

**LAND SUBDIVISION REGULATIONS
OF THE
TOWN OF MADISON, NEW HAMPSHIRE**

ORIGINALLY ADOPTED BY THE MEMBERS OF THE MADISON PLANNING BOARD
10/6/76

AMENDED AFTER PUBLIC HEARING: 12/7/88
2/2/91
3/6/91
10/7/92
01/12/00
01/19/05
10/04/06
05/02/07
02/06/13
02/06/13 ** Revision
09/04/13 Rewording

Mark White Chair

James B. Down

John R. ...

...

Grp 12 Ser C-1
Date Filed:
04.05.2013

Marcia E. Shackford
Town Clerk, Madison, NH

LAND SUBDIVISION REGULATIONS
OF THE
TOWN OF MADISON, NEW HAMPSHIRE

SECTION I. AUTHORITY AND TITLE.	4
SECTION II. DEFINITIONS.	5
SECTION III. RULES OF PROCEDURE.	6
A. Agenda.	7
B. Minimum Not Maximum.	7
C. Submission of Preliminary/Conceptual Plat for Subdivisions.	7
D. Procedure for Formal Submission of Subdivision	7
E. Boundary Line Adjustment.	9
SECTION IV. PLAT DETAILS.	9
A. Final Plat — Subdivision.	9
SECTION V. PERFORMANCE GUARANTEE.	12
SECTION VI. STREET STANDARDS.	14
A. Construction of Streets.	14
B. Drainage.	15
C. Street Design.	17
D. Miscellaneous Standards.	18
E. Details.	24
SECTION VII. DESIGN STANDARDS.	28
A. Lots.	28
B. Easements.	28
C. Cluster Development.	29
D. Site Plan Review	31
E. Unsuitable Land.	31
F. Protection of Natural Features.	31
G. Environmental Control — Erosion, Sedimentation.	31
SECTION VIII. OTHER REQUIRED IMPROVEMENTS.	32
A. Monuments.	32
B. Water and Sewer Facilities.	32
C. Fire Protection.	32
D. Scattered or Premature Development	32
E. Cumulative Review of Sequential Applications	33
SECTION IX. ADMINISTRATION	34
A. Review by Other Town Officials.	34
B. Certifications.	34
C. Performance and Inspection of Work.	35
D. Data Listing.	36
SECTION X. COMPLIANCE WITH REGULATIONS; PENALTIES.	37
SECTION XI. VARIANCES	38
SECTION XII. AMENDMENTS.	39
SECTION XIII. APPEALS	40
SECTION XIV. LEGAL STATUS PROVISIONS.	41
A. Repeal of Conflicting Ordinances.	41

B. Validity.	41
C. Disqualification of Land Use Board Members.	41
SECTION XV. ZONING EXEMPTIONS FOR CERTAIN UTILITY STRUCTURES.	42
SECTION XVI. BUILDING PERMITS.	43
APPENDIX I AMENDMENT HISTORY OF SUBDIVISION REGULATIONS	44
APPENDIX II STREET DETAILS	

SUBDIVISION REGULATIONS

SECTION I. AUTHORITY AND TITLE.

A. Pursuant to the authority vested in the Madison Planning Board by the voters of the Town of Madison, during Town Meeting on March 9, 1971, and in accordance with the provisions of Chapter 36, Sections 19—29, and 19a, New Hampshire Revised Statutes Annotated, 1955, as amended, the Madison Planning Board adopts the following regulations governing the subdivision of land in the Town of Madison, New Hampshire, such regulations to be known as the “Land Subdivision Regulations of the Town of Madison”. The regulations will be in effect immediately upon their adoption by the Planning Board, and these regulations shall run with the land.

B. Purpose. The purpose of this Regulation is to promote the development of adequate streets, utilities and other facilities and services to new land developments; to assure the adequate provisions of safe and convenient traffic access, and circulation, both vehicular and pedestrian; to assure in general, the wise development of areas in harmony with the community; to create the conditions favorable to health, safety, convenience or prosperity; to provide against any scattered or premature subdivision of land as would involve danger or injury to health, safety or prosperity by reason of the lack of water supply, drainage, transportation, schools, fire department, or other public services or necessitate an excessive expenditure of public funds for the supply of such services; and to secure equitable handling of all subdivision plans by providing uniform procedures and standards for observance both of the subdivider and the planning board.

C. Guidelines. It is recommended that the subdivider give due regard to the preservation and protection of existing features such as trees, scenic points, brooks, streams, water bodies, other natural areas and historic landmarks in order to preserve the natural environment as set forth in these regulations.

D. Site Plan Review. Pursuant to the authority vested in the Madison Planning Board by the voters of the Town of Madison on March 1988, the Planning Board shall review Site Plans in accordance with RSA 674:43—44, and the Madison Site Plan Review Regulations.

SECTION II. DEFINITIONS.

- A. Abutter. "Abutter" means any person whose property is located in New Hampshire and adjoins or is directly across the street or stream from the land under consideration by the local land use board. For purposes of receiving testimony only, and not for purpose of notification, the term "abutter" shall include any person who is able to demonstrate that his land will be directly affected by the proposal under consideration. For purposes of receipt of notification by a municipality of a local land use board hearing, in the case of an abutting property being under a condominium or other collective form of ownership, the term "abutter" means the officers of the collective or association, as defined in RSA 356—B:3, XXIII.
- B. Board. The Planning Board of the Town of Madison.
- C. Boundary Line Adjustment. The change to be made to the boundaries of a lot or abutting lots of record, changing its size or shape but not result in the creation of an additional lot.
- D. Completed Application. A Completed Application is that which is sufficient to evoke the jurisdiction of these regulations and the enabling legislation and is that which contains sufficient information to allow the Planning Board to make an informed decision.
- E. Comprehensive Plan. A document prepared and/or adopted by the Planning Board to guide the long range development of the Town.
- F. Engineer. The Board of Selectmen of the Town of Madison or their appointed agent.
- G. Final Plat. The final map prepared by a licensed land surveyor of all or a portion of the subdivision which is presented by the Planning Board for final approval in accordance with Section III-b of these Regulations and which, if approved, shall be filed with the Registry of Deeds of Carroll County.
- H. Lot. A parcel of land capable of being occupied by one principal structure or use, and its accessory structures or uses, and as shown and identified as such on a plat. The number of lots in a subdivision will be considered to be the total number on adjacent land with the same subdivider whether the subdivision is made at one time or serially.
- I. Official Map. A map adopted in accordance with Chapter 36:16—18, New Hampshire Revised Statutes Annotated, 1955, as amended. Such a map shall be deemed to be conclusive with respect to the location and width of streets and the location of public parks shown thereon.
- J. Performance Guarantee. Any security which may be accepted in lieu of a requirement that certain improvements be made before the Planning Board or other approving body approves a plat, including performance bonds, escrow agreements, and other similar collateral or surety agreements.
- K. Plat. The map of a subdivision.

L. Preliminary/Conceptual Plat. The sketch map of a subdivision of sufficient accuracy to be used for the purpose of discussion, classification and or definition of requirements for a formal hearing.

M. Right of Way. A strip of land occupied or intended to be occupied by a street, roadway, or public/private access.

O. Site Plan Review. Review of the construction or improvements on a tract or tracts of land for nonresidential use or use for multi—family units other than one and two family dwellings, and changes and expansion of existing improvements.

P. Street. Any street, avenue, boulevard, road, alley, highway, lane, cul—de—sac, or other public roadway.

Q. Subdivider. The registered owner or the authorized agent of the registered owner of a subdivision.

R. Subdivision. “Subdivision” means the division of a lot, tract, or parcel of land into 2 or more lots, plats, sites, or other divisions of land for the purpose, whether immediate or future, of sale, rent, lease, condominium conveyance or building development. It excludes re-subdivision and, when appropriate to the context relates to the process of subdividing or to the land or territory subdivided. The division of a parcel of land held in common and subsequently divided into parts among the several owners shall be deemed a subdivision under this chapter. 1971 - 233:2. The grant of an easement in gross to a public utility for specific facilities; Including an unmanned structure that is less than 200 square feet, Is not a subdivision pursuant to RSA 672:14.

S. Utility Easement. Land used for installation of electrical power lines, communication lines, water lines, sewer lines, storm drainage lines or other lines for utility purposes.

T. Wetlands. Defined in RSA 482-A:2:X – Wetlands means an area that is inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal conditions does support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands shall be delineated on the basis of hydrophytic vegetation, hydric soils, and wetlands hydrology in accordance with the techniques outlined in the Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1, (January, 1987) as amended. (Amended 10/04/06)

SECTION III. RULES OF PROCEDURE.

A. Agenda.

In accordance with RSA 676:1, the Planning Board will have an Agenda prepared for each meeting and/or Public Hearing. The Agenda delineating the order of business and those matters to come before the meeting will be prepared and distributed to the Board members and to the Office of the Town Clerk not less than three (3) days prior to the meeting. The secretary of the Planning Board will take minutes of each meeting, transcribe, and distribute same to the Board members and to the Office of the Town Clerk.

B. Minimum Not Maximum.

These regulations shall be interpreted as minimum requirements and compliance with these minimum requirements in no way obligates the Planning Board to approve any particular application solely on that basis. The Planning Board will fully consider all aspects of an application before rendering its decision. This will include study of all site designs and technical aspects of the proposal, as well as consideration of the impact of development on open space, wildlife habitat and other natural resources, on local traffic patterns and on available public utilities, services, and municipal resources.

Conflicting Provisions: If any other provisions of the town or any provision of the state or federal law relates to any matter covered herein, the provision which imposes the greater restriction or higher standard shall govern.

C. Submission of Preliminary/Conceptual Plat for Subdivisions. (Amended 10/04/06; 05/02/07)

1. Procedure for Preliminary Review. An applicant shall make application for a Preliminary Review Hearing for a subdivision or boundary line adjustment, pursuant to RSA 674:35 I, by the second Wednesday of the month prior to the Preliminary Review at 12:00 noon. Preliminary Review shall be non-binding for both the applicant and the Planning Board. The application will not be acted upon unless:

- a. The application is signed by the owner of record;
- b. the application is submitted with the applicable fee in accordance with the Planning Board fee schedule; and
- c. three (3) 11" x 17" copies of the proposed project are submitted with the application.

D. Procedure for Formal Submission of Subdivision

1. Formal Submission. — A Completed Application shall be submitted to and accepted by the Board only at a public meeting of the Board with notice as prescribed below. After formal submission and acceptance, the Planning Board shall conduct the Public Hearing, as prescribed in Paragraph 3 herein. After the completion of the Public Hearing, the Planning Board may discuss additional plat details with the Subdivider prior to another public hearing. At that meeting, the Planning Board shall also approve, disapprove, or ask for revisions to the plat for the next public hearing after formal submission. An application will not be acted upon unless:

- a. the application is signed by the owner of record:
- b. accompanied by the applicable fee in accordance with the Planning Board fee schedule
- c. the list of abutters provided, and;
- d. has been received by the second Wednesday of the month prior to the Public Hearing at 12:00 noon.

A minimum of four copies of the final plat, stamped and certified by a N.H. licensed land surveyor, must be provided to the Board no later than the public hearing date. All related engineering, sewage, water, slope/soil and roadway data, when applicable, will be included with the final plat.

2. Notice. The Planning Board shall notify the Abutters and the Subdivider by certified mail, return receipt requested, of the date upon which application shall be formally submitted to the Board and date upon which the initial public hearing shall be held by the Board. Notice shall be mailed at least ten (10) days prior to the date of formal submission. Notice to the general public shall also be given at the same time by posting at three public places within the Town of Madison. The Notice shall include a general description of the proposal which is the subject of the Application and shall identify the Subdivider and the location of the proposal. If notice of the public hearing has been included in the Notice of Formal Submission or any prior notice, additional notice of that public hearing is not required of an adjourned session of hearing with proper notice if the date, time and place of the adjourned session was made known at the prior meetings.

3. Public Hearing. No application may be denied or approved without a public hearing on the application. At the hearing, the Subdivider, an abutter or any person with a direct interest in the matter, may testify in person or in writing. Other persons may testify as permitted by the Chairman of the Planning Board who may also limit all oral testimony at his discretion. A Public Hearing may not be required when the Board is considering or acting upon a boundary line adjustment application provided that Notice to Abutters shall be given prior to the approval of the application in accordance with Paragraph III D2 (Ref. RSA 676:4). An abutter may be heard on the application at his request.

4. Procedures. The Planning Board will take action to approve or disapprove or ask for revisions to the plat by the second regular meeting after formal submission. The Board will approve or disapprove the subdivision within (90) days of the date of formal-submission, except that such action may be extended if the Planning Board applies to the Selectmen for an extension not to exceed an additional ninety (90) days before acting to approve or disapprove an application. The Subdivider may waive the requirements for Planning Board action within the time period specified and consent to such extensions which may be mutually agreeable. Such a waiver by a subdivider shall be noted in the minutes of the Planning Board and the Subdivider shall write a letter to the Chairman of the Planning Board consenting to the same.

5. Actions Related to Final Plat Approval.

- a. One copy of the final plat and related data may be sent to the Town Engineer for his

review and comment prior to final Planning Board action(s). The subdivider may discuss details/questions with the Engineer after submission to the Board for approval.

- b. Approval of a final plat package may be final approval or conditional approval. Conditional approval will specify the conditions to be met before final approval is granted; e.g., permits, state subdivision approval, etc. This conditional approval shall not exceed 90 days. If this period is exceeded, a rehearing for final approval may be required.
- c. Final approval will be acknowledged in the meeting minutes and by the stamping, dating and signing of each cover sheet of the final plat package. The final plat will not be signed by the Chairman or his designated representative until the requirements of performance guarantee have been met and acknowledgement received from the Selectmen.
- d. Upon failure of the Board to approve or disapprove an application, the Subdivider may obtain from the Selectmen an order directing the Board to act within thirty (30) days. Failure of the Planning Board to act upon such order of the Selectmen shall constitute grounds for the Superior Court, upon petition of the Subdivider, to issue an order approving the application in accordance with the provisions of RSA 676:4.
- e. The Subdivider shall tender offers of cession in a form certified as satisfactory by the Town Counsel of all land included in streets, highways or parks, not specifically reserved by the Subdivider, but approval of the final plat of the Board shall not constitute an acceptance by the Town of the dedication of any street, highway, or park or other public open space until such time as the same is accepted by the Town at its next annual or special Town meeting.

The final plat certified by the Planning Board will be recorded with the Carroll County Registry of Deeds within 90 days from the date of plat signature. The final plat must be certified by a licensed land surveyor (Ref. RSA 674:37). Distribution of the remaining three copies will be one each to the Planning Board files, Office of Selectmen and Town Engineer. If the subdivider or is agent desire a stamped/approved plat, additional copies are to be provided at the time of submission and the application so annotated.

E. Boundary Line Adjustment.

An applicant shall submit an application for a Boundary Line Adjustment to the Planning Board at least 15 days prior to its regularly scheduled meeting. This application shall be:

- 1. accompanied by the applicable fee in accordance with the Planning Board schedule;
- 2. a list of abutters, and;
- 3. four copies of the final plat which is stamped and certified by a N.H. licensed land surveyor.

The criteria for approval shall be the intent of the Zoning Ordinance. The procedure for evaluation/approval shall be as outlined in paragraphs III D. 2 and 5.

SECTION IV. PLAT DETAILS.

