

# Town of Campton

## Standards for Town and Subdivision Roads

### A. INTRODUCTION

1. These standards are established to encourage safe and efficient roads in Campton. While promoting smooth traffic flow and optimum sight distances, they are designed also to ensure wise use of taxes for road construction and maintenance, and long-term use of the public roadways for intra- and inter-town commerce. They are also intended to help minimize potential conflict with pedestrians, and cyclists, to allow for sufficient privacy and quiet in the residential neighborhoods, and to assist in maintaining the rural character of Campton.

2. All access points, including driveway entrances, shall be located to most adequately promote the safety, efficiency, and convenience of the traveling public and the residents adjacent to the roadway. Access points to public roads and streets shall be limited in number to protect the long-term utility of the roadway. Minor interior streets, cul-de-sacs, or continuous loops shall be laid out to best serve land subdivisions and neighborhoods.

3. Safety is an important factor in all roadway design and layout. Every effort should be made to provide clear areas within the maintenance limits. The use of flatter slopes, the use of guardrail where necessary and the use of warning signs are some of the other safety factors to be considered.

4. Pursuant to R.S.A. 36:21, land of such character as to create a danger to health, flood or fire hazard, injury, or other menace, shall not be platted for development which would promote these hazards until appropriate measures have been taken by the developer to eliminate such hazards. No natural drainage way will be altered or obstructed unless proper and necessary permits are obtained from state and local authorities so that adequate means are taken to provide for the runoff. Scattered or premature subdivision of land that would constitute a threat to the prosperity of the town, or place an undo burden by reason of the lack of drainage, transportation of school children, fire protection, or other public services that necessitate an excessive expenditure of public funds, or are in conflict with the harmonious development of the town, will not be platted for development.

### B. MINIMUM ROAD STANDARDS

1. The use of more liberal values than these minimum standards is recommended. For

additional guidance and design of local development roads and streets with high volumes of traffic, reference will be made to the publication, Basics of a Good Road for Municipal Officials. A copy is on display at the Selectmen's Office and information for obtaining copies is available there also.

2. Existing roads shall, whenever necessary and practicable, be widened and improved to the standards required by these Regulations, at the "fair share" expense of the developer, as determined by the selectmen.

#### C. ROAD LAYOUT

1. Roads shall be laid out so as to intersect at right angles. Roads shall be continuous and in alignment with existing streets as far as possible.

2. Roads shall be logically related to the topography so as to produce usable lots, grades not in excess of 12 percent and safe intersections in relation to the proposed use of the land to be served by such streets.

3. The arrangement of roads in a subdivision shall provide for the continuation of the principal roads in adjoining subdivisions or for their proper projection when adjoining property is not subdivided, and shall be of a width at least as great as that of such existing connecting roads.

4. Where dead-end roads are included in subdivision; the following shall be laid out at the ends. For dead-end roads of up to 500 feet, a cul-de-sac or hammerhead in conformance with specifications shown in Appendix B shall be laid out. For roads greater in length, a continuous loop shall be laid out in conformance with specifications as shown in Appendix C.

#### D. STREET NAMES AND HOUSE NUMBERS

1. Names of new streets shall not duplicate nor bear phonetic resemblance to the names of existing streets within the town, or towns of Thornton, or Ellsworth. Names shall be approved by the Fire Chief for conformance with E-911 specifications. Streets, which join or are in alignment with streets of abutting or neighboring properties, shall bear the same name. Street signs and traffic signs shall be installed by the town. The cost shall be borne by the developer.

2. House address numbers shall be assigned in accordance with the town street numbering system, and the size of numbers to conform to E-911 specifications. Numbers shall be allotted for lots along both sides of each road according to E-911 specifications.

#### E. RIGHT OF WAY

1. No road right-of-way shall be less than 50 feet in width. A larger right-of-way may

be required if a greater road width is warranted in the opinion of the Planning Board.

2. Existing streets within or abutting the subdivision shall, whenever necessary in the opinion of the Planning Board, be widened and improved to the standards required by these Regulations, at the "fair-share" expense of the developer, as determined by the Selectmen.

