

ROAD DESIGN ORDINANCE

FOR THE

TOWN OF ST. AGATHA, MAINE

ENACTED: 3-25-2008
Date

EFFECTIVE: 3-25-2008
Date

CERTIFIED BY: Kelly Thibodeau
Name
Town Clerk
Title

Affix Seal

1 Statement of Purpose.

The purpose of these standards is to promote the health, safety, and public welfare of the residents of St. Agatha through the establishment of minimum design, construction, and acceptance standards for roads.

2 Applicability.

A. New Construction: These standards shall apply to the construction of all new roads within the town, whether public or private. No road shall be accepted as a town way unless they meet the provisions of these standards.

B. Alterations: Alterations, widening and lengthening improvements shall be consistent with the standards of this Ordinance. The Town shall be exempt from the provisions of these standards when the Town undertakes alterations, widening, and improvements.

C. Higher Design and Construction Standard: Nothing in these standards shall be construed to prevent the design and construction of roads which meet higher standards, use improved methods, or higher quality materials.

3 Application Procedures.

Prior to any new construction, renovations or lengthening of an existing road, an application shall be submitted to the Planning Board with the following information in the application.

A. Submission Requirements:

1. The name(s) of the applicant(s);
2. The name(s) of the owner(s) on record of the land upon which the proposed road is to be located;
3. A copy of the deed for the property proposed for road construction;
4. A statement of any legal encumbrances on the land upon which the proposed road is to be located; and
5. The anticipated starting and completion dates of each major phase of road construction.

B. Plans: The plans and illustrations submitted as part of the application shall be prepared by a Maine Registered Land Surveyor or Professional Engineer to include the following information:

1. The scale of the plan. (All road and roadway plan and profile drawings shall be drawn to a scale 1" = 50' horizontal and 1" = 10' vertical);
2. The direction of magnetic north;
3. A plan profile and typical cross section views of all proposed roads;
4. The starting and ending point with relation to established roads, roads, or ways and any planned or anticipated future extensions of the roads. (All terminal points and the center line alignment shall be identified by survey stationing.);
5. The roadway and roadway limits with relation to existing buildings and established landmarks;
6. Dimensions, both lineal and angular, necessary for locating boundaries, and necessary for locating subdivisions, lots, easements, and building lines;
7. The lots, if any, as laid out and numbered on said road, showing the names of all owners of abutting property;
8. All natural waterways and watercourses in or on land contiguous to the said roads or ways;
9. The kind, size, location, profile and cross section of all existing and proposed drainage ways and structures and their relationship to existing natural waterways;
10. A soil erosion and sedimentation control plan showing interim and final control provisions;
11. Curve data for all horizontal and vertical curves shall be the centerline radius, arc length, beginning of curve and end of curve points;
12. All centerline gradients shall be shown and expressed as a percent;
13. All curve and property line radii of intersections;
14. The limits and location of any proposed sidewalks and curbing;
15. The location of all existing and proposed overhead and underground utilities, to include, but not limited to, the following: (NOTE: When a location, in the case of any underground utility, is an approximate, it shall be noted on the plan as such.)
 - a. storm drains;
 - b. telephone line poles or underground vaults;

- c. electrical power line poles or underground vaults; and
- d. street lights.

16. The name(s) of each proposed new road.

C. Upon receipt of plans for a proposed public road, the Planning Board shall forward one copy to the Board of Selectmen and the Town Manager for review and comment. The Planning Board shall presume the plans acceptable should the Board of Selectmen and the Town Manager not submit written comments within thirty (30) days of the receipt of the proposed public way.

D. Roads Within Proposed Subdivision: Roads, proposed as part of a subdivision shall be submitted to the Planning Board as an integral part of the subdivision application. Plans shall conform to the provisions of this Ordinance as well as that required by the State's Subdivision Laws.

E. Application Fee: An application fee of \$50 shall be paid to the "Town of St. Agatha" upon submission of an application. The application fee shall be waived if the road is being reviewed as an element of a subdivision application.