- A. Final Plat — Subdivision. The final plat shall be a print at a scale of one hundred (100)

feet to the inch, or less (200 feet to the inch, 500 feet to the inch, etc.) or at greater detail as directed by the Board to indicate clearly existing and proposed features of the site. Said plat shall be prepared in compliance with all applicable statutory requirements and shall be prepared on 22 x 34 inch standard sheets measured from the cutting edge. If one sheet is not of sufficient size to contain the entire area of the site and environs, the plat shall be divided into sections to be shown on separate sheets of equal size with the entire area of the site and environs, the plat shall be divided into sections to be shown on separate sheets of equal size with references on each sheet to the adjoining sheets. All dimensions shall be shown to hundredths of a foot and bearings to at least the nearest thirty seconds. The error of closure shall not exceed 1:5000. The final plat shall show or be accompanied by the following:

1. Date, name and location of subdivision, name of record owner and subdivider, graphic scale and reference meridian (standard title block).
2. Tract boundary lines, right-of-way lines of streets, street names, easements, and other rights of way, park areas, or land to be reserved or dedicated to public use, all lot lines and other site lines, water courses with accurate dimensions, wetlands, bearings or deflection angles, and radii, arcs, and central angles of all curves. Proposed lots shall be numbered consecutively as instructed by the Engineer.
3. The purpose of any easement of land reserved, or dedicated to public use shall be designated, and the proposed use of sites other than residential shall be noted.
4. The identity and location for all Abutters to the tract to be divided.
5. Location and description of all monuments.
6. Certification by registered engineer or registered surveyor as to accuracy of plat details. Accuracy will meet accepted State standards.
7. When approval of a plat is required by any officer or body of such a municipality, state or county, approval shall be certified on the plat in appropriate space provided therefore on the plat.
8. Cross-sections and profiles of streets. (Cross-sections at 50 foot intervals plotted at 1" – 10" horizontal and vertical). Profiles plotted with the same horizontal scale as the plans and a horizontal to vertical scale ration of 5 to 1 respectively. All data based on a field survey.
9. If required by the Planning Board, due to slope or soil condition, topographic contours which meet standard practices will be included in the plat.
10. Plans and profiles, approved by the Engineer, of sewers, storm drains, culverts, catch basins, headwalls, and other drainage structures, as well as sanitary sewers, water, gas and underground electric layouts showing feasible connections to existing or proposed utility systems shall be required to accompany the final plat.

11. That at least one bench mark established on each section or submission of a subdivision, tied into any previously established bench mark on any previously submitted plat. Said bench mark to be plainly marked in the field and stationed on the final plat with its elevation. Ties to U.S.G.S. bench marks may be required.

SECTION V. PERFORMANCE GUARANTEE.

A. The Planning Board shall require a Performance Guarantee. The subdivider or owner shall obtain from the engineer at subdividers or owners expense, the cost of construction of all such improvements thereof in accordance with the requirements and specifications of Section VI of these Regulations. The amount of this guarantee will be no less than the cost of these improvements and provided to the Town prior to the sale of any lots.

In lieu of construction, the Planning Board may waive the requirements that the applicant complete all public improvements prior to the signing of the subdivision plat providing that one of the performance guarantees described in the following section 1 or 2 are submitted to the planning board:

1. Surety Bond. A Surety Bond, issued by a surety company authorized to do business in New Hampshire, in the amount as approved by the Planning Board, to be filed with the Town Treasurer.
2. Other Guarantees. Cash, irrevocable letter of credit issued by a banking institution in the amount as approved by the Planning Board, and deposited with the Town Treasurer.
3. Conditions. The performance guarantees allowed in Sections 1 or 2 shall be subject to the following conditions:
 - (a) The bond or other guarantee instruments shall comply with all statutory requirements and be satisfactory to the Planning Board Attorney as to form, sufficiency and manner of execution.
 - (b) The amount of the bond or other instruments shall be in an amount representing one hundred percent (100%) of the cost for completion of the streets, the installation of utilities, and other proposed facilities. Upon partial completion of a subdivision's improvements and inspection by the Town Engineer, the Planning Board may authorize in writing a pro-rated reduction in the performance guarantee corresponding to the amount completed, but in no case shall more than 50% of the performance guarantee be released until the entire subdivision improvements are completed to the satisfaction of the Board.

B. As a condition to the approval of a final plat by the Planning Board, a performance guarantee for completion of improvements required hereunder and potential damages to abutting streets, shall be tendered by the subdivider to the Town, such guarantee to consist of either:

A performance bond in an amount equal to the estimated cost of required improvements and potential damages as determined by the Engineer, issued by a surety company acceptable to the Planning Board and registered and licensed to do business in this State, conditioned and such form as the Planning Board may require.

A cash deposit, in an amount equal to the estimated cost of the required improvements and potential damages as determined by the Engineer.

Such performance guarantee shall remain in full force and effect until the expiration of one year after the approval by the Engineer of all required improvements in accordance with the provisions of Subparagraph 3, Paragraph C, of Section VII of these Regulations, or date that all latent defects have been corrected and approved by the Engineer, whichever is later, and shall be conditioned in part upon the faithful correction by the subdivider of any latent defects which appear within the period of one year after the approval by the Engineer or any required improvements as set forth in Subparagraph 4, Paragraph C., Section VIII hereof. In the case of a cash deposit the amount on deposit may be reduced by the board of Selectmen by resolution when portions of the required improvements have been installed, provided sufficient amount not to exceed 25% of the total is retained to cover the correction of any latent defects which may appear within one year following the approval by the Engineer of any required improvements as set forth in said Subparagraph 4, Paragraph C, Section VIII hereof. A joint inspection for latent defects shall be made by the Engineer and owner or subdivider not earlier than the 10th nor later than the 11th month following approval by the Engineer.

C. After approval of the final plat, the subdivider or owner shall:

1. Notify the Engineer in writing of the date on which work or required improvements is to be commenced and the date by which work is estimated to be completed (not more than three (3) years from the date of approval of the final plat). Such work shall be completed within said period, unless the time is extended by the Board of Selectmen.

2. Receive authorization of the Engineer in writing before work shall commence.

D. If the required improvements have not been installed and completed in accordance with the requirements of these Regulations or if any latent defects in such improvements appearing within a period of one (1) year after approval thereof by the Engineer have not been corrected as required herein above, then and in that event any cash deposit may be used to complete the improvements or correct the latent defects; in the event the performance guarantee is in the form of a performance bond, the obligator and surety thereon shall be liable to the Town for the reasonable cost of such uncompleted improvements or corrections.

SECTION VI. STREET STANDARDS.

In accordance with RSA Chapter 23 as amended, the Planning Board shall approve designs and Selectmen shall enforce the following road specifications. The intent of these standards is to provide all citizens of the Town of Madison with safe roads requiring a minimal amount of maintenance, while improving the circulation patterns of the Town.

The Board of Selectmen shall enforce this ordinance with the lone exception being accepting private roads as Town roads, which shall be done by Town Meeting vote. The Planning Board shall approve all new road designs for new projects.

A. Construction of Streets

1. Right of Way Width - The minimum ROW width shall be fifty (50) feet. Greater width may be required if, in the opinion of the Planning Board, it is needed to provide adequate room for the proposed street, sidewalks if required, street utilities, drainage, grading, snow storage, and emergency response service.

2. Clearing and Grubbing - The entire limits of the road-bed shall be cleared of all trees, stumps, roots, boulders and like materials. In addition, all topsoil and unsuitable materials must be removed from the limits of the road bed. In no case shall the limit of clearing and grubbing extend less than 10 feet from the road shoulder.

3. Geotextile Placement – Except where both the native soil and embankment material contain less than 12-percent fines (#200 sieve or finer), a woven geotextile shall be placed at subgrade. Where the embankment material contains less than 12-percent fines, the geotextile shall be positioned at the base of the embankment. The geotextile shall be equivalent to, or stronger than, Mirafi 500X.

4. Embankment Material - In areas of fill, unsuitable material or in the presence of water, the construction of an embankment will be required to bring the level of the street up to that which is needed to place the aggregate subbase. The embankment shall be brought to subgrade in horizontal lifts with common material which is suitable for road construction as approved by the Town. Testing of the materials shall be done at the applicant's expense.

5. Aggregate Base and Subbase Materials – The aggregate subbase course shall consist of twelve inches of gravel, N.H. DOT Item 304.2, and the aggregate base shall consist of six inches of crushed gravel, N.H. DOT Item 304.3. Testing of the materials' gradation (AASHTO T27 and T11) and proctor (AASHTO T99) shall be done at the applicant's expense. See Detail 1 in Appendix I. These are minimum standards. The amount of aggregate base and subbase materials shall be increased in areas of poor soils and for roads carrying commercial/industrial traffic. A geotechnical investigation may be required.

6. Compaction - Compaction is required for the embankment, aggregate base and subbase materials. It shall be performed by using vibrating rollers and water in lifts of no greater than twelve inches. Compaction shall be performed until the required density is achieved. Density shall be determined by AASHTO T238 method and shall not be less than 95 percent of the maximum density determined in accordance with AASHTO T99.

7. Pavement

a. Binder Course - A 2 to 3-inch lift of pavement (see details 1A and 1B) meeting New Hampshire Standard Specifications for Road and Bridge Construction, Division 400, Section 401.

b. Wearing Course - A 1 to 1 1/2-inch lift of pavement (see details 1A and 1B) meeting New Hampshire Standard Specifications for Road and Bridge Construction, Division 400, Section 401.

c. Pavement shall not be installed when the outside air temperature is below 40 degrees Fahrenheit, nor when the road base temperature is below 40 degrees Fahrenheit. Temperature of pavement mix relative to road base temperature when spread shall be in accordance with Table #3. Pavement shall not fall below 185 degrees Fahrenheit prior to the completion of rolling. Pavement shall not be installed when the subgrade is frozen or the grades are incorrect. On newly constructed roads, the base course and the wearing course shall not be installed in the same season.

8. Shoulders - In accordance with Detail 1. Shoulders shall be installed on both sides of the street and shall consist of modified crushed gravel, NHDOT Item 304.33. When curbs are installed this section shall not apply.

9. Loaming and Seeding

a. All remaining disturbed areas within the right of way shall have four inches of loam, which is free of stumps, roots and other unsuitable material, installed.

b. All remaining disturbed areas within the right of way shall be fertilized and seeded in accordance with section 646 of NHDOT specifications, except that all mulch shall be anchored with a tackifier, at a minimum.

c. The seeding of slopes, ditches, fore slopes, inverts and back slopes, shall require the use of erosion control matting.

10. Cross Sectional Grading of Slopes - Cross Sectional elements shall be in accordance with Details # 1A and # 1B in Appendix II.

B. Drainage

1. Adequate disposal of surface water shall be provided. Provisions must be made for maintaining natural watercourses and, unless a drainage easement is provided, limiting the peak runoff from new or improved roads to the existing conditions during both the 2-year and 25-year rainfall events. Road cross-culverts and water flow in the curb line shall be designed for at least the 25-yr event and driveway culverts for at least the 10-year event. Water flow along the curb line shall not extend more than 4 feet into the travel

lane. Drainage calculations must be submitted to the Planning Board for its approval. For comparison of existing conditions and proposed conditions, or where hydrograph routing is necessary, the SCS TR-20 method shall be used. For storm-drainage system sizing where the drainage area is less than 200 acres the Rational Method or SCS methods may be used. For storm-drainage system sizing where the drainage areas are greater than 200 acres, the Potters Small Watershed Analysis, SCS methods, or other methods as approved by the Planning Board or their representative may be used.

2. All road culverts shall be at least fifteen (15) inches in diameter and all driveway culverts shall be at least twelve (12) inches in diameter. Culverts shall be corrugated metal pipe (complying with AASHTO M36, Type III) or reinforced concrete pipe (Class III or higher complying with NHDOT Section 603), or HDPE plastic pipe (by Hancor or ADS complying with AASHTO M294, Type S). No aluminum shall be allowed. See Detail 6A.

3. When pipe systems are included in a street design, plan/profile sheets shall be required for the systems showing proper sizing, slopes, inverts, etc.

4. When roadside drainage ditches are used, they shall be in accordance with Details 1A and 1B.

5. The street crown, center to shoulder, shall be 1/4 inch per foot. Superelevation may be required where the ADT is greater than 400. When designing a superelevated street, the superelevation rate shall not exceed 3/4 inches per foot, and must be accompanied by engineering calculations.

6. Headwalls with properly designed cut-offs shall be required at the inlet end of all culverts. See Detail 2. For driveway culverts, prefabricated end-sections with toe plates may be used in lieu of headwalls.

7. Underdrains shall be used under ditches where the seasonal high water table is within three feet of the subgrade elevation. Where the road runs nearly perpendicular to the existing contours, additional underdrains shall be installed laterally across the road and spaced no greater than 100 feet apart. Where the road runs nearly diagonal to the contours, underdrains shall be installed laterally across the road and spaced no greater than 200 feet apart. Underdrain shall be installed in accordance with Detail 3.

8. Infiltration structures shall require: pre-treatment of the storm water before infiltration; test pits demonstrating that the bottom of the structures are at least 3 feet above the seasonal high groundwater table; the bottom of the infiltration structure shall be at least three feet below finished grade; and the infiltration structure shall be located outside the travel way and shoulder. In areas of SCS Adams soils, confirmed by test pitting, the exfiltration velocity may be assumed to be 0.0022 cfs/sf. In all other areas, the exfiltration velocity shall be determined by field permeability testing or established correlations to grain-size distributions, with a 1.5 factor of safety applied.

9. Drainage easements shall be provided where the peak rate of runoff will increase and/or where the runoff flow types changes to concentrated flow. Drainage easements shall extend from point of increased flow and/or the point where the flow becomes concentrated to the point the runoff reaches an NHDES jurisdictional wetland /channel. Drainage easements are not required within the road right-of-way.

10. For subdivisions, the assumed impervious area per building lot shall not be less than 5,000 square feet and the assumed cleared area per building lot shall not be less than 10,000 square feet. The assumed impervious and cleared areas shall be stated on the subdivision plan with a note specifying that if the actual impervious and/or cleared areas exceed the assumptions, the lot owner shall revise the drainage analysis accordingly and provide measures to limit the flow to those assumed in the drainage design. Note: impervious area includes both paved and compacted gravel surfaces.

C. Street Design

1. General Design – All streets in the subdivision shall be designed to provide safe vehicular travel. Due consideration shall also be given to the attractiveness of the street layout in order to obtain an optimum livability and amenity of the subdivision. Provision shall be made for the future extension of streets to adjoining unsubdivided property. Subdivisions that adjoin or include existing streets that do not conform to the widths shown on the comprehensive plan or official maps or the street width requirements of these regulations shall dedicate the differential width along either or both sides of said existing streets. If the subdivision is along one side only, one half (1/2) of the differential width shall be dedicated.

2. Naming- No street shall have a name which duplicates or which is substantially similar to the name of an existing street. The continuation of an existing street, however, shall have the same name.

3. Pavement widths- shall be in accordance with details 1A and 1B. The minimum pavement width is 18 feet. This width is only applicable to dead end roads with an ADT below 160. If a road does not meet these conditions then the minimum width shall be 20 feet. When curbing is proposed on rural roads such at intersections or steeper grades, then the pavement width shall be increased by four feet. Roads in areas zoned commercial shall vary based on accepted methods of design, number of lanes, the need for bike lanes, etc. In general the minimum width for these roads shall be twenty-four feet.

4. Curbing

a. Use - Curbing is required in all business districts, along any commercial driveway, all intersections with arterial or collector roads, and where any road or ditch grade exceeds 8% or 6% when the developed length exceeds 250 feet. Use of curbing requires drainage systems.

b. Type - Granite curbing shall be used when curbing is installed. Bituminous or concrete curbing shall not be permitted as it is a substandard material for this use. If

sidewalks are present vertical curbing is required. If there are no sidewalks than either vertical or sloped curbing is acceptable (See detail 7).

5. Sight Distance, Minimum - All sight distances shall be computed for both vertical and horizontal curves.

a. Level terrain - A minimum sight distance of two hundred feet is required.

b. Rolling and hilly terrains - A minimum sight distance of one hundred and fifty feet is required.