F. SUB GRADE PREPARATION All topsoil and other yielding material shall be removed from the proposed roadway location and be replaced with suitable fill material to establish the proper grade for the road base. All brush, stumps, boulders and ledge shall be removed to a uniform cross sectional depth of not less than 12 inches below the sub grade and replaced with sand, broken rock of a diameter not greater than 12 inches, or gravel. If a spring of water is encountered, drainage stone of 1 1/2 inches shall be placed to a depth of 12 inches, and 18 inches wide, and including a 4 inch PVC pipe, carrying the water beyond the road base. A suitable geotextile fabric shall be placed over the entire width of the drainage stone. Topsoil shall be stock piled on site for restoration of ground cover on road slopes.

G. ROAD BASE (See Appendix A)

1. The sub-base course shall consist of bank-run gravel, free from loam or organic matter to a compacted depth of 12 inches, per New Hampshire Standard Specifications, 1974, Section 304. Compaction to be accomplished by a roll of no less than 6 ton weight. Sub-base is to extend to the entire width of road, including shoulders.

2. The finish base course shall consist of crushed stone and fine gravel not to exceed 1 1/2 inches in diameter to a minimum compacted depth of 6 inches, covering the full width of the sub-base of the road.

H. ROAD WIDTH

1. The minimum width of roadway or traveled way shall be 20 feet. At the discretion of the Planning Board additional width may be required. At roadway curves of less than a radius than 500 feet, widening shall be done according to the specifications of table 1.

I. GRAVEL SHOULDERS

1. A 3 foot crushed gravel shoulder, shall be constructed adjacent to all roadways, flush with the roadway asphalt surface.

J. ROADWAY SURFACE

1. All roadway surfaces are to be Hot Bituminous Treated, with a base course of 2 inches of 3/4 inch Hot Bituminous base material, and a wearing or top coat of 1 inch of

3/8 inch Hot Bituminous material. Each layer of Hot Bituminous to compacted with a roll of at least 6-ton weight.

2. In unusual cases of low traffic volumes, the Selectmen at their discretion may allow a gravel surface, per the above roadway specifications
3. Existing roads in an approved subdivision shall be “grandfathered” from the requirement of having hot bituminous application at the discretion of the Board of Selectmen.

K. BRIDGES

1. On stream crossings of 10 feet or more spans, the structure shall be designed to H15-S20 loading (A.A.S.H.O. specifications.)
2. Roadway width across bridges shall be equal to the width of pavement and shoulders on the approaching roadways.

L. ROAD GRADES

1. Roadway grades shall not exceed 12 percent.
2. No grades over 6 percent over protracted distances (over 600 feet) and such grades shall require paved ditches, per selectmen specifications, to limit surface erosion.
3. No more than 2 percent grade within 50 feet of an intersection, as measured from the nearest right-of-way line of the road being intersected.

M. SIGHT DISTANCE

1. A minimum safe stopping sight distance shall be 200 feet.
2. For changes in grade exceeding 1 percent, a vertical curve shall be provided ensuring a minimum sight distance of 150 feet.

N. CONSTRUCTION SUPERVISION

1. Construction of the roadway, drainage facilities, and all other elements of the roadway must be done under the supervision of the Road Agent, (or his designee), and with the approval of the Board of Selectmen. If supervision of work cannot be overseen by the Road Agent or his designee, and additional help is hired by the town to accomplish the supervision, the additional expense to the town shall be born by the developer, and arrangements for payment will be made prior to the commencement of roadwork.

2. A road cannot be accepted as a town road until the minimum standards herein have been met. For roads that have been built prior to the inception of these standards, that a person, persons, or developer is asking the town to accept, core samples, or cross sectional pictures of the road bed construction, shall be submitted to the Road Agent and Board of Selectmen for their review, before acceptance of the road.

O. EROSION CONTROL

1. Adequate measures to prevent soil erosion shall be taken during road construction and lot clearing.

2. Erosion shall be controlled by placing mulch or matting on all surface disturbed by construction of the roadway and on all other surfaces where there is danger of eroded material being carried from the roadway area. Additional measures may include, but not be limited to: maintenance of vegetative cover on steep slopes, seeding of road shoulders and embankments, construction of settlement basins and temporary dams.

