# WILTON, NEW HAMPSHIRE

# LAND USE LAWS

## *ROAD DESIGN STANDARDS AND SPECIFICATIONS*
## *APPENDIX I*

***Adopted November 20, 1991***

## *1.0 ROAD DESIGN STANDARDS AND SPECIFICATIONS*

All streets and roads shall be designed to meet the following minimum standards for the Town of Wilton, NH.

**1.1** **General Street Plan.** The entire street plan for the proposed development must be approved prior to the construction of any individual phase.

**1.2** **Street Layout.** Streets shall be laid out so as to intersect at right angles as nearly as possible. No street shall intersect another as less than a 60 degree angle. Streets shall be continuous and shall align with existing streets to the maximum extent possible.

**1.3** **Dead-end Roads**. Dead-end roads may have a maximum length of 600 feet and be designed with a cul-de-sac turning area. Circular cul-de-sacs for residential subdivisions shall have a minimum radius of 75 feet. Circular cul-de-sacs for commercial or industrial developments shall have a minimum radius of 100 feet. T-type turning areas shall a paved width of 120 feet, a 150 foot right-of-way of and a 25 foot radius.

**1.4** **Right-of-way.** The minimum street width right-of-way shall be 50 feet. A greater width may be required for arterial and collector streets.

**1.5** **Highway Right-of-way Bounds.** Highway bounds, of a type approved by the Board of Selectmen, shall be installed at all intersections of streets, at all points of change in direction and at any other points the Board may deem necessary to designate the street lines.

**1.6** **Alignment.** No street shall be constructed with a curvature of less than a 200 foot radius.

**1.7** **Grade.** Streets, where feasible, shall have a recommended maximum grade of 8 percent and a minimum grade of 0.5 percent. Special care shall be taken to provide flat grades at all intersections.

**1.8** **Construction Supervision.** Construction of the roadway, drainage facilities, sidewalks, curbs and all other elements of the highway must be supervised by the consulting engineer, the Town road agent or other qualified person designated by the Planning Board.

**1.9** **Clearing.** The entire area of each street shall be cleared of all stumps, brush, roots, boulders and like material, and all trees not intended for preservation.

**1.10** **Subgrade Preparation.** All loam and other yielding material shall be removed from the roadway and replaced with suitable fill material. All boulders and ledge shall be removed to a uniform cross sectional depth of not less than 12 inches below the subgrade and replaced with sand or gravel.

**1.11** **Drainage.** Surface water shall be disposed of by means of culverts or sufficient capacity at water courses as determined by standard hydraulic design methods and by construction of a longitudinal storm drainage system whenever required to relieve water in the ditch sections. Construction is to be in accordance with New Hampshire Standard Specifications for Road and Bridge Construction, 1990, Sections 603 and 604, as amended.

**1.12** **Gravel Base.** All streets shall be constructed with a minimum of 12 inches of gravel plus 6 inches of crushed gravel in accordance with the New Hampshire Standard Specifications for Road and Bridge Construction, 1990, Section 304, as amended.

**1.13** **Asphalt Surface.** The asphalt surface shall be hot bituminous pavement as prescribed in the New Hampshire Standard Specifications for Road and Bridge Construction, 1990, Sections 401 and 403, as amended.

**1.14** **Gravel Shoulders.** Gravel shoulders, equal to the base course depth, shall be constructed adjacent to all asphalt surfaces as indicated in Table I-1.

**1.15** **Bridges.** On stream crossings of 10 feet or more span, the structure shall be designed in accordance with the AASHTO Standard Specifications for Highway Bridges for a minimum design loading of HS-25 and 125 percent of alternate military load.

**1.16** **Guardrails.** Guardrails shall be constructed in accordance with the New Hampshire Standard Specifications for Road and Bridge Construction, 1990, Section 606, as amended and shall be required in areas where 10 or more feet of elevation change and the slope is greater than 2.5:1. The Board may require the placement of guard rails in other areas that pose safety hazards.

**1.17** **Sidewalks.** Sidewalks shall have a minimum width of 4 feet and be constructed of 2 inch thick asphalt on a 4 inch gravel base, on one or both sides of the street when in the opinion of the Board such sidewalks are necessary.

**1.18** **Erosion Control.** Erosion shall be controlled in accordance with the Erosion and Sediment Control Standards in Appendix II.

**1.19** **Utilities.** Utility poles should be kept close to the right-of-way line, in no case closer than the ditch line and always well back of a curb. Water and sewer mains should be constructed outside the surface area of the street and preferably outside the ditch line.

**1.20** **Safety.** Safety is an important factor on all roadway improvements. On development roads it may not be possible or practical to obtain obstacle-free roadsides but every effort should be made to provide clear areas within the maintenance limits. The use of flatter slopes, the use of guard rails where necessary and the use of warning signs are other safety factors to be considered in street design and construction.