6. Any new street/road that will serve more than two lots in a subdivision or may be subsequently deeded to the Town must be constructed to Town standards.

7. Maximum Road Length- Any new road that is built that does not have a second egress on a Class V or better Town road will be limited to 1,000 feet in length.

8. Dead End Streets (Turn Aounds)- - Dead end street shall be provided with a cul-de-sac type turn around at the end.

9. Cul-de-sac turn around radius, minimum - See Detail 4.

10. Off-Street Parking - The pavement widths as detailed earlier are predicated on there being no on-street parking. As such, off-street parking of two spaces per lot or unit shall be required.

11. Driveways – Driveways shall be located and their entrances designed as a part of street design. See Detail 5. Driveways shall conform to the Town of Madison, Planning Board Regulation #1, Driveway Regulations.

12. Utilities- All underground utilities shall be located beyond the ditch line. All above-grade utility facilities such as transformers, pedestals, and sector cabinets shall be located at the right of way line.

13. Water and Sewer Utilities - Hydrants to be located behind the ditch line but not less than 10 feet from the travel way.

D. Miscellaneous Standards.

1. Highway Bounds and Signs

Granite highway bounds, at least twenty-four inches in length and four inches square, shall be set at all points of street intersections, at all points of change of direction (PC/PT), at points along tangents no more than 800 feet and as per proper surveying standards. Discs shall be set in the top of the bounds and shall be stamped with numbers corresponding to those indicated on the metes and bounds plan.

All projects shall conform to the Manual of Uniform Traffic Control Devices, latest edition.

2. Consultants

The Planning Board or Board of Selectmen may hire consultants to review plans, perform construction observation and/or perform other duties related to the project as they deem appropriate. All costs of said consultants shall be paid by the applicant as a Condition of Approval.

3. Construction Observation

Initial review shall take place upon submission of proposed road plans. It is the responsibility of the applicant to have roads laid out with centerline grade stakes at every half station. The applicant will notify the Board of Selectmen of the date that the centerline has been laid out and ready for review.

Prior to the start of the work, a pre-construction meeting will be held to review procedures, identify responsibilities and discuss Town requirements. The contractor and the contractor's superintendent shall attend the pre-construction meeting. The following items shall be submitted at or before the pre-construction meeting:

- a. Two (2) copies of the approved plans;
- b. US EPA NPDES Notice of Intent (NOI) and Stormwater Pollution Prevention Plan (SWPPP);
- c. Surety of Work;
- d. Testing and construction observation fees; and
- e. Project schedule.

The Town and the Town's representatives shall have full access to the site when the work is in preparation, during construction and after completion. The Town may observe the work on a periodic or full-time basis. The Town must be present during the installation of utilities, drainage pipes, geotextile and pavement and must observe the work at other specified stages.

The applicant shall notify the Office of the Selectmen two business days prior to the required construction observations. Upon notification of applicant, the Office of the Selectmen or designee shall perform the following construction observations within 48 hours:

- a. Cleared – Following tree clearing, prior to grubbing, with periphery erosion control measures in place.
- b. Grubbed - Roadway is grubbed down to native soil, free of loam or other unsuitable materials prior to the placement of any fill.
- c. Drainage - Installation of pipe, culvert, basins, etc.

- d. Embankment – Placing and compacting the embankment material.
- e. Geotextile – Geotextile is laid.
- f. Aggregate Subbase - Aggregate Subbase is installed and compacted.
- g. Aggregate base - Aggregate base is installed and compacted.
- h. Pavement installation - Applicant must notify the Town of date(s) which pavement will be installed. The Town must give approval prior to the placement of pavement. The Town must be present during the installation of pavement.
- i. Utilities-Installation of conduits, cables, pipe, and warning tape for electric, water, sewage, etc. The Town must be present during the installation of utilities.
- j. As built drawings- Shall be maintained on a daily basis, weekly reviews will be conducted.
- k. Final Construction Observation - After the submission of as built drawings and prior to the release of the surety the Town shall conduct a final construction observation. All items contained within the Town's "punch list" shall be addressed prior to the acceptance of the work.

Failure to notify the Town or their designated representative of said construction observation points shall give the Town the right to reject the work and require reconstruction.

The Town and/or their designated representative shall at all times have access to the site for the purpose of performing construction observations.

The cost of construction observation and testing shall be paid by the applicant(s) prior to the acceptance of the work.

4. Surety of Work

Proper surety in the form of cash, bonds must be submitted to the Town to insure the completion of work. No work shall commence on the property until proper surety is in place. The surety amount shall be 115% of the current Engineer's opinion of probable cost.

An Engineer's opinion of probable cost shall be submitted for approval prior to the surety being accepted. The cost shall include the costs of construction observation and testing. Surety may be drawn down no more often than monthly. In no case shall the surety be drawn below ten percent until the completed road has successfully stood for one year.

The surety may be used by the Town to repair work which has failed or is not found to be in accordance with the plans and specifications, to restore the site should the project default, to cover the cost of testing and construction observations and to cover legal or other fees the Town may incur during the collection process.

5. Street Acceptance

No street will be accepted by the town until such time as all improvements have been carried out as shown on the final plat, in accordance with the requirements of these regulations and

subject to any conditions established by the Planning Board at the time of final plat approval. In addition, the following conditions shall be met prior to Selectmen recommending a street for acceptance:

- a. At least eighty-five (85) percent of all buildings to be built on lots fronting on the road shall be fully constructed and ready for occupancy.
- b. The valuation along said street shall be a minimum of two million dollars per mile.
- c. Street construction shall have been complete for a minimum of eighteen months.
- d. The standards of this ordinance shall have been met.
- e. At least one thousand feet of street shall be proposed for acceptance except when the proposal is for a generally straight extension of an existing Town street.
- f. A fee simple deed shall be submitted prior to acceptance, which shall include a metes and bounds description, prepared by a New Hampshire Licensed Land Surveyor, shall be submitted to the Town. Accompanying the legal description shall be a certification by the Owner's surveyor that the right-of-way bounds have been set at the locations shown on the street design plan.
- g. No road will be considered unless accessible via a Town or State roadway.
- h. All petitions for road layout must be made before Oct. 1 of each year. Petitions shall be signed by at least twenty-five Madison registered voters.
- i. When there are no records indicating that the Town witnessed the road construction (i.e. construction observation records, sieve analysis, compaction tests, etc.) road corings to investigate sub grade shall be performed and paid for by the applicant. Testing will not be done between November 1 and May 1. The following testing shall be performed: pavement and aggregate testing @100-ft spacing; aggregate base density and percent compaction @ 200-ft spacing; aggregate base sieve analysis @ 400ft spacing; subgrade sieve analysis @ 400ft-spacing; and aggregate base proctor tests @ 800-ft spacing (composite from corings).
- j. Betterment projects shall conform to the provisions of RSA 231:28-33. All costs of betterment engineering shall be paid for by the applicant. Betterment periods shall be no longer than 10 years.
- k. Upon acceptance of the road, a maintenance bond shall be provided to reserve funds to repair or reconstruct the road, which have become damaged due to latent defects in the road construction. The maintenance bond shall remain in effect until two (2) years after acceptance and the bond value shall generally be twenty dollars (\$20) per linear foot of roadway accepted. The bond value is intended to approximately equal 10 percent of the cost to fully reconstruct the road.

6. Waivers

Waivers to any section may be requested. All waiver requests must be submitted in

writing. The Planning Board shall not approve waivers unless it shall make findings based upon evidence presented to it in each specific case that:

- a. The granting of the waiver will not be detrimental to the public safety, health or welfare or injurious to other properties located nearby.
- b. The granting of the waiver shall not permit construction of a lesser quality or create a structure requiring greater maintenance.
- c. The granting of the waiver shall not have the effect of nullifying the intent and purpose of these regulations.

Upon receiving the request, the Planning Board shall evaluate the arguments, review the possible precedence which the decision may set, and shall vote to grant or deny the request.

7. More Stringent Provisions

In all cases of conflict between this and other Town or State regulations, the strictest regulation shall apply.

8. Minimum Data Required on Street Design Plans

- a. The applicant shall submit two complete sets of street design plans for the Planning Board's review. The applicant shall also submit two copies of any revisions made to the plans for approval. The plans shall be submitted on twenty-two by thirty-four inch or twenty-four inch by thirty-six inch plan/profile paper and shall be done with a horizontal scale of 1" = 40' and a vertical scale of 1" = 10'.

b. Data Requirements

- i. Title showing the name of the subdivision, name of the street and name of the owner, applicant, date (day, month, year), revision history, scale and name and seal of a Professional Engineer licensed in the State of New Hampshire
- ii. Right-of-way lines
- iii. Slope and drainage easements
- iv. All centerline data (tangent lengths and bearings, curve data and stationing)
- v. Edge of pavement lines
- vi. Cross sections at each half station
- vii. Existing grade at each half station (on profile and cross section)
- viii. Proposed grade at each half station (on profile and cross section)
- ix. Length of vertical curves and data (on profile)
- x. Sight distance of horizontal and vertical curves
- xi. Design speed
- xii. Type of terrain considered to control design

- xiii. Average daily traffic (ADT) based on "ITE Trip Generation Manual" current edition
- xiv. Design Year based on tenth year after opening year
- xv. Drainage structure location and inverts, station, skew, length, slope and end treatment
- xvi. Benchmarks spaced not more than five hundred feet along the roadway
- xvii. Utility locations and details
- xviii. Specific material specification or reference
- xix. A detailed Engineer's opinion of probable construction cost
- xx. A notarized letter fixing the legal responsibility for maintenance of the streets
- xxi. Grading plan showing existing and proposed contours at a minimum of two foot frequency within the right of way
- xxii. General notes for construction observations (see section 131.68c for construction observation requirements).
- xxiii. Driveway layout with the street right-of way and spot elevations at edge of pavement, ditchline/gutter, and right-of-way line.
- xxiv. Erosion and Sediment control plan with project-specific construction sequence.

9. As-Builts

- a. In order to ensure the proper construction of development streets, As-Built drawings shall be presented to the Office of the Selectmen or its designee for its review prior to final draw down of the surety for the project. These drawings must be maintained on a daily basis and will be reviewed weekly.
- b. Except for those referred to above, the Planning Board does not require as-built subdivision plans, nor will it stamp and sign such plans. The only as-built subdivision plans, which the Board will stamp and sign is the plan showing the location of structures on condominium property. Such plans shall:
 - i. Be certified to be correct and stamped by a N.H. Licensed Land Surveyor
 - ii. Be accompanied by Certificates of Occupancy, if applicable;
 - iii. Clearly identify in the title block exactly what the as-built plan is approving; and
 - iv. Have the following plat note printed on each sheet, "These as-built plans are pursuant to, and without modification of, the original Planning Board approval.
- c. Submit metes and bounds plan prepared by a N.H. Licensed Land Surveyor showing the following items:

- i. Platted rights-of-way.
- ii. Bearing and distances of right-of-way tangents and other property lines.
- iii. Horizontal curve data for the right-of-way including radius, delta and length.
- iv. Numbered bounds.
- v. Slope, drainage and other easements and encumbrances.
- vi. Edge of pavement and driveway entrances.
- vii. Other items required by the N.H. Code of Administrative Rules, Board of licensure for Land Surveyors, Rule Lan 503.09.

E. Details: Refer to Tables #1-3 on the following pages. Additional Street Standard details #1A – 10 are included in the Appendix.

**TABLE 1
STREET DESIGN GUIDELINES**

Description	Terrain		
	Level	Rolling	Hilly
Terrain Classification			
Right of way (ft)	Section 131-67.A.(1)		
Pavement width (ft)	Section 131-67 .C.(1)		
Type of Curb if used	Section 131-67 .C.(2)		
Minimum sight distance ¹ (ft)	200	150	150
Maximum grade	6%	9%	11%
Minimum cul-de-sac radius	See Detail #4		
Cross-Slope	2%	3%	4%
Design Speed	25	25	20
Minimum centerline radius			
4 Percent Superelevation	150	150	125
Without Superelevation	200	200	150
Minimum tangent- Between reverse curves (ft)			
4 Percent Superelevation	100	100	100
Without Superelevation	75	75	50
Driveways	Section 131-67.C.(7)		

¹ For sight distance calculations, the height of the driver's eye is considered to be 3.5 feet and the height of object 2.0 feet

**TABLE 2
INTERSECTION DESIGN GUIDELINES**

Description	Terrain		
	Level	Rolling	Hilly
Approach Speed (mph)	25	25	20
Clear sight distances ¹			
Approach	200	200	150
At intersection	IAW SSD for intersection Road, but not less than 200 ft.		
Vertical Alignment - Maximum grade			
New Roads	3%	3%	4%
Existing Roads	6%	6%	8%
Distance (ft) ²	100	100	100
Minimum angle of intersection	** 90 0 +/- 10 0 **		
Minimum curb radius (ft)			
Local – Local	25	25	25
Local – Collector	30	30	30
Collector – Collector	35	35	35
Collector – Arterial	40	40	40
Minimum centerline offset from Adjacent intersection ³			
Local – Local	125	125	125
Local – Collector	150	150	150
Collector – Collector	200	200	200
Minimum tangent length			
Approaching intersection (ft)	50	50	50

¹ For intersection sight distance calculations, the height of the driver's eye is considered to be 3.5 feet and located 10 feet from the edge of travel way, and the height of object is 3.5 feet.

² Measured from the centerline/centerline intersection along both the new side street and the new or existing thru-street.

Residential driveways will be considered as local roads and commercial driveways as collector roads.

**TABLE 3
RECOMMENDED MINIMUM PLACEMENT TEMPERATURES**

Mat Thickness, in. (cm)

Base ¹						
Temp. F	½(1)	¾(2)	1(2.5)	1-½(4)	2(5)	3(7.5) ²
+40-50	---	---	310	300	285	275
+50-60	---	310	300	295	280	270
+60-70	310	300	290	285	275	265
+70-80	300	290	285	280	270	265
+80-90	290	280	275	270	265	260
+90	280	275	270	265	260	255
Rolling						
Time, min.	4	6	8	12	15	15

¹Base on which mix is placed [C=0.555 (F-32)]

²and greater

SECTION VII. DESIGN STANDARDS.

The subdivision plat shall conform to the design standards set forth in Section VII: Street Standards and herein to encourage good development patterns within the Town. Whether either or both an official map or comprehensive plan may be adopted, the subdivision shall conform thereto with respect to street, public open spaces and drainage ways.

A. Lots.

1. All lots shall have a minimum of two buildable acres. Land to be used for roadways or rights of ways shall not be used in computing lot size; nor shall land which contains steep slopes, wetlands, unusual surface configurations, or rock formations. (Amended 10/04/06)
2. Insofar as is practical, side lot lines shall be at right angles to straight streets, and radial to curved streets.
3. Where extra width has been dedicated for widening of existing streets, lots shall begin at such extra width line, and all setbacks shall be measured from such line.
4. Where there is question as to the suitability of a lot or lots for its or their intended use due to the presence of such factors as rock formations, steep slopes, unusual surface configurations, tendency to periodic flooding, poor drainage, unsuitable soil or soils, and inadequate capacity for sanitary sewer disposal, the Planning Board may, after adequate investigation, withhold approval of such lot or lots.
5. Lots shall be laid out/and or graded in such a manner so as to prevent the collection of water at low points thereon.
6. Only those trees shall be removed as shall be necessary to permit construction of streets, driveways, lawns, scenic views, and dwellings and other authorized structures.
7. When any lot is bound on one or more sides by a Class 1 thru Class V highway, lake, pond, stream, river, or other body of water, the minimum frontage on the same shall not be less than two hundred feet (200') for each such lot.
8. Wetlands and Steep Slopes. Wetlands and steep slopes >33% (greater than 33%) shall not be included in the minimum lot size determination. The Planning Board shall require delineation of the wetlands by a certified soil scientist at the applicant expense. (Added 1/17/05)

B. Easements.

1. Easements for utilities across lots or centered on rear or side lot lines shall be provided where necessary. The widths of these easements shall be based on the requirements of the various service agencies involved (power company, telephone company, etc.) with respect to the type of subdivision contemplated and the type of service provided (overhead, underground, etc.).
2. Where a subdivision is traversed by a watercourse, drainage way, channel or stream, the

Board may require that there be provided a storm water easement or drainage right—of-way of adequate width to conform substantially to the lines of such watercourses, drainage way, channel or stream, and provide for construction or other necessary purposes.