3. All drainage or erosion control facilities must be consistent in design with procedures and guide lines used by the Grafton County Soil Conservation District or developed by the U.S. Soil Conservation Service.

P. DRAINAGE

1. Surface water shall be disposed of by means of culverts of sufficient capacity at water courses as determined by standard hydraulic methods and by construction of a longitudinal storm drainage system whenever required to relieve water in such ditch sections. Construction to be in accordance with the New Hampshire Standard Specifications for Road and Bridge Construction, 1980, Sections 603 and 604. Storm water or drainage easements shall be provided for watercourses or drainage traversing subdivision. All culverts shall be of plastic construction with a smooth bore. Minimum culvert size shall be 15 inches for any application including driveways.

2. All proposed drainage facilities and culverts shall be installed. Natural watercourses shall be cleaned and increased in size where necessary to take care of storm runoff. Drainage ditches at least three feet in width and sixteen inches in depth at their midpoint below centerline grade shall be constructed in the road right-of-way on both sides of the paved roadway. At its discretion, the Planning Board may require curbs and gutter. All ditches shall have a flat or round bottom to help prevent erosion.

3. No water shall be permitted to run across the roadway on the surface but be directed into catch basins, or otherwise into ditches, and shall be piped underground in a pipe of not less than 15 inches in diameter, or such size as may be deemed necessary by the Planning Board.

4. Paving or stone of a sufficient size shall be provided in ditches where soil or

velocity conditions warrant protection from erosion.

Q. UTILITIES

1. Utilities poles should be kept close to the Right of Way line of the roadway, but in no case closer than the ditch line and always well back of a curb.
2. The above applies to underground utilities also.

R. HIGHWAY ACCESS-DRIVEWAY

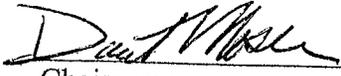
1. Before any driveway or other access is constructed within the limits of the right-of-way of any State maintained highway, a written construction permit must be obtained from the New Hampshire Department of Public Works and Highways as per R.S.A. 249:17. State approvals shall be submitted to the Planning Board as part of the subdivision review material.
2. All subdivision plans (concerning access to any roadway in town) shall indicate the location of the driveway or other access points, the width of the driveway, entrance, exit or approach and the safe sight distance for each access point.
3. The maximum width of any access point or driveway shall be 50 feet measured parallel to the highway centerline at the curb or shoulder line with a desirable width of 35 feet, except that an access point or driveway may be flared beyond a width 50 feet at its junction with the highway to accommodate the turning radius of vehicles expected to use the driveway or approach.
4. For proposed residential or commercial development along town or state roadway frontages that exceed 600 feet, the construction of an internal street system or service road outside of the roadway right-of-way will be required to provide greater safety for the development occupants, as well as the highway users. See Appendix C for illustrations of intended access to public thoroughfares.

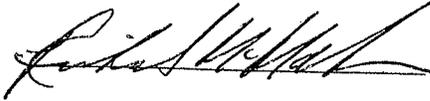
S. CONSTRUCTION SURETY

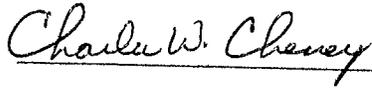
The sub divider shall tender offers of cession in a form certified as satisfactory by the Town Legal Counsel of all land included in roads not specifically reserved by him, but approval of the plat by the Planning Board shall not constitute an acceptance by the Town of the dedication of any road, or other public open space. The sub divider shall either file a bond in an amount and with surety and conditions satisfactory to the Selectmen providing for and securing to the Town the actual construction and installation of such improvements and utilities within a period specified by the Selectmen and expressed in the bond; or other evidence supporting an assessment or other method whereby the Town is put in an assured position to do said work and make alterations at the cost of the sub divider. Such bond or other method shall be approved as to form and sureties by the legal

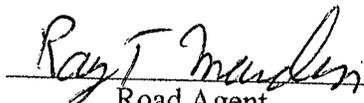
Revised: September 24, 2001

Campton Board of Selectmen

  
Chairperson





  
Road Agent

counsel of the Town and conditioned on the completion of such improvements within 5 years of the date of the bond or acceptance by him of any other approved method.