F. Application Review:

1. Complete Application: Within thirty (30) days from the date of receipt, the Planning Board shall notify the applicant in writing that the application is complete, or if incomplete, the specific additional material needed to make them complete. Determination by the Planning Board that the application is complete in no way commits or binds the Planning Board as to the adequacy of the application to meet the requirements of this Ordinance.

2. Application Approval: The Planning Board shall, within thirty (30) days of a public hearing, or within sixty (60) days of having received the completed application or within such other time limit as may be mutually agreed to, deny or grant approval on such terms and conditions as it may deem advisable to satisfy this Ordinance and to preserve the public health, safety, and general welfare. In all instances, the burden of proof shall be upon the applicant. In issuing its decision, the Planning Board shall make a written finding of fact establishing that the application does or does not meet the provisions of this Ordinance.

3. Public Hearing: The Planning Board may hold such public hearing within thirty (30) days of having notified the applicant in writing that a complete application has been received and shall cause notice of the date, time and place of such hearing to be given to the applicant, all owners' property abutting the proposed road or any other impacted party as may be determined by the Planning Board, and posted at three (3) prominent locations throughout the Town at least seven (7) days prior to the hearing. Public hearings shall be conducted in accordance with the procedures within this Ordinance.

4 Acceptance of a Town Way.

A road or easement constructed on private property by the owner(s) shall be laid out and accepted as a Town right-of-way or public easement by the Town *only* upon the following conditions:

- A. Roads which the owner(s) proposes to be dedicated as Town rights-of-way shall be designed and constructed in accordance with the Road Design and Construction standards contained within this Ordinance.
- B. The owner(s) shall give the Town of St. Agatha a warranty deed to the property within the boundaries of the right-of-way or public easement at the time of its acceptance.
- C. A plan of the right-of-way or public easement shall be recorded in the Aroostook County Registry of Deeds, Northern Office at the time of its acceptance.
- D. A petition for acceptance of the Town right-of-way or public easement shall be submitted to the Town of St. Agatha upon a form to be presented to the Planning Board for their review and comment. Said petition shall comply with all applicable requirements contained within this Ordinance.
- E. Acceptance of a Town right-of-way or public easement shall take place at the Annual Town Meeting.

5 General Road Design Standards.

- A. These design standards shall be met by all roads and shall control the roadway, shoulders, curbs, ditches, sidewalks, drainage systems, culverts, and other appurtenances.
- B. Roads shall be designed to discourage through traffic within a residential subdivision.
- C. Wherever existing or other proposed roads, topography, and public safety permits, roads shall run in east/west directions to maximize access for solar energy utilization. The character, extent, width, and grade of all roads shall be considered in their relation to existing or planned roads.
- D. Where a development borders an existing narrow road (not meeting the width requirements of the standards for roads in this Ordinance), or when the Comprehensive Plan indicates plans for realignment or widening of a road that would require use of some of the land in the development, the plan shall indicate reserved areas for widening or realigning the road marked "Reserved for Road Realignment (Widening) Purposes". Land reserved for such purposes may not be included in computing lot area or setback requirements.

- E. Driveways shall be located not less than forty (40) feet from the tangent point of the curb radius at an intersection. Driveways to corner lots shall gain access from the road of lower classification when a corner lot is bounded by roads of two different classifications. Driveways, whenever possible, should be located no closer than five (5) feet from adjacent property lines and fifty (50) feet to an adjacent driveway.
- F. The maximum number of driveways onto a single road is controlled by the available site frontage as noted in E above. In addition, no low volume traffic generator shall have more than one two-way access onto a single roadway and no medium volume traffic generator shall have more than two two-way accesses in total onto a single roadway.
- G. Any road serving 15 dwelling units or more shall have at least two road connections with existing public roads on an approved subdivision plan for which performance guarantees have been filed and accepted.
- H. Existing roads shall be extended at the same or greater width.
- I. Road names require the approval of the legislative body at the Annual, or specially called, Town Meeting. Roads that are in alignment with roads already existing or named, shall be given the name of the existing road. Names of new roads shall not duplicate, nor bear phonetic resemblance to those of existing roads in St. Agatha. The developer shall reimburse St. Agatha for the costs of installing road name, traffic safety, and control signs.
- J. Intersections of roads shall be at angles as close to ninety (90) degrees as possible. In no instances shall road intersections be at an angle of less than seventy-five (75) degrees.
- K. The curb line radius at road intersections shall be no less than twenty-five (25) feet. Where the angle of the road intersects is less than ninety (90) degrees, a longer radius may be required.
- L. Any road intersection shall be so designed in profile and grading and so located as to provide the following minimum sight distances measured in each direction. The measurements shall be from the driver's seat of a vehicle standing on that portion of the intersecting road or road with the front of the vehicle a minimum of ten (10) feet behind the curb line or edge of the shoulder with the height of the eye three and one-half (3.5) feet to the top of an object four and one-quarter (4.25) feet above the road surface. Adjustments may be requested by the Planning Board to adjust for downgrades and upgrades.