3. Where necessary, temporary vegetation and/or mulching and structural measures shall be used to protect areas exposed during development.
4. Sediment basins shall be installed and maintained to remove sediment from runoff waters and from land undergoing development.
5. Provisions shall be made to effectively accommodate the increased runoff caused by changed soil and surface conditions during and after development.
6. The permanent final vegetation and structures shall be installed as soon as practical in the development.
7. The development plan shall be fitted to the topography and soils so as to create the least erosion potential.
8. Whenever feasible, natural vegetation shall be retained and protected.
9. Natural drainage ways shall be utilized and left open to remove excess surface water.

C. Cluster Development.

1. The purpose of this section is to encourage flexibility and variety in residential development in order to promote more efficient use of land in harmony with its natural features, to make more economic the provision to roads, water, septic disposal and other services, to promote designs which enhance the privacy, safety and enjoyment of residents and to preserve open space.

2. Definitions.

a. Cluster Single—Family Development or Subdivision: An entirely single-family residential subdivision where instead of the entire tract being subdivided into house lots of conventional size, a number of housing units or lots of reduced dimensions are scattered or clustered around and within areas of open space.

b. Total Common Land. The land in a cluster or multi—family development that is created by reducing individual lot sizes, or on parcels with attached units, all land not occupied by units, roadways and other allowed structures, to which access is provided for the residents of the subdivision and possibly for the citizens of the Town or the public at large, and which is owned by either a homeowners' association, a municipal body, or a private non—profit agency for the purpose of preserving the open space.

3. General Requirements

- a. Cluster developments are allowed and must be reviewed and approved by the Madison Planning Board in compliance with the Subdivision Regulations.
- b. Accessory uses and structures are permitted as well as buildings, structures or facilities incidental to the use of common land for conservation, preservation or recreational uses irrespective of the number of residential buildings permitted.
- c. The maximum number of dwelling units in either cluster or multi-family developments shall not exceed that otherwise permitted if a conventional subdivision was planned on the parcel in question utilizing the standards in Section VII.B. above. The applicant shall prepare a conventional subdivision layout to illustrate the maximum number of dwelling units, and shall show on that layout that not only could the lot be legally created, but also that a house could realistically be constructed on the site. Without limitation, the applicant must show that each lot could comply with all setbacks and on site septic requirements. (Amended 10/04/06)
- d. Public or private rights—of-way within a development (internal streets) must be at least fifty (50') in width with at least one entrance upon a Class I thru Class V highway, and no more than one (1) entrance per six hundred feet (600) of frontage on said highway, and constructed to the standards enumerated in Section VI, A above. Driveways are permitted to serve a maximum of two dwelling units for each driveway and need not meet the required standards for public or private rights—of-way. Driveways, however, must be of a reasonable length and grade to ensure safety and provide accessibility for fire protection apparatus to the dwellings in question.
- e. The developer must provide safe and adequate water sewerage disposal with provisions in the Declaration of Condominium or Declaration of Covenants and Restrictions establishing the development to provide for a Property Owners Association to maintain all such systems, the common land, the amenities, and all private roadways. In such instances, the Declaration and all deeds and leases over three years in duration will specify that the water, sewage, and roadway systems are and will remain privately maintained by the Association, and will not be deeded to the Town.

4. Areas and Dimensions

- a. The parcel to be subdivided shall have at least two hundred feet (200') frontage along a public or private roadway, and if fronting upon a lake, pond, stream, river, brook, or other body of water, the minimum frontage of same shall not be less than two hundred feet (200').
- b. Except as specified by Paragraph 4.13 of the Zoning Ordinance, there are no individual setback requirements for units within a cluster.
- c. The cluster development shall have a minimum of 2 acres per dwelling unit as specified in the zoning ordinance. Except as otherwise specified in the zoning ordinance, there is no minimum area of contiguous land for a cluster development dwelling unit. However, the type of septic system and water supply must be specified.

D. Site Plan Review — A Site Plan Review (SPR) is required for nonresidential or multi—family dwellings. The requirements for subdivision approval may be in addition to SPR but an approval of a SPR does not preclude the need for subdivision approval.

E. Unsuitable Land. Land of such character that it cannot be safely used for building purposes because of danger to health or peril from fire, flood or other hazard, shall not be platted for residential occupancy nor for any other use which would tend to increase the danger to health, life or property or aggravate the flood hazard, until, in the opinion of the Board, appropriate measures have been taken by the subdivider to eliminate such hazards or reduce them to reasonable risks. Land subject to periodic flooding, poor drainage or other hazardous conditions, shall not ordinarily be subdivided. Land with unsuitable soil or inadequate capacity for individual sanitary sewerage disposal systems shall not be subdivided unless connected to a common sewer system.

F. Protection of Natural Features. Due regard shall be shown for all natural features, such as trees, water-courses, scenic points, historic spots, and similar community assets.

G. Environmental Control — Erosion, Sedimentation. The following control measures shall be employed by the developer for an effective erosion and sediment control plan:

1. The smallest practical area of land shall be exposed at any one time during development.
2. When land is exposed during development, the exposure shall be kept to the shortest practical period of time.

SECTION VIII. OTHER REQUIRED IMPROVEMENTS.

A. Monuments. Monuments shall be set on the right—of—way lines of streets, at the beginning and end of the project, beginning and end of curves, angle points, and on tangents with a maximum distance between bounds of 1,000 feet. Such bounds to be stone or concrete 2” x 2” x 36” long. Concrete boundary monuments to be reinforced with 3/8” diameter deformed bars or acceptable substitutes. The bound shall be set six (6”) inches above finished grade. No permanent monuments shall be set until all construction which would disturb or destroy the monuments is completed. Bounds shall be set by a registered professional engineer or land surveyor and must be set within 120 days of completion of construction. “Iron pipes and drill holes shall be used at lot property corners.”

B. Water and Sewer Facilities. All water and sewer facilities shall conform to New Hampshire Water Supply and Pollution Control Commission Criteria, and the Madison Sewer Ordinance, as amended.

C. Fire Protection. The Planning Board has the authority to require the subdivider to provide adequate fire protection.

D. Scattered or Premature Development.

1. Scattered or premature subdivision of land as would involve danger or injury to health, safety or prosperity by reason of lack of water supply, drainage, transportation, school, fire department or other public services, or that a lack of these facilities would be a hazard or necessitate an excessive expenditure of public funds for the supply of such services shall not be approved by the Board. The funds for the supply of such services shall not be approved by the Board. The Planning Board may, if the situation warrants, approve an entire subdivision, allowing only a portion thereof to be developed each year. This phased development would help permit an orderly expansion of services within the town to match growing needs.

2. The following items shall be considered in determining whether the proposed subdivision is scattered or premature and the subdivider may be required to have studies made at subdividers expense under guidelines established by the Planning Board to determine the effect that the proposed subdivision may have on:

- (a) Distance from nearest elementary school.
- (b) Capacity of school system and effect on school bus transportation.
- (e) Adequacy of access street(s) and/or sidewalk(s).
- (d) Adequacy of water supply for domestic and for firefighting purposes.
- (e) Potential health problems due to on—site sewage systems and/or water supply.
- (f) Potential fire protection problems due to location and/or special conditions relative to

type of use.

- (g) Potential special policing problems.
- (h) Potential drainage problems, both on the site and downstream.
- (l) Causing an excessive expenditure of public funds.
- (j) Other potential problems within the meaning or the purpose of this section.

E. Cumulative Review of Sequential Applications (Added 01/12/00)

1. Purpose

These cumulative review provisions are adopted to ensure that the Town of Madison, through its planning board, retains control over its expenditures on the development, improvement, and maintenance of town services to new or expanded subdivisions and to the sequential subdivision of parcels located in the same area of the town, and to ensure that the planning board has the opportunity to review and reconsider the needs and burdens created by sequential subdivision applications when the actual overall impact of such sequencing has become more readily apparent.

Among other matters, such cumulative review shall consider to what extent the sequential applications, taken together, may present a level of development that is scattered or premature within the meaning of RSA 674:36,11(a).

2. Cumulative Review

The planning board shall have the authority to include within its review and consideration of any application for subdivision approval the nature, scope and impact of any prior subdivision approval where:

(a) the prior subdivision approval became final not more than five (5) years before the date of tiling of the subsequent application; and

(b) the subsequent application seeks to subdivide land that is either part of or contiguous to the parcel or parcels subject to the prior approval, or where the same public or private road or roads provide actual access to some or all of the lots in both the prior and subsequent subdivisions; and

(c) where the subsequent application seeks to subdivide land that is under the same ownership or control as the land subject to the prior approval at the time of that approval, or is owned by the heirs, successors, assigns or other grantees of those who owned the land at the time of the prior approval.

SECTION VIII. ADMINISTRATION.

A. Review by Other Town Officials. Before approval of the final plat is given, the applicant shall obtain for the Planning Board written statements that the proposed subdivision plat is satisfactory to Town Officials as follows:

1. The Board of Selectmen as to the relationship of the proposed water and drainage lines in existing public ways.
2. The Engineer as to the design of the street system, location of easements, and design of the water and drainage systems, including appurtenances.
3. The Madison Planning Board will call upon the Chiefs of the Fire and Police Departments to review all proposed subdivisions.

B. Certifications. The following listed certifications shall be affixed to the final plat plan together with the appropriate signatures and seals (when available) prior to the approval by the Planning Board.

It is hereby certified that the lands subdivided on this map are owned by title of records and that consent to the approval of said map is given.

(date) (corporate or individual name)

2. I hereby certify that this map and survey has been made under my supervision. The date of the survey was

(date) (licensed land surveyor)

3. I certify that a bond has been given to the Town of Madison guaranteeing the construction of all public facilities such as roads, drains and monuments and other appurtenances as shown on this map.

(date) (Town Clerk)

4. I have carefully examined this map and find it conforms with the provisions of Town ordinances and state laws and requirements applicable thereto.

(date) (Building Inspector)

5. This map is hereby approved by the Madison Planning Board at an official meeting held

on _____ and shall be filed on or before _____ with the Carroll County Register of Deeds.

(date) (Chairman, Madison Planning Bd.)

C. Performance and Inspection of Work.

1. All work necessary for the construction of required improvements shall conform to the requirements of these Regulations. Such work shall be performed in a good and workmanlike manner, and shall be free from faults and defects. All materials incorporated in such construction shall conform to the requirements of these Regulations and shall be of good quality. Any work or materials not conforming to the foregoing standards may be considered defective and rejected by the engineer. All work and materials rejected by the Engineer as defective shall be removed and corrected by the subdivider.

2. The Engineer will be the Town's representative during the construction of required improvements. He shall at all times have access to the site when the work is in preparation and progress. He will make periodic visits to the site to familiarize himself gradually with the progress and quality of the work and to determine in general if the work is proceeding in accordance with the requirements of these Regulations. The subdivider shall provide the Engineer in advance with a schedule of work to be performed outside of the Engineer's normal office hours and give the Engineer timely notice of the completion of each major stage in the construction of any required improvement so that the Engineer may inspect the work so completed prior to the covering thereof, and the Engineer shall make all such inspections with reasonable promptness so as to cause no delay in the work. In particular, the subdivider shall, in the case of streets, give timely notice to the Engineer of the completion of subgrades, drainage base course, and base and final surfacing.

3. The subdivider shall give the Engineer notice when any required improvement is completed and ready for final inspection. The Engineer will promptly make such inspection and, when he finds that the particular improvement has been fully completed in accordance with the requirements of these Regulations, he shall approve the same in writing. Such approval, in the case of a street, shall not constitute the legal acceptance of the street by the Town nor shall it modify in any way the requirements of law for the acceptance of streets by the Town.

4. The subdivider shall promptly remedy any defects in any required improvement due to faulty workmanship or materials which appear within a period of one year after approval thereof by the Engineer.

5. Notwithstanding the on-site observations and inspections of the Engineer, any directions given by him, and any approvals of required improvements issued by him, the subdivider shall be and remain fully responsible for the performance of the construction work in accordance with the requirements of these Regulations and the Engineer shall have no responsibility for the failure of the subdivider to carry out the work as required herein.

6. The subdivider may, upon demand, be required to promptly reimburse the Town for all inspection work performed by the Engineer pursuant to the provisions of subparagraphs 2 and 3 of this Paragraph C, Section VIII. In the case of a major subdivision, the subdivider shall file with the Town a cash deposit in such amount as the Engineer may reasonably require, as security for such reimbursement, and if the subdivider fails to make reimbursement as and when required hereunder, the Town may appropriate such cash deposit as necessary to effect reimbursement.

D. Data Listing. The following listed data shall be included on the final plat prior to approval by the Madison Planning Board.

1. Area of land subdivided _____ acres.
2. Number of building lots _____.
3. Length of streets _____ feet.
4. Area of open space/conservation strips _____ acres.
5. List of abutters.

SECTION X. COMPLIANCE WITH REGULATIONS; PENALTIES.

No subdivision of land shall be made, and no land in any subdivision shall be transferred, sold or offered for sale until a final plat, prepared in accordance with the requirements of these Regulations, has been approved by the Planning Board. As provided in RSA 676:16—17, any owner, or agent of the owner, of any land located within a subdivision, who transfers or sells any land before a plan of the said subdivision has been approved by the Planning Board and recorded or filed in the office of the Register of Deeds, shall forfeit and pay a penalty of five hundred dollars (\$500.00) for each lot or parcel so transferred or sold; and the description by metes and bounds in the instrument of transfer or other documents used in the process of selling or transferring shall not exempt the transaction from such penalties. The Town of Madison may enjoin such transfer or sale and may recover the said penalty by civil action. In any such action, the prevailing party may recover reasonable court costs and attorney’s fees as the same may be ordered by the court.

SECTION XI. WAIVERS

Where strict conformity to the Subdivision Regulations would cause undue hardship or injustice to the owner of the land, a subdivision plan substantially in conformity with regulations may be approved by the Board provided that the spirit of the regulations and public convenience and welfare will not be adversely affected.

SECTION XII. AMENDMENTS.

These Regulations may be amended or rescinded by the Planning Board but only following a public hearing on the proposed changes. The Chairman of the Planning Board shall transmit a record of any changes so authorized to the Register of Deeds of Carroll County.

SECTION XIII. APPEALS.

Any person aggrieved by a decision of the Planning Board concerning a plat or subdivision or building permit may present to the superior court a petition, duly verified, setting forth that such decision is illegal in whole or in part, specifying the grounds of the illegality, Such petition shall be presented to the court within thirty (30) days after the filing of the decision in the office of the Planning Board.

SECTION XIV. LEGAL STATUS PROVISIONS.

- A. Repeal of Conflicting Ordinances. All ordinances or parts of ordinances, of other governing bodies in the Town, inconsistent with, or contrary to the provisions of this ordinance are hereby repealed to the extent necessary to give this ordinance full force and effect.
- B. Validity. Should any section or part of a section or any provision of this ordinance be declared by the courts to be unconstitutional or invalid, such declaration shall not affect the validity of the ordinance as a whole, or any part thereof, other than the part so declared to be unconstitutional or invalid.
- C. Disqualification of Land Use Board Members. As provided in RSA 673:14, no member of a zoning board of adjustment, building code board of appeals, planning board or historic district commission shall participate in deciding, or sit upon the hearing, of any question which the board is to decide in a judicial capacity if that member: 1) has a direct personal or pecuniary interest in the outcome which differs from the interest of other citizens, or 2) would be disqualified for any cause to act as a juror upon the trial of the same matter in an action at law. Any board member (or the public, if allowed by local ordinance or rules of procedure) may request an advisory, non—binding vote if it is unclear whether a member should be disqualified. If a vote is to be taken, it must be done prior to, or at the start of, the public hearing.