Revised: September 24, 2001

Campton Board of Selectmen

Charles W. Cheney  
Chairperson

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Road Agent

Revised September 29, 2003

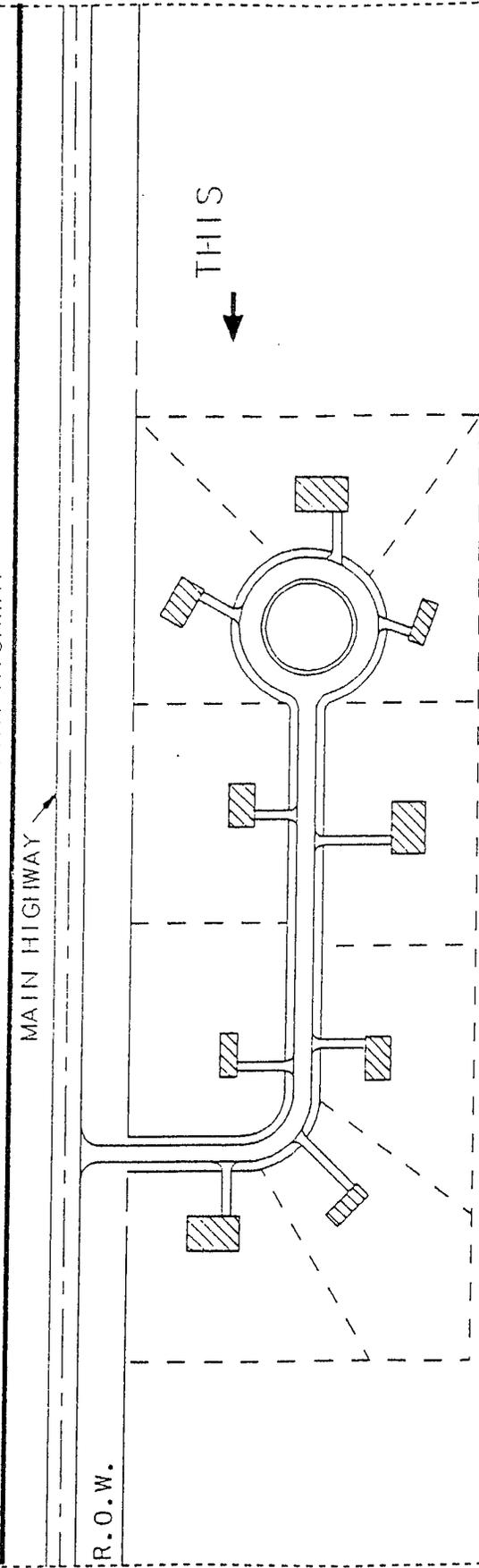
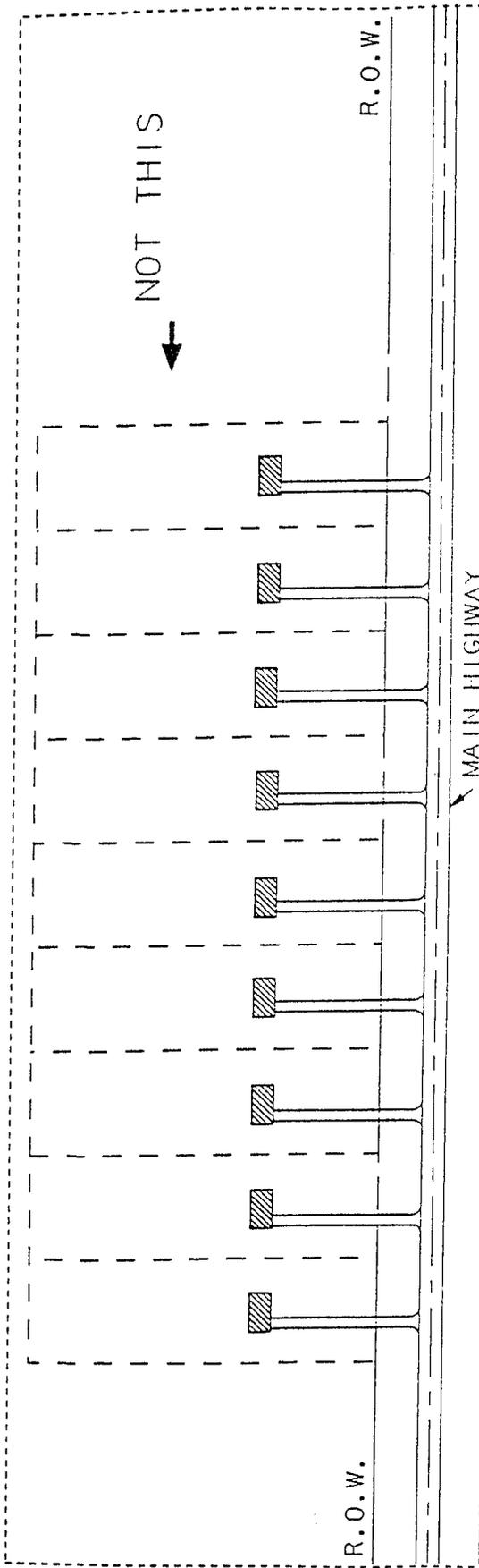
Charles W. Cheney  
Chairperson