Allowable Speed Minimum Required Sight Distance(in feet)
(MPH)

25	250
30	300
35	350

40	400
45	450
50	500
55	550

Where necessary, corner lots shall be cleared of all growth and sight obstructions, including ground excavation, to achieve the required visibility.

M. Where, in the opinion of the Planning Board, it is desirable to provide for road access to adjoining property, proposed roads shall be extended by dedication, to the boundary of such property.

N. Utilities shall be located in all roads as indicated within this Ordinance.

O. Street lighting shall be installed as required by the Planning Board.

P. The centerline of the roadway shall be the centerline of the right-of-way.

Q. Dead end roads shall either be constructed to provide a cul-de-sac turn around or a hammerhead or "T" turn around. Cul-de-sac turn arounds designed with a center island shall meet the following dimensions:

1. Property line: seventy (70) feet;
2. Outer edge of pavement or travel surface: sixty (60) feet; and
3. Maximum length of dead end road: 1,500' (measured from the center line of the feeder road to the center of the turn around radius).

If a center island will not exist, a radius to the property line could be sixty (60) feet. The Planning Board may require the reservation of a twenty (20) foot easement in line with the road to provide continuation of pedestrian traffic or utilities to the next road. The Planning Board may also require the reservation of a sixty (60) foot easement in line with the road to provide continuation of the road where future subdivision is possible. Hammerhead or "T" turn arounds are an equally viable option. These turn arounds shall allow a minimum extension of sixty (60) feet perpendicular from the road centerline on each side of the proposed road.

R. The procedures outlined in the erosion and sedimentation control plan shall be implemented during the site preparation, construction, and clean-up stages. Refer to: Erosion Control, herein, for a description of minimum erosion control methods.

S. Following road construction, the developer or contractor shall conduct a very thorough clean up of stumps and other debris from the entire road right-of-way. If on-site disposal of stumps and debris is proposed, the site shall be indicated on the Plan, and be suitably covered with fill and topsoil, limed, fertilized, and seeded.

T. Adequate provision shall be made for disposal of all surface water and underwater through ditches, culverts, under drains, and/or storm water drainage systems. Drainage design shall be based upon a ten-year storm event and shall be reviewed by the local Soil Conservation Service Office before construction. Refer to: Culverts, herein, for a description of minimum culvert standards.

U. Catch basins (of standard design) shall be built where necessary and culverts of proper size and capacity will be installed at all watercourses, with necessary headers. Refer to: Culverts, herein, for a description of minimum culvert standards.

V. Slopes and ditches shall slope away from the shoulders of the road at a ratio of at least four (4) horizontal feet to one (1) foot vertical and never steeper than two (2) to one (1). In cases where this is not possible or practical, as where the roadway cuts through the side of a hill, all cuts shall be made to that adjacent slopes will not slide. The tops and sides of all cuts shall be cleared of all trees, stumps, and boulders for an adequate distance so as to prevent such material from sliding into the ditches. Banks will be loomed, seeded, and mulched.

W. The Planning Board shall have the authority to designate whether sidewalks shall be required. Sidewalk specifications shall comply with MDOT General Specifications which include a minimum sidewalk width of 5' with 2" of bituminous hot mix (Grade D) over a 12" gravel subbase after compaction.