SECTION XV. ZONING EXEMPTIONS FOR CERTAIN UTILITY STRUCTURES.

The Planning Board designates the building inspector or its designee, upon application by a utility, to waive any requirement contained in an ordinance, code, or regulation for any unoccupied structure which is less than 200 square feet in area, which is necessary for the furnishing of utility services for the public health, safety, or general welfare, and for which the utility's siting options are limited by virtue of said structure being a physically integrated component of the utility's transmission or distribution apparatus. Any such waiver shall terminate, without further action by the Planning Board, if said structure ceases to be used for provisions of utility services.

The building inspector will ensure that such utility structures do not adversely affect the character of the area or create a hazard to the public.

SECTION XV. BUILDING PERMITS.

No building permits shall be issued for the construction of a building subject to these regulations until final approval is granted by the Board. Denial of a permit will not be made on the basis of uncompleted streets or utilities (Ref. RSA 676:12) unless there is no performance guarantee in place.

APPENDIX I. AMENDMENT HISTORY OF SUBDIVISION REGULATIONS

2000

Amend Section VI, Required Improvements by inserting the new paragraph, Cumulative Review of Sequential Applications.

2005

Amend Section VII, Design Standards, A. Streets, by inserting the follow new paragraph after #9; 10. Maximum Road Length. Any new road that is built that does not have a second egress on a Class V or better Town road will be limited to 1,000 feet in length.

Amend Section VII, Design Standards, B. Lots, by inserting the following parenthetical statement at the end of paragraph 1; 1. The minimum lot size is two acres. Land to be used for roadways or rights of way shall not be used in computing lot size.

Amend Section VII, Design Standards, B. Lots, by inserting the following new paragraph after #7; 8. Wetlands and steep slopes greater than 33% shall not be included in the minimum lot size determination. The Planning Board shall require delineation of the wetlands by a certified soil scientist at the applicant expense.

2006

Steep slopes language added.

2007

Amend Section III. Rules of Procedure. C.1. Submission of Preliminary/Conceptual Plat for Subdivisions – Procedure for Preliminary Review; and Section III. Rules of Procedure. D.1.d. Procedure for Formal Submission of Subdivision – Formal Submission to reflect the change in application deadline from fifteen (15) days prior to the meeting to the first Wednesday of the month at 12:00 Noon to allow more time for application review.

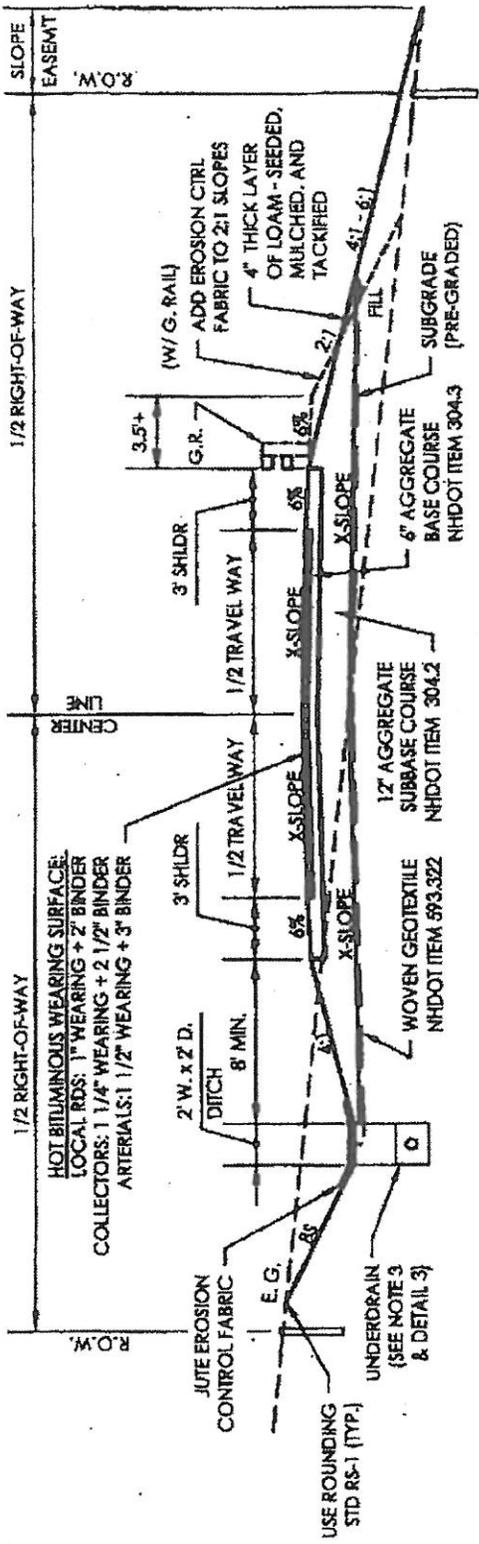
2013 – February 6

The amendment includes an expanded section of Street Standards to address Construction of Streets, Drainage, Street Design, Miscellaneous Standards, and Details. The purpose of the amendment is to bring the street standards up to date with current engineering and construction methods.

2013 – September 4

This amendment is a rewording if sections III C and D to clarify and change the deadlines of Preliminary Review and Subdivision applications to the second Wednesday of the month and of section XI from the heading “VARIANCES” to “WAIVERS” as variances are only granted by the Zoning Board of Appeals.

APPENDIX II. STREET DETAILS



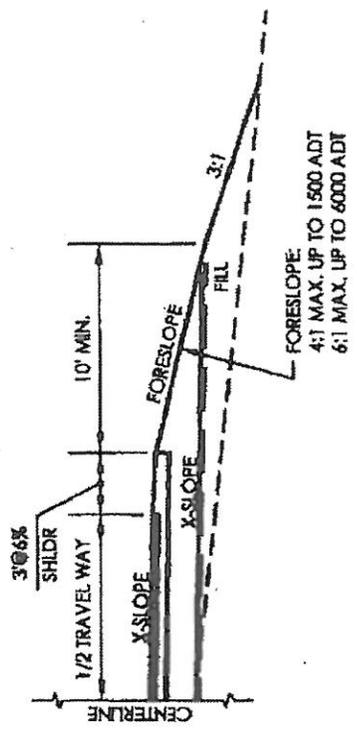
TYPICAL SECTION

TRAVELED WAY	ADT	<160	161-750	751-1500	>1500
X-SLOPE	WIDTH*	18"	20'	22'	24'
	TERRAIN	LEVEL	ROLLING	HILLY	-
BACKSLOPE (BS)	SLOPE	2%	3%	4%	-
	VERT. SLOPE HGT.	0-5'	6-10'	>10'	LEDGE
	SLOPE	4H:1V	3H:1V	2H:1V	1H:2V

* SEE NOTE 4

NOTES:

- WHERE BOTH THE NATIVE SOIL AND EMBANKMENT MATERIAL CONTAIN LESS THAN 12% FINES (#200 SIEVE OR FINER), THE GEOTEXTILE MAY BE OMITTED.
- THE AGGREGATE BASE AND SUBBASE COURSES SHALL EXTEND TO DAYLIGHT, EITHER BY ELEVATING THE ROAD OR BY CONSTRUCTING DITCHES WITH FREE-DRAINING OUTLETS.
- UNDERDRAINS SHALL BE CONSTRUCTED (WITH FREE-DRAINING OUTLETS) UNDER ALL DITCHES WHERE THE SEASONAL HIGH GROUNDWATER TABLE IS WITHIN 3 FEET OF SUBGRADE.
- REFER TO PARAGRAPH 131-67.C (1) FOR INCREASED WIDTH REQUIREMENTS WHERE CURB IS USED (ADD 2') AND WHERE THERE IS TRUCK TRAFFIC (20' MIN. TRAVEL WAY).
- GUARD RAIL MAY ONLY BE USED AT WETLAND/STREAM CROSSINGS, WHERE EXISTING FEATURES ARE MORE HAZARDOUS THAN THE RAIL, AND WHERE THE FILL DEPTH EXCEEDS 10'. REFER TO THE NARRATIVE OF THESE ROAD STANDARDS FOR ADDITIONAL SPECIFICATIONS/REQUIREMENTS.

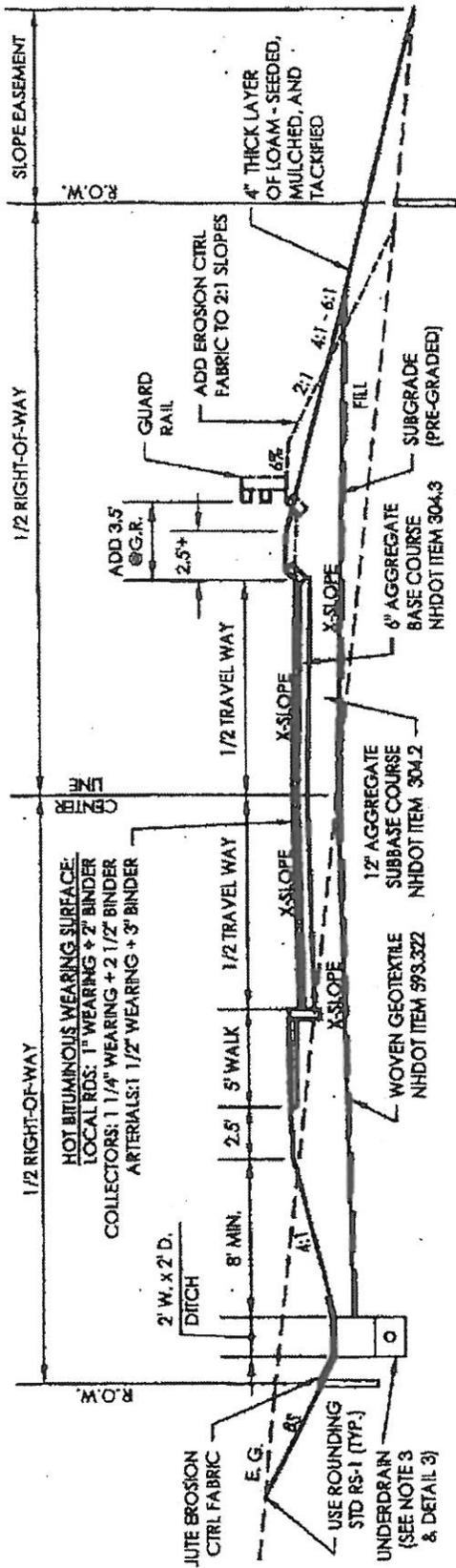


ALTERNATE SECTION

TOWN OF MADISON, NH
ROAD STANDARDS

DETAIL #1A
OPEN ROADWAY SECTION

SCALE: 1" = 8'

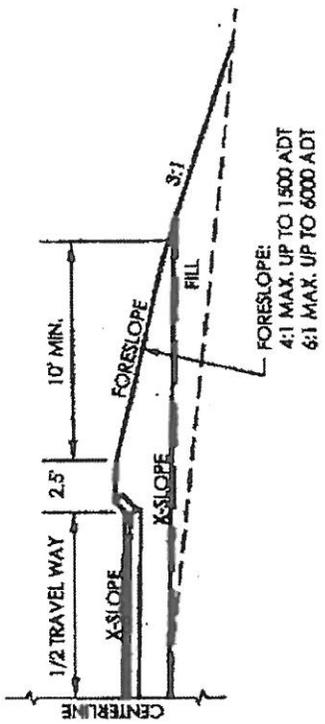


TYPICAL SECTION

TRAVELED WAY	ADT	<160	161-750	751-1500	>1500
X-SLOPE	WIDTH*	22'	24'	24'	28'
	TERRAIN	LEVEL	ROLLING	HILLY	---
BACKSLOPE (BS)	SLOPE	2%	3%	4%	---
	VERT. SLOPE HGT.	0-5'	6-10'	>10'	LEDGE
	SLOPE	4H:1V	3H:1V	2H:1V	1H:2V

* SEE NOTE 4

- NOTES:
- WHERE BOTH THE NATIVE SOIL AND EMBANKMENT MATERIAL CONTAIN LESS THAN 12% FINES (#200 SIEVE OR FINER), THE GEOTEXTILE MAY BE OMITTED.
 - THE AGGREGATE BASE AND SUBBASE COURSES SHALL EXTEND TO DAYLIGHT, EITHER BY ELEVATING THE ROAD OR BY CONSTRUCTING DITCHES WITH FREE-DRAINING OUTLETS.
 - UNDERDRAINS SHALL BE CONSTRUCTED (WITH FREE-DRAINING OUTLETS) UNDER ALL DITCHES WHERE THE SEASONAL HIGH GROUNDWATER TABLE IS WITHIN 3 FEET OF SUBGRADE. REFER TO PARAGRAPH 131-67.C (1) FOR INCREASED WIDTH REQUIREMENTS.
 - GUARD RAIL MAY ONLY BE USED AT WETLAND/STREAM CROSSINGS, WHERE EXISTING FEATURES ARE MORE HAZARDOUS THAN THE RAIL, AND WHERE THE FILL DEPTH EXCEEDS 10' IN CUT SECTIONS. THE DITCH MAY BE OMITTED PROVIDED THAT: A) AN UNDERDRAIN IS INSTALLED; B) FLOW ALONG THE CURB DOES NOT EXTEND MORE THAN 4' INTO THE TRAVEL LANE, AND A 5' BENCH IS PROVIDED BEHIND THE CURB OR SIDEWALK FOR SNOW STORAGE. REFER TO THE NARRATIVE OF THESE ROAD STANDARDS FOR ADDITIONAL SPECIFICATIONS/REQUIREMENTS.