J. D. H.  
Daniel W. Johnson

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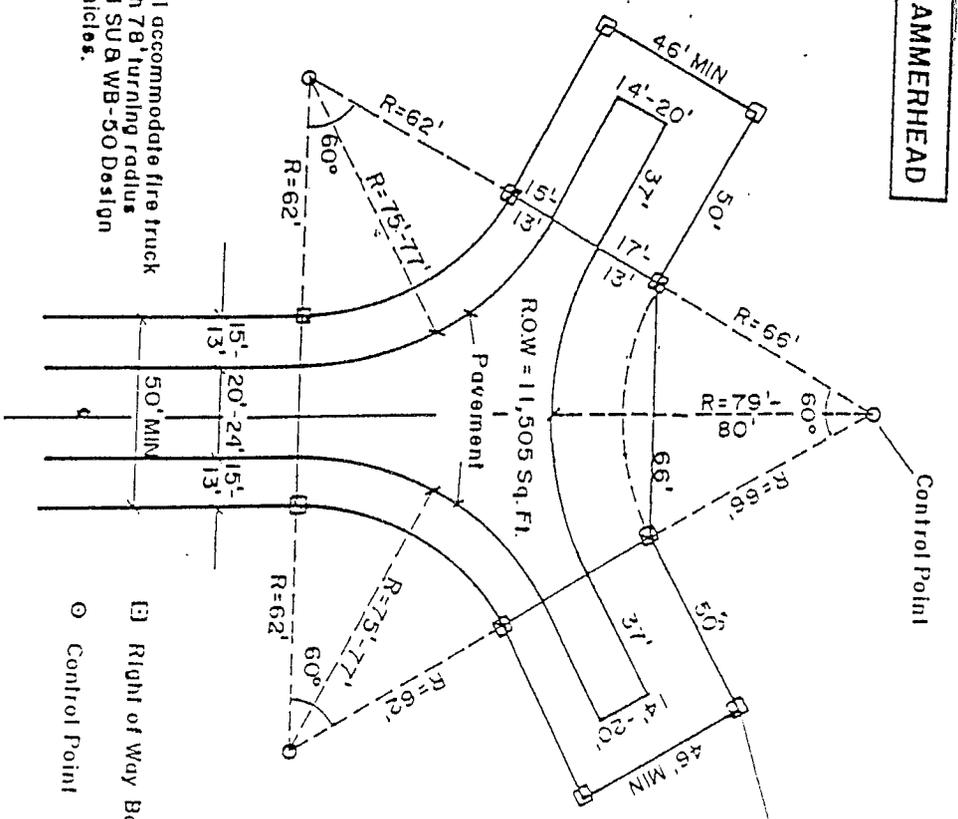
Roy T. Macdonald  
Road Agent