X. Longitudinal runs of water and/or sewer mains shall be laid outside of the travel lanes and clear of any present or designated sidewalks. Utility poles shall be so placed that any present or designated sidewalks may be contained within the boundaries of the road or way without obstructions by poles or appurtenances.

Y. All roads proposed for acceptance as Town ways, and constructed without adherence to this Ordinance shall require the following:

1. Completed application form for road and acceptance standards along with all required material accompanying application.
2. Written statement by the St. Agatha Sewer Department stating that all underground systems are properly constructed.
3. Following the evaluation, obtain a written statement signed by a registered professional engineer attesting that the proposed road meets or exceeds the standards set forth by this Ordinance.
4. Developer shall be required to comply with the standards as they are set forth in this Ordinance.
5. The Town may require the developer to excavate the proposed road to determine soil quality and depth.

Z. A land use permit shall not be issued unless the roadway from which the lot receives access is a Town right-of-way.

6 Road Classification.

Road classification are based on the road's ultimate purpose, use, and/or volume stated in terms of Average Daily Traffic (ADT) as determined by the Planning Board. The number of dwelling units to be served by a residential road shall be used as an indication of the number of trips. Whenever a subdivision road continues, an existing road that formerly terminated outside the subdivision or it is expected that a subdivision road will be continued beyond the subdivision at some future date, the classification of the road will be based upon the road in its entirety, both within and outside of the subdivision.

A. Collector Road: The primary purpose of a collector road is to serve as feeders to arterial roads and collectors of traffic from minor roads. A collector has a potential to sustain minor commercial businesses along its route.

B. Residential Collector: The primary purpose of a residential collector road is to conduct traffic gathered from local or minor roads to collector roads. Residential collectors shall be designed to exclude all external through traffic which has neither origin or destination on its tributary local access roads.

C. Local or Minor Road: The primary purpose of a local or minor road is to conduct traffic to and from dwelling units to other roads. Usually, such a road is not designed for through traffic.

Road Classification Based on

Traffic Volume (ADT) and Dwelling Units Served

Class	ADT Range	Dwelling Units Served
Collector	500-3,000	15+
Residential Collector	200-500	15
Local or Minor	0-200	Less than 15

The Planning Board may at their discretion, require the road surface be paved or unpaved. For all roads to be left unpaved, the aggregate base material shall meet MDOT Standard Specification #703.10, as may be amended, and shall be placed a minimum of four (4) compacted inches in depth. All aggregate base material shall be free of rocks and rock particles which exceed one and three-quarter (1.75) inches in diameter.

7 Road Design and Construction Standards Chart.

	Collector	Residential	Local
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		Collector	
a. Minimum Width of Right-of-Way	60'	50'	50'
b. Minimum Paved Width	24'	24'	20'
c. Minimum Shoulder Width (each)	4'	3'	2'
d. Curbing (if desired)	vertical	vertical(no ditches allowed)	(if desired)
e. Curb Reveal	7"	7"	
f. Minimum Grade	1.0%	1.0%	0.5%
g. Maximum Grade	6.0%	8.0%	10.0%
h. Drainage Ditch Angle Ratio: Shoulder to ditch bottom Ditch bottom to right-of-way		4:1 2:1	4:1 2:1
i. Minimum Distance Ditch Bottom to Sub-Base Bottom		12"	12"
j. Maximum Grade at Intersections	3% within 50'of intersection	3% within 50'of intersection	3% within 50'of intersection
k. Minimum Angle of Intersections	90 degrees	90 degrees	90 degrees
l. Minimum Centerline Radii on Curves	230'	200'	150'
m. Minimum Tangent Length Between Reverse Curves	200'	100'	50'
n. Minimum Sidewalk: Sidewalks Bituminous surface Gravel sub-base course Portland cement concrete reinforced with #10 wire mesh Sand base if cement used	5' 2" 12" 4" 6"	5' 2" 12" 4" 6"	5' 2" 12" 4" 6"
o. Minimum Road Base: (after compaction) aggregate sub-base (maximum size stone 2") crushed aggregate base (if necessary)	24" 3"	24" 3"	24" 3"
p. Hot Bituminous Pavement: Surface course Base course	1.25" 1.75"	1.25" 1.75"	1.25" 1.75"
q. Minimum Road Crown: Gravel Paved	0.50":1' 0.25":1'	0.50":1' 0.25":1'	0.50":1' 0.25":1'
r. Property Line Radii (intersections)	10'	10'	10'