ALTERNATE SECTION

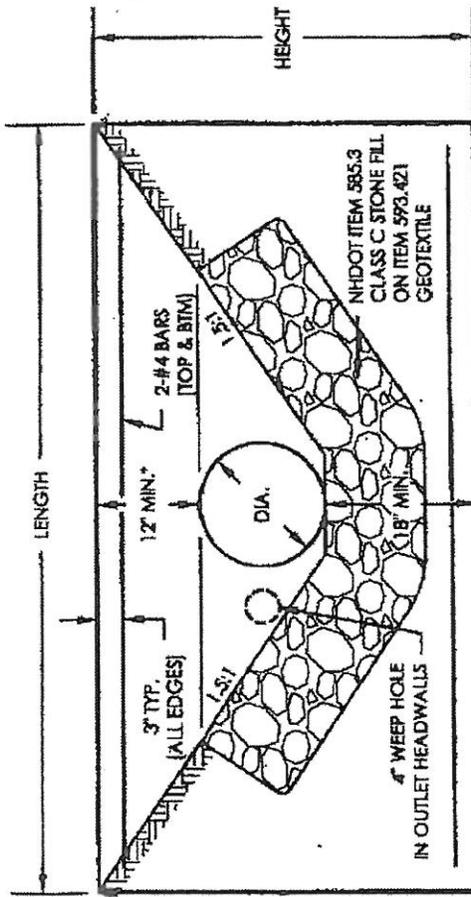
TOWN OF MADISON, NH
ROAD STANDARDS

DETAIL #1B
CURBED ROADWAY SECTION

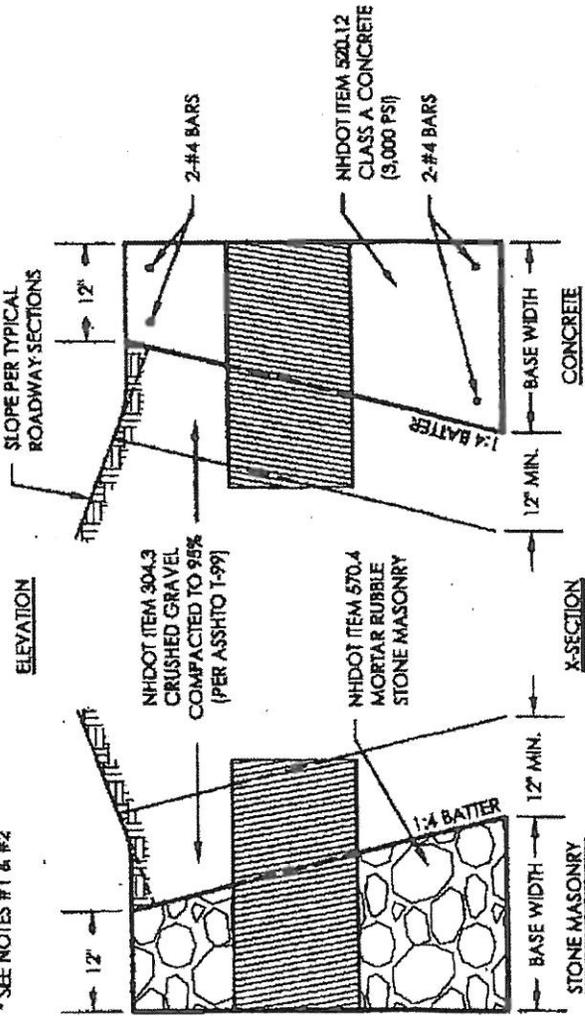
SCALE: 1" = 8'

PIPE DIA.	LENGTH	HEIGHT	BASE WIDTH
15"	8'-0"	3'-9"	1'-11"
18"	9'-0"	4'-0"	2'-0"
24"	11'-0"	4'-6"	2'-2"
30"	13'-0"	5'-0"	2'-3"
36"	15'-0"	5'-6"	2'-5"
48"	19'-0"	6'-6"	2'-8"

- NOTES:**
- IF THE HEIGHT ABOVE THE CULVERT IS INCREASED, THE HEADWALL LENGTH SHALL BE INCREASED AS REQUIRED TO MAINTAIN THE 1.5:1 EARTH SLOPE.
 - COVER OVER PIPE MAY BE REDUCED TO 12" AS SHOWN ONLY WHERE THE CULVERT IS NOT LOCATED UNDER A ROAD'S TRAVEL WAY OR SHOULDER.
 - HEADWALLS ARE TO BE LOCATED AT LEAST 11' FROM THE EDGE OF PAVEMENT TO MINIMIZE ROADSIDE HAZARDS.
 - EARTH SLOPES TO BE STABILIZED AS REQUIRED TO PREVENT SCOUR/EROSION.



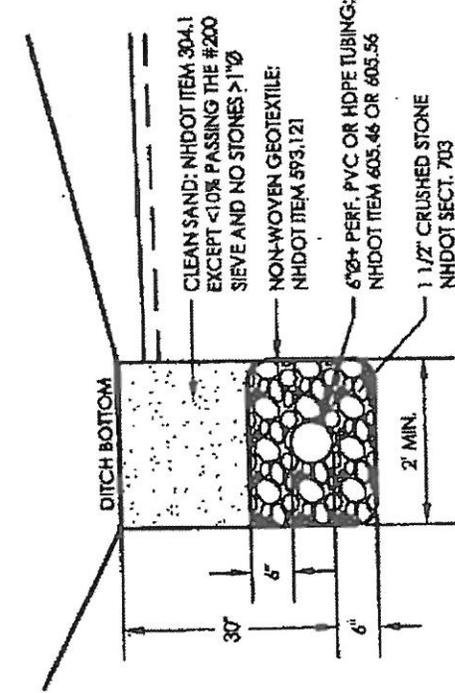
* SEE NOTES #1 & #2



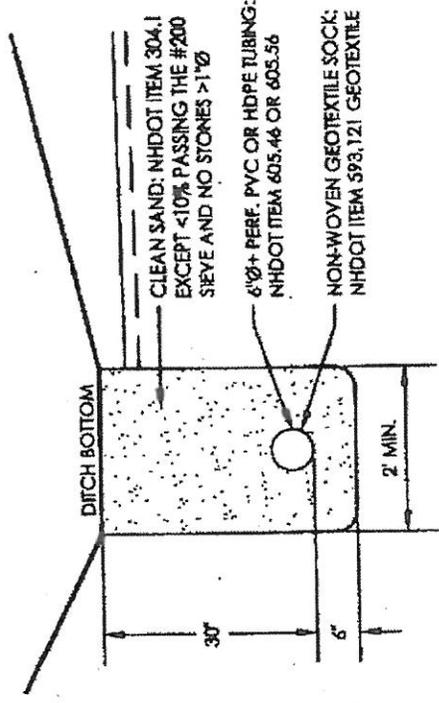
TOWN OF MADISON, NH
ROAD STANDARDS

DETAIL #2
TYPICAL CULVERT HEADWALL

SCALE: NONE



OPTION A - STONE DRAIN



OPTION B - SAND DRAIN

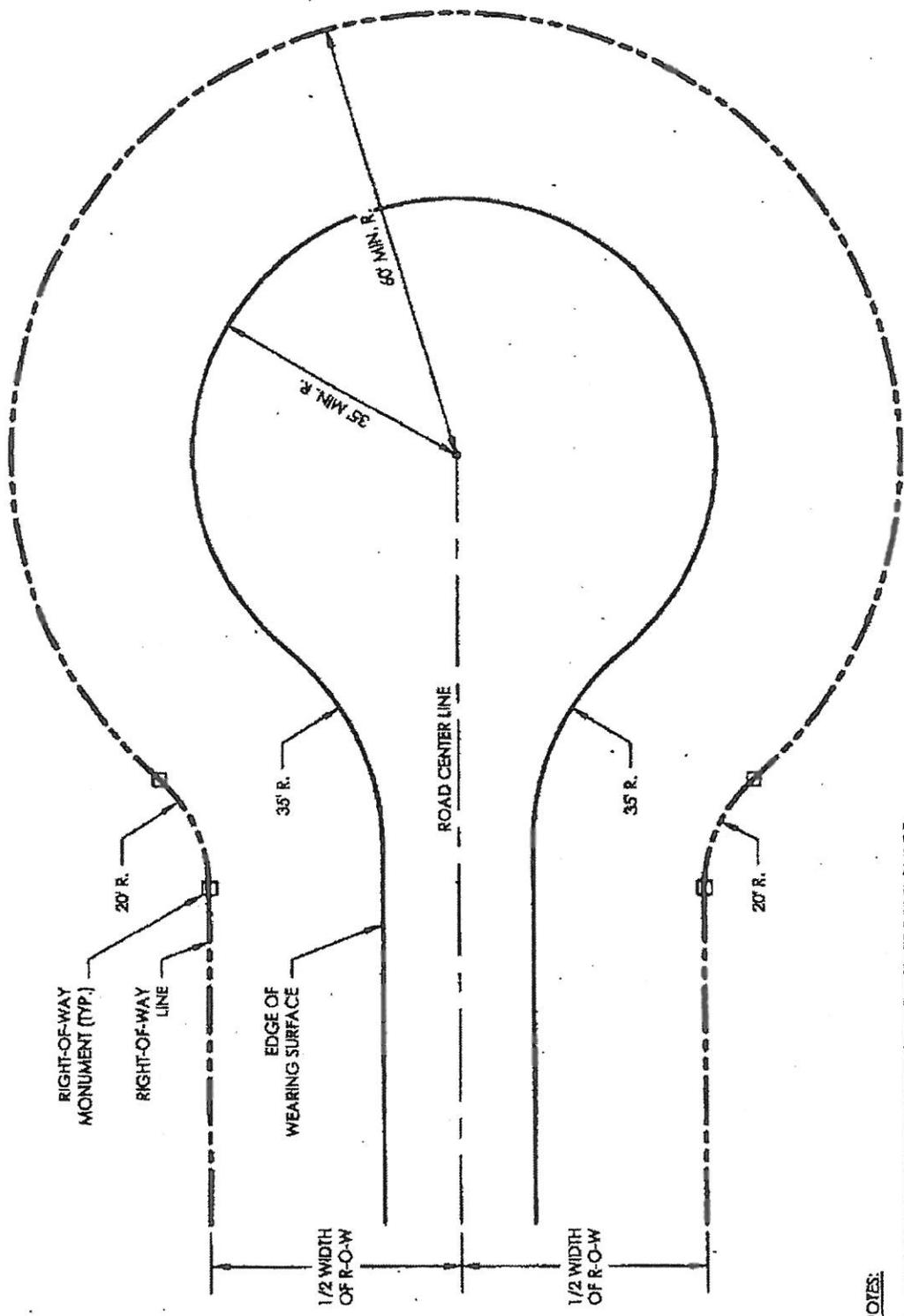
- NOTES:
1. REFER TO DETAILS 1A AND 1B AND THE NARRATIVE OF THESE ROAD STANDARDS FOR CONDITIONS WHERE UNDERDRAINS ARE REQUIRED.
 2. ALSO REFER TO THE NARRATIVE OF THESE ROAD STANDARDS FOR REQUIREMENTS FOR LATERAL AND DIAGONAL UNDERDRAINS.

TOWN OF MADISON, NH
ROAD STANDARDS

DETAIL #3

TYPICAL UNDERDRAIN TRENCH

SCALE: NONE



NOTES:

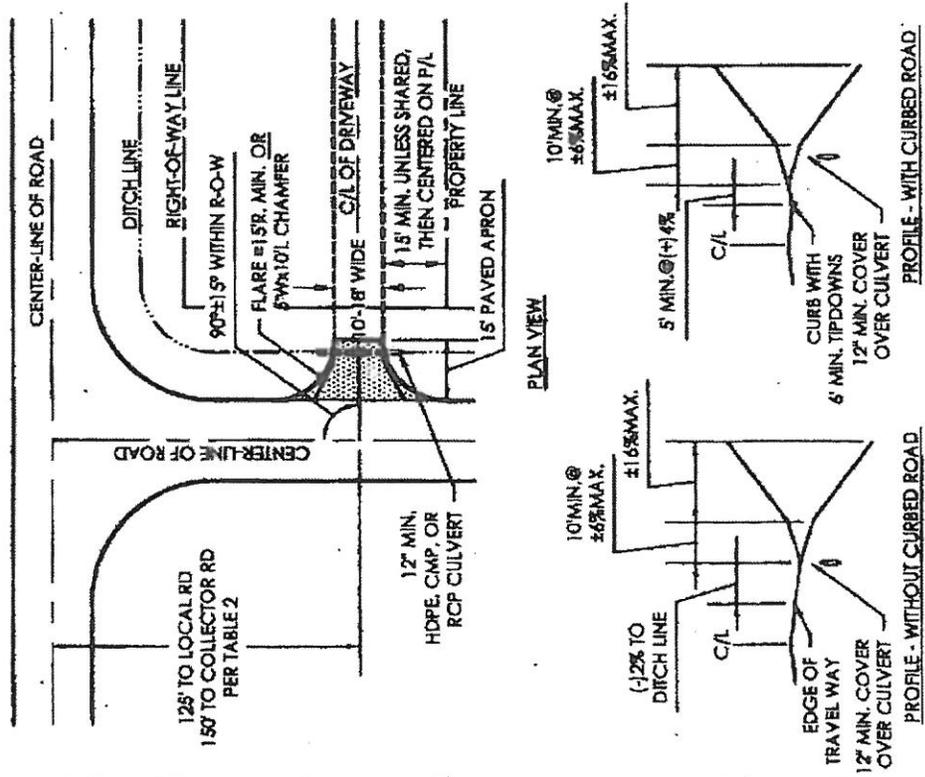
1. THE MAXIMUM LONGITUDINAL GRADE AND CROSS-SLOPE OF CUL-DE-SACS SHALL BE 3%.
2. CUL-DE-SAC TO BE CONSTRUCTED WITH SAME CROSS-SECTIONAL ELEMENTS AS REQUIRED FOR THE ROAD.

TOWN OF MADISON, NH
ROAD STANDARDS

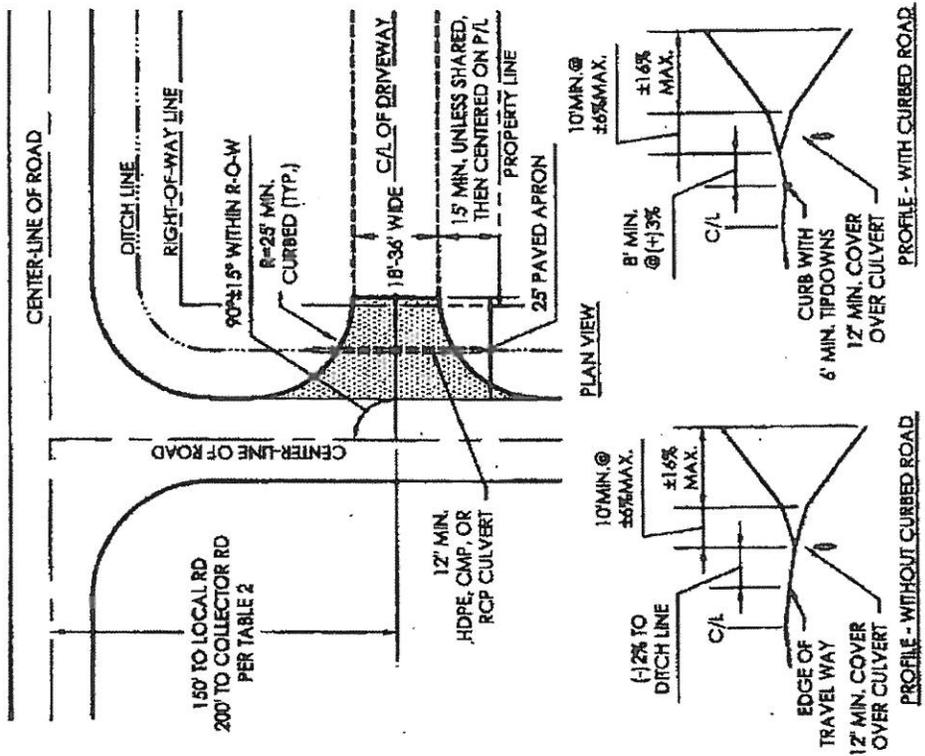
DETAIL #4
TYPICAL CUL-DE-SAC

SCALE: 1" = 20'

RESIDENTIAL



COMMERCIAL



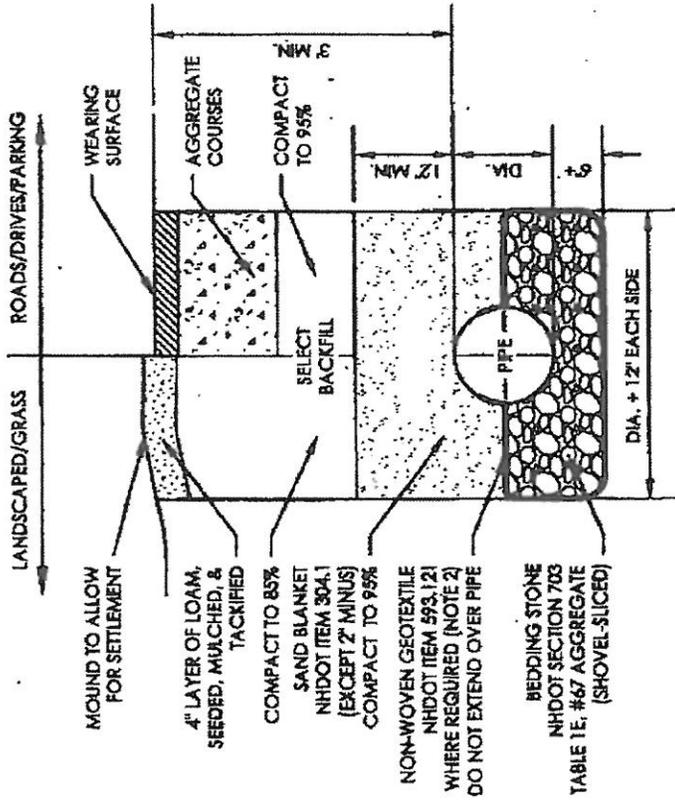
NOTES:

1. BOTH RESIDENTIAL AND COMMERCIAL DRIVEWAYS SHALL COMPLY WITH THE SAME SIGHT-DISTANCE REQUIREMENTS AS SPECIFIED FOR INTERSECTIONS (SEE NARRATIVE);
2. THE ALGEBRAIC DIFFERENCE BETWEEN ANY TWO ADJACENT GRADES IN A DRIVEWAY SHALL NOT EXCEED 9 PERCENT.
3. FOR RESIDENTIAL DRIVEWAYS IN EXCESS OF 500' LONG, 20' WIDE BY 100' LONG SECTIONS SHALL BE SPACED NO MORE THAN 500' APART TO ALLOW EMERGENCY VEHICLES TO PASS.
4. FOR ALL DRIVEWAYS IN EXCESS OF 500 FEET LONG, A TURN-AROUND SHALL BE PROVIDED AT THE DEAD-END TO ACCOMMODATE FIRE-TRUCKS AND OTHER EMERGENCY VEHICLES.

