agency and Planning Board shall be notified in writing at least 48 hours before each required inspection as listed. No inspection may be waived except by joint approval of Planning Board and responsible agency.

Appendix 6 REGULARITY FACTOR FORMULA

No building permit or certificate of occupancy shall be issued for any new construction on a lot which has a regularity factor of less than .40. The regularity factor shall be determined by the formula:

$$R = (16A) / (P \text{ squared})$$

where R is the regularity factor; A is the land area in square feet, and P is the perimeter in feet. That part of the lot area in excess of the required lot area may be excluded from the Regularity Formula in determining the regularity factor. The perimeter containing the excess area shall not be included in the required frontage.

Town of Sturbridge

Appendix 7 APPROVED STREET TREE LISTING

<u>Species</u>	<u>Common Name</u>	<u>Varieties</u>
Acer rubrum	Red Maple	Autumn Flame October Glory Red Sunset
Acer x freemanii	Red Maple	Armstrong Autumn Blaze
Acer saccharum	Sugar Maple	Fall Fiesta Flashfire Green Mountain Legacy
Carpinus betulus	Upright European Hornbeam	Fastigata Frans Fontaine Pyramidalis
Carpinus caroliniana	American Hornbeam	
Cledastris kentukea	American Yellowwood	
Gleditsia triacanthos var. intermis Halka	Thornless Honeylocust	Shademaster Skyline Street Keeper
Gymnocladus dioicus Espresso	Kentucky Coffeetree & Cultivars	
Quercus alba	White Oak	
Quercus coccinea	Scarlet Oak	
Quercus palustris	Pin Oak “Pingreen” Green Piller Pin Oak	
Quercus rubra	Red Oak	

<i>Tilia americana</i>	American Linden Cultivars	American Sentry Redmond
<i>Tilia cordata</i>	Littleleaf Linden Cultivars	Corinthian Glenleven Greenspire Summer Sprite
<i>Tilia tomentosa</i>	Silver Linden Cultivars	Green Mountain Sterling
<i>Ulmus americana</i>	American Elm Cultivars	Colonial Spirit Jefferson New Harmony Princeton Valley Forge
<i>Ulmus accolade</i>	Hybrid Elm Cultivars	Commendation Patriot
<i>Zelkova serrata</i>	Japanese Zelkova Cultivars	Green Vase Halka Musashino Schmidtlow' - (Wireless) Village Green