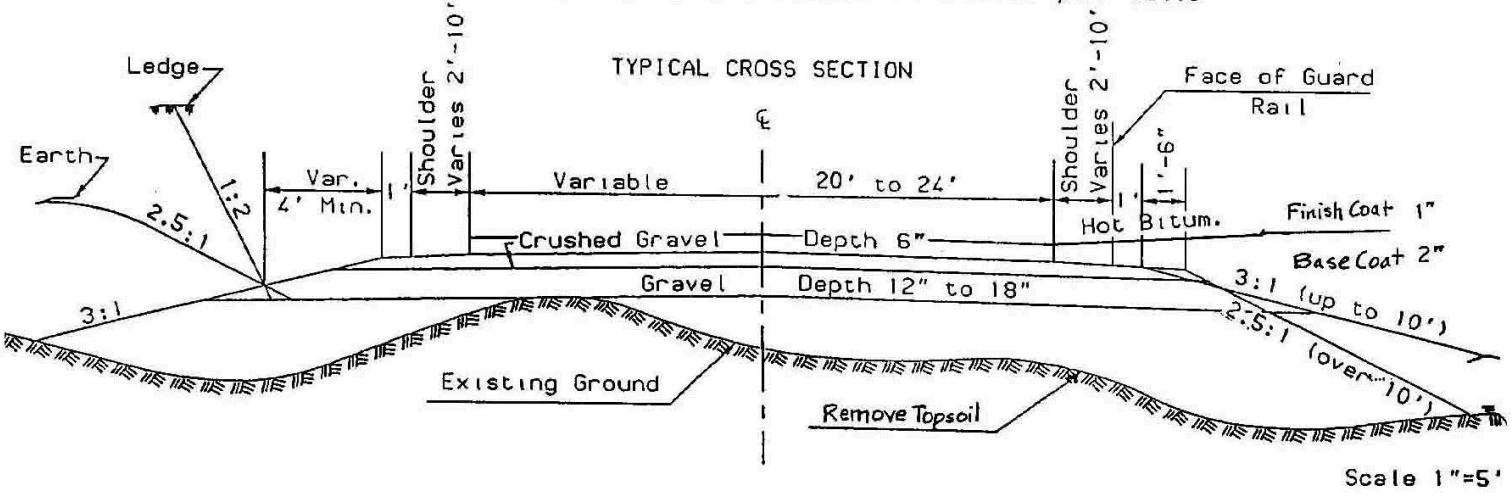
**1.21** **Minimum Standards.** These standards establish minimum guidelines for the design and construction of local streets. Additional standards may be applied to a development based on the physical characteristics of the site, projected traffic volumes and proposed use. Additional information on street design and construction standards can be found in the American Association of State Highway and Transportation Officials (AASHTO), A Policy on Geometric Design of Highways and Streets, 1984.