TOWN OF MADISON, NH
ROAD STANDARDS

DETAIL #5
TYPICAL DRIVEWAY LAYOUT

SCALE: 1"=40'H/8'V±
REVISED: APRIL 10, 2008



- NOTES:
1. SELECT BACKFILL IS MATERIAL REMOVED FROM THE EXCAVATION (OR IMPORTED) THAT CONTAINS LESS THAN 30% FINES (#200 SIEVE), IS SCREENED TO REMOVE STONES GREATER THAN 6", AND IS FREE OF MUCK, ORGANICS, AND OTHER DELETERIOUS MATERIALS.
 2. THE NON-WOVEN GEOTEXTILE MAY BE OMITTED IF THE SEASONAL HIGH WATER TABLE IS BELOW THE BOTTOM OF THE BEDDING.
 3. PIPE TO BE GALVANIZED CMP, CLASS III OR HIGHER RCP, OR SMOOTH-INSIDE HDPE AS SPECIFIED IN THE DRAINAGE SECTION OF THE ROAD STANDARDS.
 4. REFER TO THE NARRATIVE OF THESE ROAD STANDARDS FOR ADDITIONAL REQUIREMENTS.

TOWN OF MADISON, NH
ROAD STANDARDS

DETAIL #6A

TYPICAL STORM DRAIN TRENCH

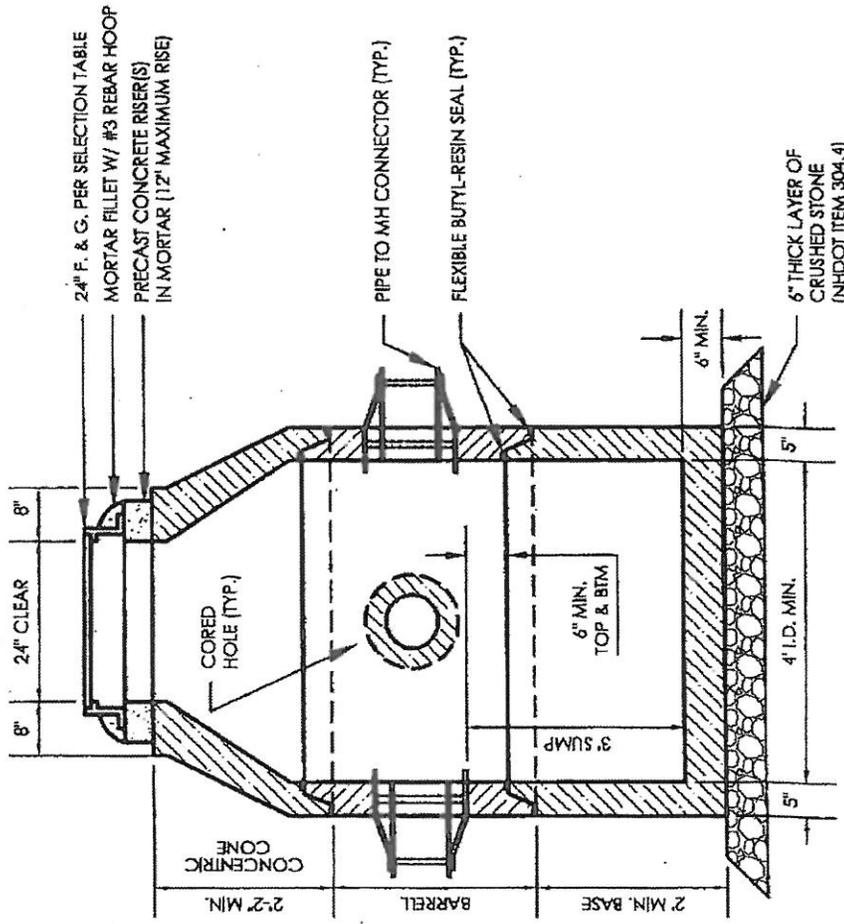
SCALE: NONE

FRAME AND GRATE SELECTION TABLE		
LOCATION	REFERENCE /STYLE	NUMBER OF FLANGES
PAVED/GRAVEL OPEN AREA AT LOW-POINT	NHDOT TYPE B OR NEENAH R-3570 STANDARD GRATE	4
PAVED/GRAVEL AGAINST CURB AT LOW POINT	NHDOT TYPE B OR NEENAH R-3571 STANDARD GRATE	3
PAVED/GRAVEL AGAINST CURB ALONG SLOPE	NEENAH R-3266 VANE GRATE	3
VEGETATED/STONE AREAS INCLUDING DITCHES & SUMPS	NEENAH R-4342 STOOL-TYPE GRATE (NO FRAME)	N/A - DIRECT FIT INTO 24"Ø CONC. RING

NOTE: NEENAH MEANS NEENAH FOUNDRY CO., NEENAH, WI

CB SPECIFICATIONS:

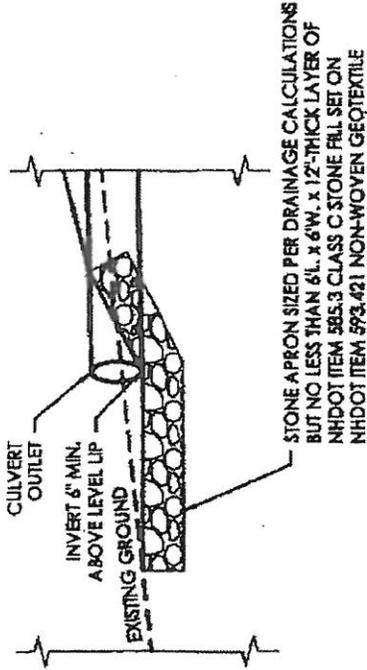
1. ALL WORK TO COMPLY WITH NHDOT SECTION 604.
2. PRECAST SECTIONS TO BE REINFORCED CONCRETE COMPLYING WITH ASTM C478.
3. FLEXIBLE BUTYL-RESIN SEAL TO BE BY CONSEAL OR EQUIVALENT.
4. PIPE TO MH CONNECTORS TO BE KOR-N-SEAL BY NFC, INC., MILFORD, NH, OR EQUIVALENT. COMPLY WITH ASTM C923.
5. MORTAR TO COMPLY WITH NHDOT SECTION 707.
6. FRAME AND GRATES SHALL BE CAST IRON COMPLYING WITH ASTM A48, CLASS 30 AND SHALL OF THE STYLE INDICATED IN THE FRAME & GRATE TABLE.
7. THERE SHALL BE A MINIMUM OF 6 INCHES OF CONCRETE BETWEEN ADJACENT CORE-HOLES. INCREASE THE CB DIAMETER WHERE NEEDED.
8. BACKFILL CB WITH NHDOT ITEM 304.1 SAND (EXCEPT 100% PASSING 1" SIEVE) AND COMPACT TO 95% (PER ASSHTO T-180) IN 12" MAXIMUM LIFTS.



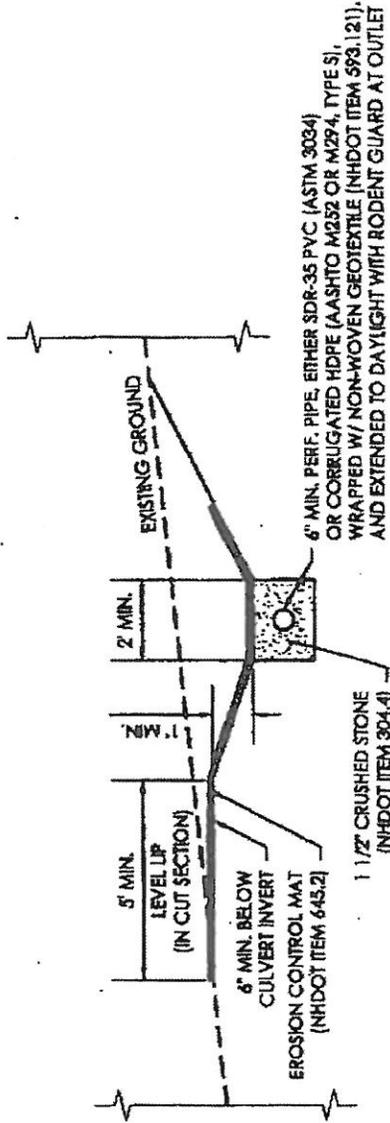
TOWN OF MADISON, NH
ROAD STANDARDS

DETAIL #6B
TYPICAL CATCH BASIN

SCALE: NONE



CULVERT OUTLET
(X-SECTION)



LEVEL SPREADER
(X-SECTION)

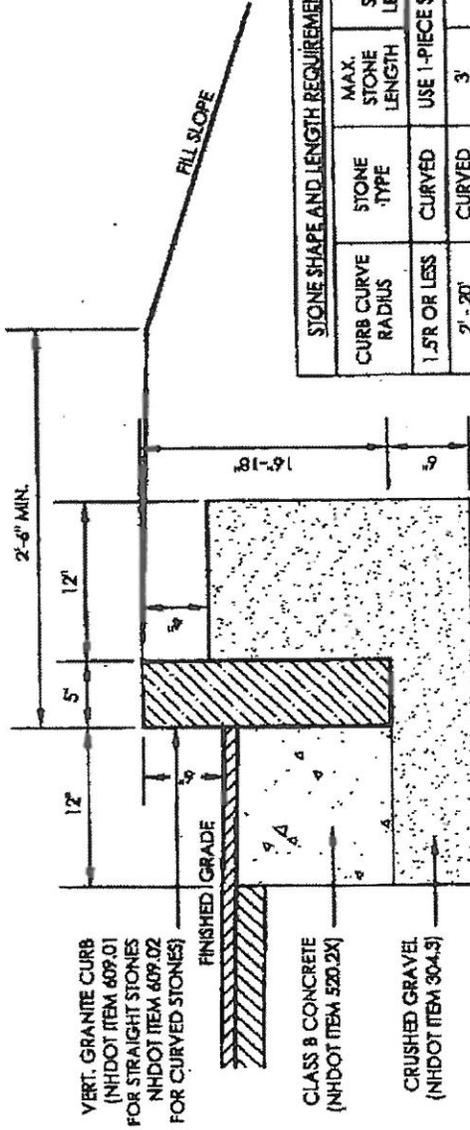
NOTE:

1. REFER TO THE NARRATIVE OF THESE ROAD STANDARDS FOR SIZING REQUIREMENTS AND OTHER ADDITIONAL REQUIREMENTS.

TOWN OF MADISON, NH
ROAD STANDARDS

DETAIL #6C
CULVERT OUTLET & LEVEL SPREADER

SCALE: NONE



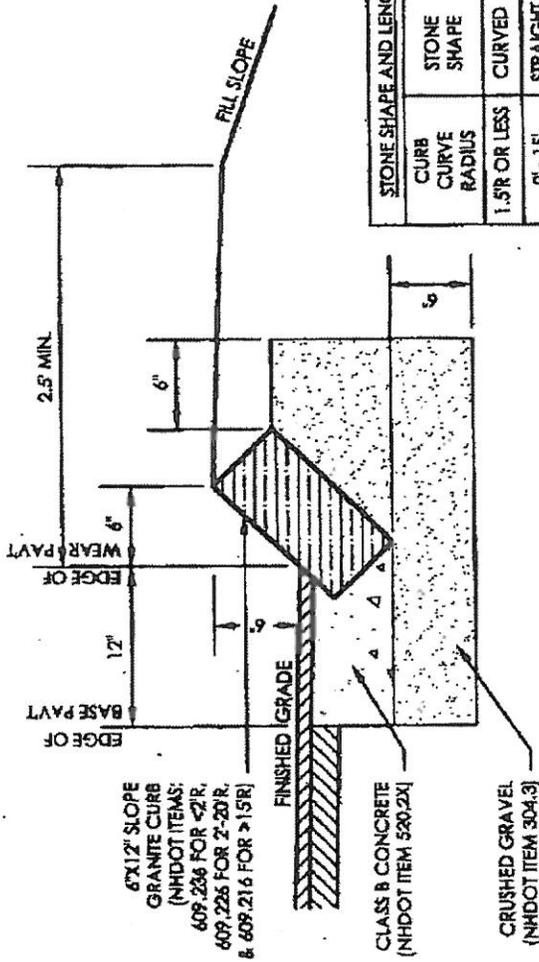
STONE SHAPE AND LENGTH REQUIREMENTS			
CURB CURVE RADIUS	STONE TYPE	MAX. STONE LENGTH	MIN. STONE LENGTH
1.5R OR LESS	CURVED	USE 1-PIECE STONE	
2' - 20'	CURVED	3'	3'
21'	STRAIGHT	3'	3'
22' - 28'	STRAIGHT	4'	3'
29' - 35'	STRAIGHT	5'	3'
36' - 42'	STRAIGHT	6'	5'
43' - 49'	STRAIGHT	7'	5'
50' - 56'	STRAIGHT	8'	5'
57' - 60'	STRAIGHT	9'	5'
OVER 60'	STRAIGHT	10'	9'

- CURB SPECIFICATIONS:**
- ALL GRANITE CURB WORK (INCLUDING STONES, MORTAR, AND INSTALLATION) SHALL COMPLY WITH NHDOT SECTION 609, EXCEPT WHERE MODIFIED BY THIS DETAIL AND THE SPECIFICATIONS.
 - THE MINIMUM AND MAXIMUM LENGTHS AND SHAPE OF STONE SHALL BE AS INDICATED IN THE ACCOMPANYING TABLE, EXCEPT PER NOTE 3.
 - AT ALIGNMENT TRANSITION POINTS (PC/PT/PI) OR AT THE END OF RUN, THE MINIMUM LENGTH OF TWO STONES MAY BE REDUCED TO 50% OF THE MAX. STONE LENGTH.
 - ADJOINING STONES SHALL HAVE THE SAME OR APPROXIMATELY THE SAME LENGTH.
 - THE MINIMUM LENGTH OF TIP-DOWNS SHALL BE 6 FEET.