RESULTS: - BETTER RESIDENTIAL AMENITY  
 - IMPROVED H'WY ACCESS SAFETY

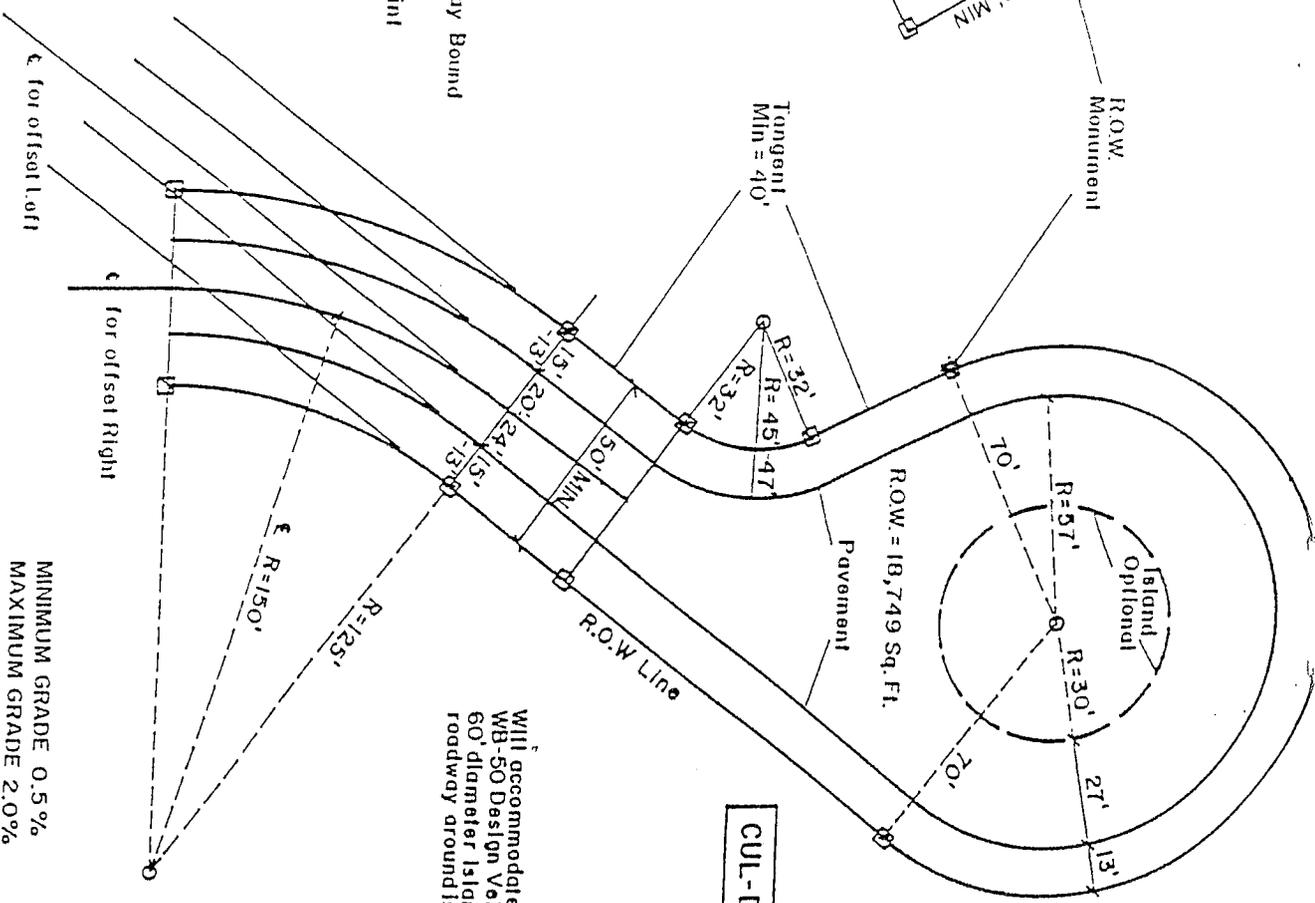
ALTERNATE LAND SUBDIVISION PLANS

**HAMMERHEAD**



Will accommodate fire truck with 78' turning radius and SU & WB-50 Design Vehicles.