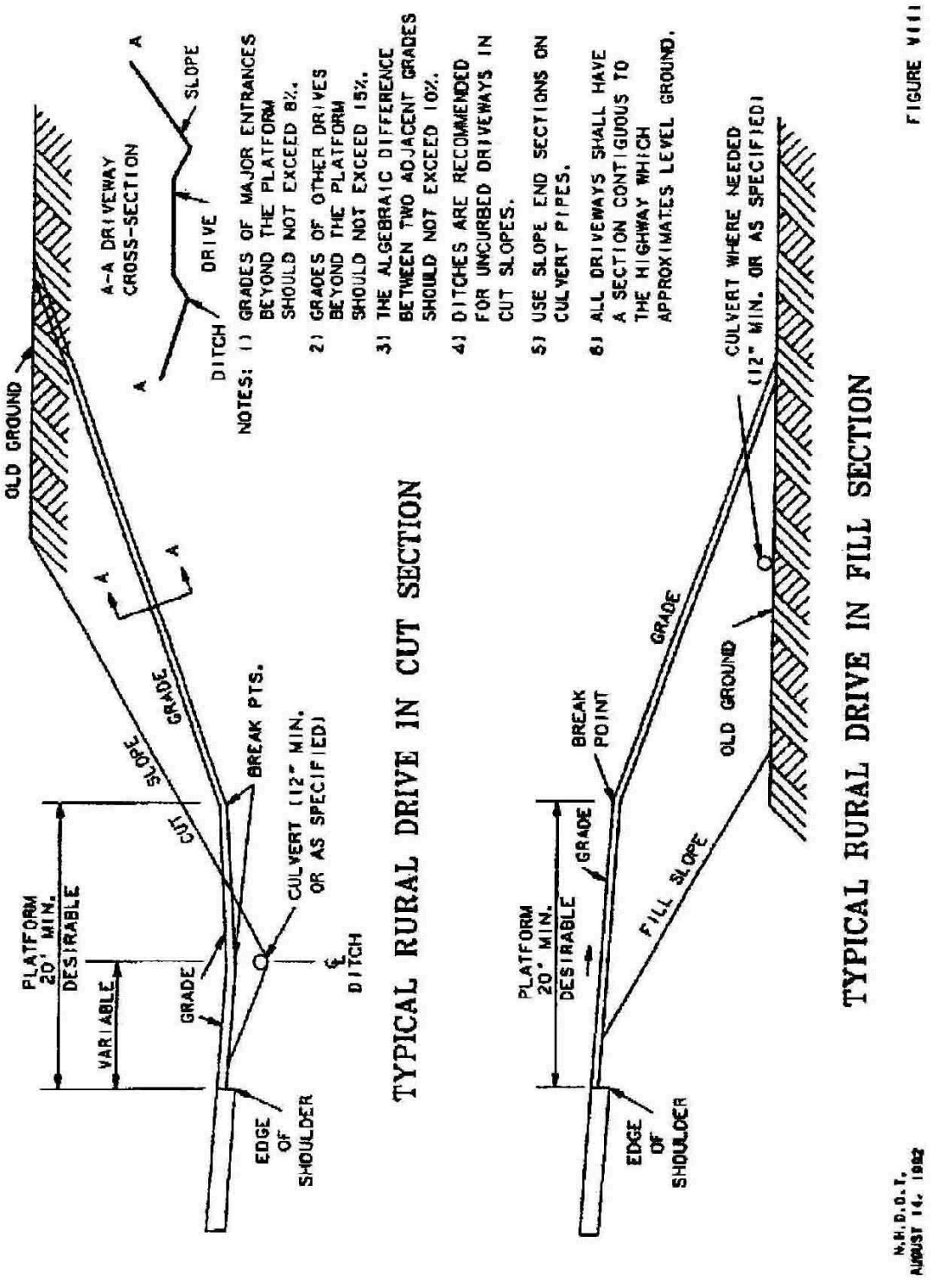
September 1990

# MINIMUM GEOMETRIC & STRUCTURAL GUIDES FOR LOCAL ROADS AND STREETS

| Average Daily Traffic (Veh./Day) | 0-200 | 200-750 | 750-1500 | 1500 & OVER |
|---|---|---|---|---|
| Pavement Width (Feet) | 20 | 20 | 22 | 24 |
| Shoulder Width (Feet) | 2 | 4 | 4 | 8-10 |
| Center of Road to Ditch Line | 16 | 18 | 19-21 | Varies |
| Pavement Type | Hot Bitum. | Hot Bitum. | Hot Bitum. | Hot Bitum. |
| Slope of Roadway | 3% | 2% | 2% | 2% |
| Base Course Depth-(Gravel) | 12" | 12" | 12" | 18" |
| (Cr. Gravel) | 6" | 6" | 6" | 6" |
| Hot Bitum. Base | 2" | 2" | 2" | 2" |
| Hot Bitum. Finish | 1" | 1" | 1" | 1" |

Notes 1. Gravel surface should be paved where steep grades occur.
2. For average daily traffic over 1000 veh./day paved shoulders should be considered
3. Base course depths may need to be increased in areas of poor soils




OLD GROUND
A-A DRIVEWAY CROSS-SECTION
SLOPE
DRIVE
DITCH
NOTES: 1) GRADES OF MAJOR ENTRANCES BEYOND THE PLATFORM SHOULD NOT EXCEED 8%.
2) GRADES OF OTHER DRIVES BEYOND THE PLATFORM SHOULD NOT EXCEED 15%.
3) THE ALGEBRAIC DIFFERENCE BETWEEN TWO ADJACENT GRADES SHOULD NOT EXCEED 10%.
4) DITCHES ARE RECOMMENDED FOR UNCURBED DRIVEWAYS IN CUT SLOPES.
5) USE SLOPE END SECTIONS ON CULVERT PIPES.
6) ALL DRIVEWAYS SHALL HAVE A SECTION CONTIGUOUS TO THE HIGHWAY WHICH APPROXIMATES LEVEL GROUND.
SLOPE
GRADE
CUT
BREAK PTS.
CULVERT (12" MIN. OR AS SPECIFIED)
℄ DITCH
PLATFORM 20' MIN. DESIRABLE
VARIABLE
GRADE
EDGE OF SHOULDER
TYPICAL RURAL DRIVE IN CUT SECTION
CULVERT WHERE NEEDED (12" MIN. OR AS SPECIFIED)
OLD GROUND
GRADE
BREAK POINT
FILL SLOPE
PLATFORM 20' MIN. DESIRABLE
GRADE
EDGE OF SHOULDER
TYPICAL RURAL DRIVE IN FILL SECTION
N.H.D.O.T. AUGUST 14, 1982
FIGURE VIII