TOWN OF MADISON, NH
ROAD STANDARDS

DETAIL #7A
VERTICAL CURB

SCALE: 1" = 1'



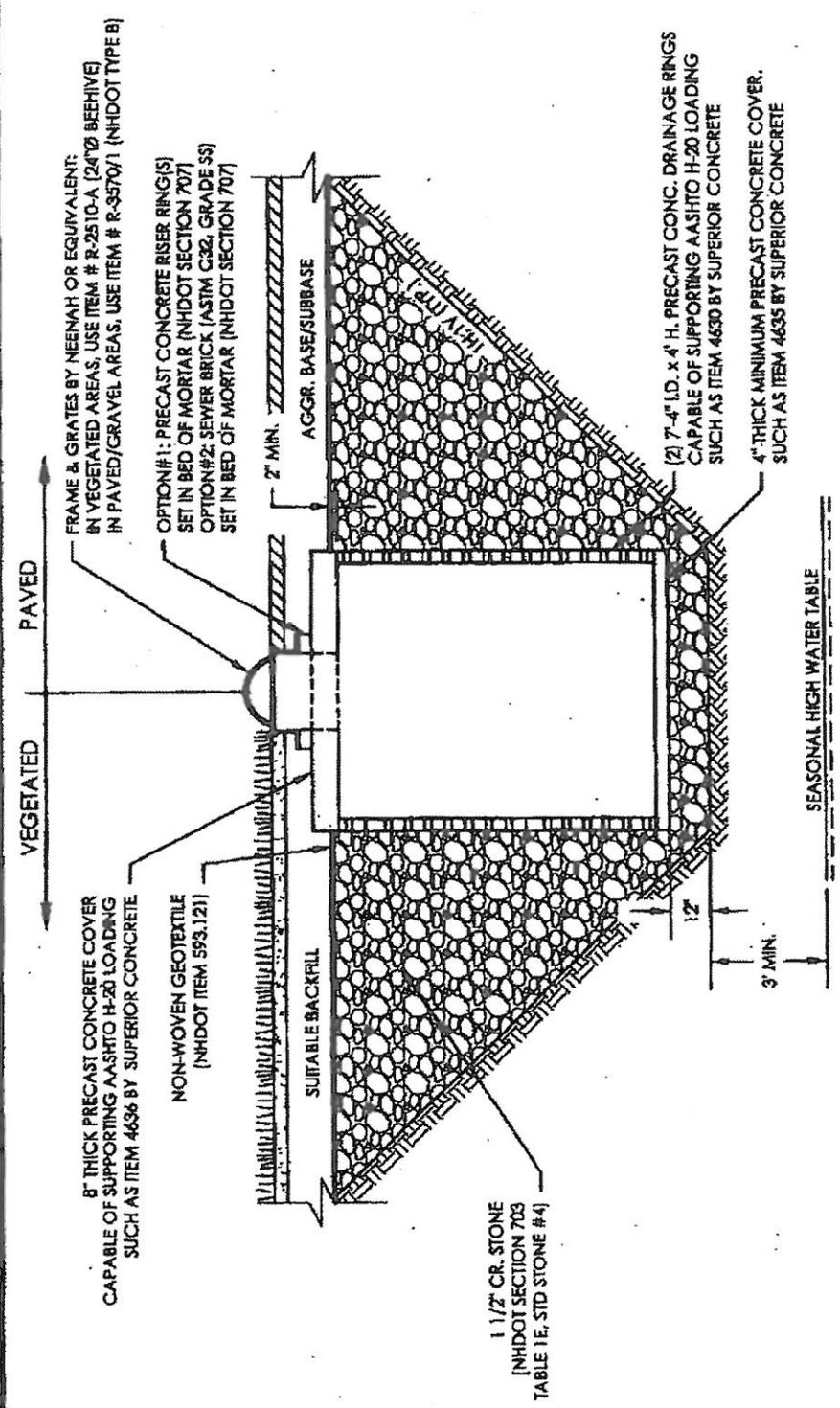
STONE SHAPE AND LENGTH REQUIREMENTS			
CURB CURVE RADIUS	STONE SHAPE	MAX. STONE LENGTH	MIN. STONE LENGTH
1.5R OR LESS	CURVED	USE 1-PIECE STONE	
2' - 15'	STRAIGHT	USE RADIAL JOINTS	
16' - 28'	STRAIGHT	1.5'	1.5'
29' - 41'	STRAIGHT	2'	1.5'
42' - 55'	STRAIGHT	3'	1.5'
56' - 68'	STRAIGHT	4'	3'
69' - 82'	STRAIGHT	5'	3'
83' - 96'	STRAIGHT	6'	3'
97' - 110'	STRAIGHT	7'	3'
OVER 110'	STRAIGHT	8'	7'

- CURB SPECIFICATIONS:**
- ALL GRANITE CURB WORK (INCLUDING STONES, MORTAR, AND INSTALLATION) SHALL COMPLY WITH NH DOT SECTION 609, EXCEPT WHERE MODIFIED BY THIS DETAIL AND THE SPECIFICATIONS.
 - RADIAL JOINTS TO BE PER NH DOT STANDARD PLAN CR-1, PLATES 3 & 4.
 - THE MINIMUM AND MAXIMUM LENGTHS AND SHAPE OF STONE SHALL BE AS INDICATED IN THE ACCOMPANYING TABLE, EXCEPT PER NOTE 4.
 - AT ALIGNMENT TRANSITION POINTS (PC/PT/PI) OR AT THE END OF RUN, THE MINIMUM LENGTH OF TWO STONES MAY BE REDUCED TO 50% OF THE MAX. STONE LENGTH IF THE CURVE RADIUS IS GREATER THAN 55 FEET.
 - ADJOINING STONES SHALL HAVE THE SAME OR APPROXIMATELY THE SAME LENGTH.
 - THE MINIMUM LENGTH OF TIP-DOWNS SHALL BE 6 FEET.

TOWN OF MADISON, NH
ROAD STANDARDS

DETAIL #7B
SLOPE CURB

SCALE: 1" = 1'



FRAME & GRATES BY NEEHAH OR EQUIVALENT IN VEGETATED AREAS. USE ITEM # R-2510-A (24"Ø BEEHIVE) IN PAVED/GRAVEL AREAS. USE ITEM # R-3570/1 (NHDOT TYPE B)

OPTION#1: PRECAST CONCRETE RISER RING(S) SET IN BED OF MORTAR (NHDOT SECTION 707)

OPTION#2: SEWER BRICK (ASTM C32, GRADE SS) SET IN BED OF MORTAR (NHDOT SECTION 707)

8" THICK PRECAST CONCRETE COVER CAPABLE OF SUPPORTING AASHTO H-20 LOADING SUCH AS ITEM 4636 BY SUPERIOR CONCRETE

NON-WOVEN GEOTEXTILE (NHDOT ITEM 593.121)

SUITABLE BACKFILL

2" MIN.

AGGR. BASE/SUBBASE

(2) 7"-Ø I.D. x 4" H. PRECAST CONC. DRAINAGE RINGS CAPABLE OF SUPPORTING AASHTO H-20 LOADING SUCH AS ITEM 4630 BY SUPERIOR CONCRETE

4" THICK MINIMUM PRECAST CONCRETE COVER, SUCH AS ITEM 4635 BY SUPERIOR CONCRETE

1 1/2" CR. STONE (NHDOT SECTION 703 TABLE 1E, STD STONE #4)

12"

3" MIN.

SEASONAL HIGH WATER TABLE

CAPACITY:
 IN AREAS OF SCS ADAMS SOILS, CONFIRMED BY TEST PITTING, THE EXFILTRATION CAPACITY MAY BE ASSUMED TO BE 2 CFS. IN ALL OTHER AREAS, THE EXFILTRATION VELOCITY SHALL BE DETERMINED BY FIELD PERMEABILITY TESTING OR ESTABLISHED CORRELATIONS TO GRAIN-SIZE DISTRIBUTIONS, WITH A 1.5 FACTOR OF SAFETY APPLIED.

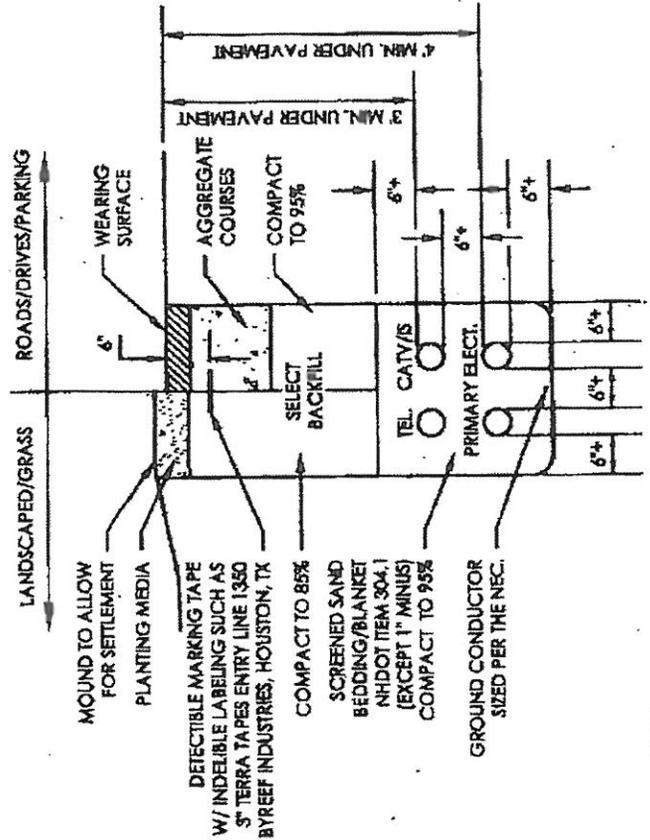
REFERENCES:
 1. AASHTO: AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
 2. ASTM: ASTM INTERNATIONAL
 3. NEEHAH: NEEHAH FOUNDRY CO., NEEHAH, WI.
 4. NHDOT: NH DEPT. OF TRANSPORTATION
 5. SUPERIOR CONCRETE: SUPERIOR CONCRETE CO., INC., AUBURN, ME.

SPECIFICATIONS:
 1. PRECAST RINGS, COVERS, AND RISERS TO BE REINFORCED CONCRETE (4000 PSI) COMPLYING WITH ASTM C478. MORTAR TO COMPLY WITH NHDOT SECTION 707.
 2. FRAME AND GRATES SHALL BE CAST IRON COMPLYING WITH ASTM A-48, CLASS 30.
 3. THERE SHALL BE A MINIMUM OF 6 INCHES OF CONCRETE BETWEEN ADJACENT CORE-HOLES.

TOWN OF MADISON, NH
 ROAD STANDARDS

DETAIL #88
 LARGE DRY-WELL CATCH BASIN

SCALE: 1" = 4'-0"

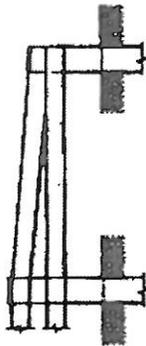


- NOTES:**
1. SELECT BACKFILL IS MATERIAL REMOVED FROM THE EXCAVATION (OR IMPORTED) THAT CONTAINS LESS THAN 30% FINES (#200 SIEVE), IS SCREENED TO REMOVE STONES GREATER THAN 6", AND IS FREE OF MUCK, ORGANICS, AND OTHER DELETERIOUS MATERIALS.
 2. CONDUIT BELOW GRADE TO BE PVC. CONDUIT ABOVE GRADE MAY BE PVC OR GALV. RIGID STEEL. CONDUIT TO BE LISTED BY UNDERWRITERS LABORATORIES.
 3. ALL WORK TO BE PERFORMED COMPLYING WITH THE MORE STRINGENT OF THE NATIONAL ELECTRIC CODE (NEC), THE UTILITY COMPANY'S STANDARDS, AND THESE ROAD STANDARDS.

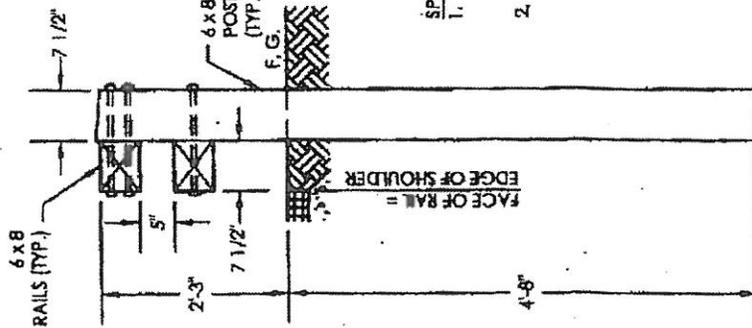
TOWN OF MADISON, NH
ROAD STANDARDS

DETAIL #9
TYPICAL CONDUIT TRENCH

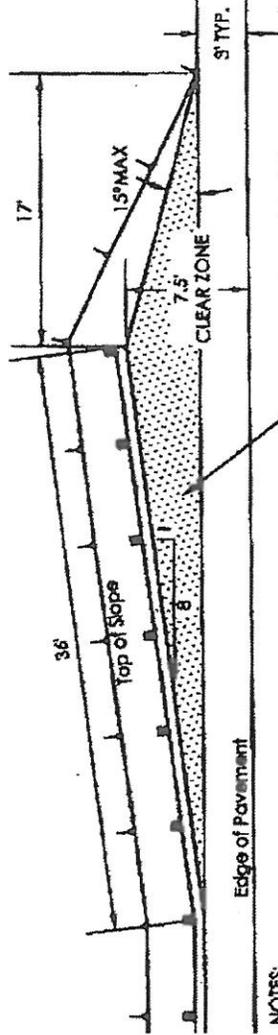
SCALE: NONE



END SECTION



SIDE VIEW

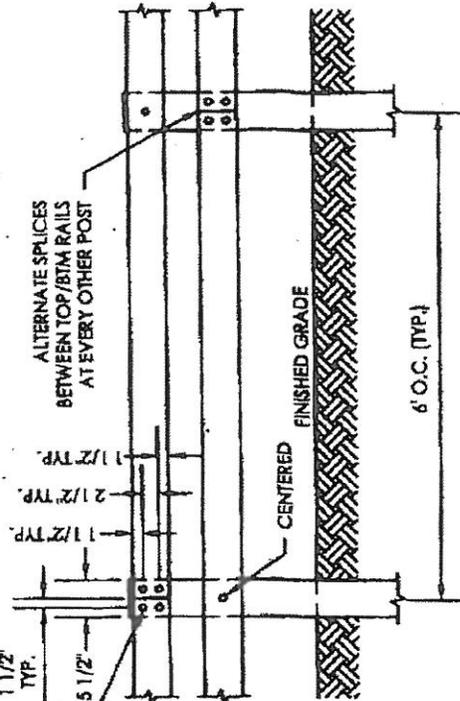


GUARD RAIL FLARE - PLAN VIEW

NOTES:

1. FLARE LAYOUT BASED ON ADT <750 AND DESIGN SPEED 40 MPH OR LESS.
2. FOR GREATER ADT OR SPEED, THE CLEAR ZONE TO BE INCREASED PER AASHTO ROADSIDE DESIGN GUIDE.

TAPER AREA TO BE GRADED WITH THE SAME CROSS-SLOPE AS THE SHOULDER

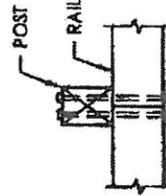


FRONT VIEW

5/8" CARRIAGE BOLT IN 1 1/8" HOLE W/ HEX NUT & WASHER - TYP. (SEE CONNECT. DETAIL)

SPECIFICATIONS:

1. ALL HARDWARE TO BE GALVANIZED STEEL COMPLYING W/ NHDOT STD SPEC SECTION 606.
2. ALL TIMBER TO COMPLY WITH THE WOOD POST SPECIFICATIONS IN NHDOT STD SPEC SECTION 606 (1,200 PSI, P.T.).



TYP. CONNECTION

TOWN OF MADISON, NH
ROAD STANDARDS

DETAIL #10
TYPICAL TIMBER GUARD RAIL

SCALE: NONE