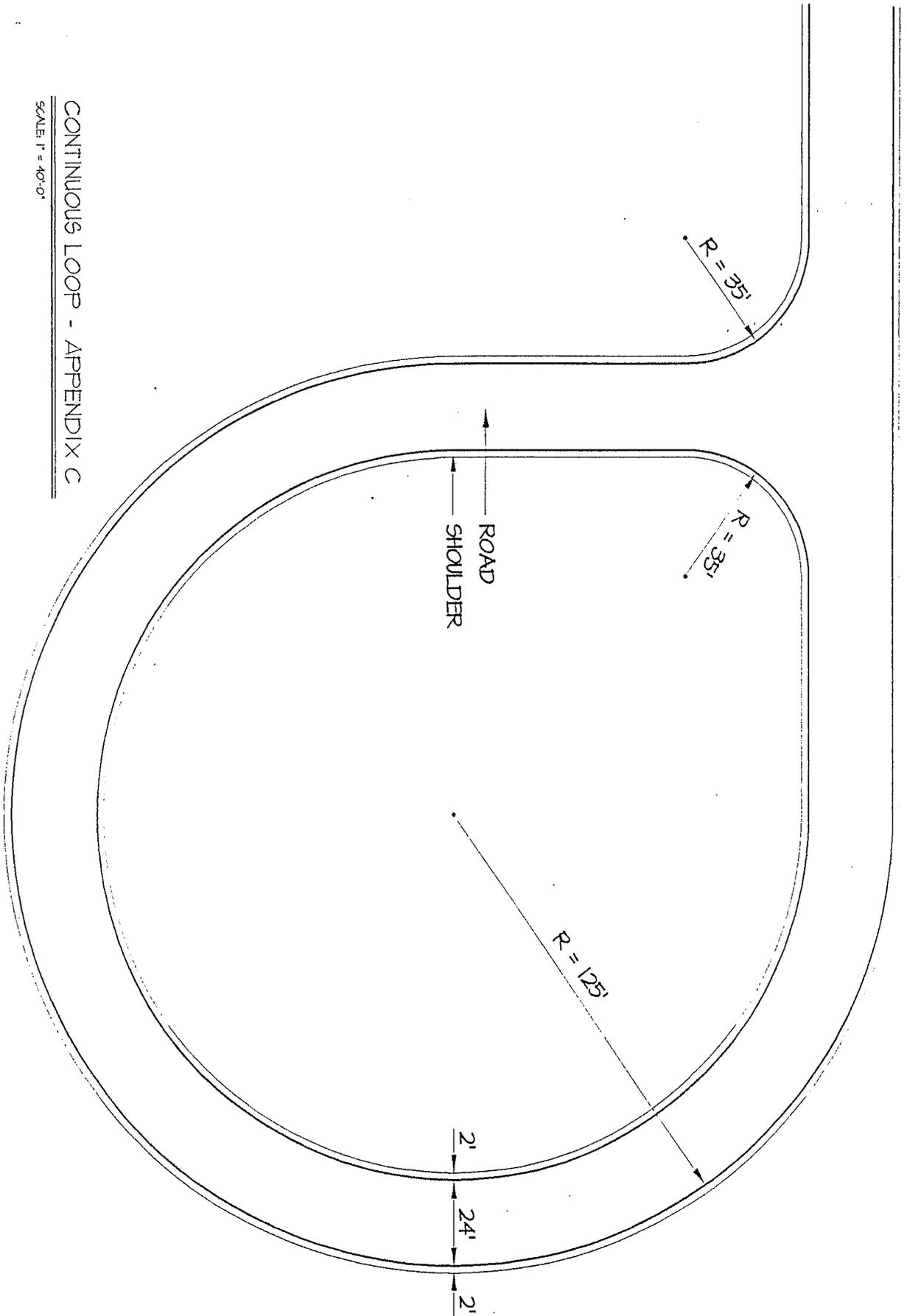
**SUGGESTED LAYOUT & MINIMUM REQUIREMENTS FOR HAMMERHEAD OR CUL-DE-SAC**



**CUL-DE-SAC**

Will accommodate Bus, SU & WB-50 Design Vehicles, with 60 diameter Island & 27' roadway around island.

MINIMUM GRADE 0.5%  
 MAXIMUM GRADE 2.0%  
 CROSS SLOPE 1/4" PER FT.



CONTINUOUS LOOP - APPENDIX C

SCALE 1" = 40'-0"