8 General Construction Standards.

A. Preparation: Before any clearing has started on the right-of-way, the center line and side lines of the new road shall be staked or flagged at fifty (50) foot intervals.

B. Grading: All roads and alleys shall be graded to their full width by the subdivider so that pavements and sidewalks can be constructed on parallel profiles. Deviation from the above will be allowed only with the approval of the Planning Board.

1. Before grading is started, the entire right-of-way area shall be cleared of all stumps, roots, brush, and/or other objectionable material and all trees not intended for preservation.
2. Tree stumps and other organic material shall be removed to a depth of two (2) feet below the subgrade. Rocks and boulders, when encountered, shall be scarified to subgrade.
3. On soils which have been identified as not suitable for roadways, the sub-soil shall be removed from the road site to a depth of two (2) feet below the subgrade and replaced with material meeting the specifications for gravel aggregate sub-base. In lieu of removal of all organic material, engineering fabric (geotextile) may be used to stabilize the road base.
4. All the material used in the construction of embankments shall be of the quality to meet standards for embankment of the latest edition of the MDOT Standard Specifications for Highways and Bridges. Excess materials, including organic materials, soft clays, wet and non-compactable materials, etc., shall be removed from the road site. The fill shall be spread in layers not to exceed 12" loose and compacted: 80% of optimum for sub-base, 95% optimum for base. If applicable, the filling of utility trenches and other places shall be mechanically tamped.
5. All side slopes shall be at a slope of four (4) horizontal to one (1) vertical except for rural design local roads which may have maximum side slopes of three (3) horizontal to one (1) vertical. Side slopes in ditches shall not exceed two (2) horizontal to one (1) vertical. Where cut and fill slopes necessary to meet this and other standards would exceed the right-of-way width, the width shall be increased to cover all such cut and fill land and to provide adequate space for maintenance access. Slopes and shoulders shall be appropriately vegetated in accordance with an erosion and sedimentation control plan approved by the Planning Board.
6. All underground utilities shall be installed prior to paving to avoid cuts in the pavement. Building sewer and water service connections shall be installed to the edge of the right-of-way prior to paving.

C. Bases: The appropriate sections of the MDOT Standard Specifications for Highways and Bridges currently in effect at the date of submission of the preliminary plan, shall be applicable to this Ordinance, except as follows:

1. Aggregate Base course shall be sand or gravel of hard durable particles free from vegetative matter, lumps or balls of clay and other deleterious substances. The gradation of the part that passes a three (3) inch square mesh sieve shall meet the following grading requirements:

Sieve Designation	%of Weight Passing Square Mesh Sieve
1/2 inch	45-70%
1/4 inch	30-55%
No. 40	20%
No. 200	5%

Aggregate for the base shall contain no particles of rock exceeding two (2) inches in diameter.

2. Aggregate Sub-base course shall be sand or gravel of hard durable particles free from vegetative matter, lumps or balls of clay and other deleterious substances. The gradation of the part that passes a three (3) inch square mesh sieve shall meet the following grading requirements:

Sieve Designation	% of Weight Passing Square Mesh Sieve
1/4 inch	25-70%
No. 40	30%
No. 200	7%

Aggregate for the sub-base shall contain no particles of rock exceeding six (6) inches in diameter.

D. Pavement Joints: Where pavement placed joins an existing pavement, the existing pavement shall be saw cut along a smooth line and to a neat, even, vertical joint. No broken or raveled edges and no deviation from grade will be permitted.

E. Curbs and Gutters: Road curbs and gutters shall be installed as required by the Planning Board. Curbs shall be vertical, except when slopes curbs are specifically allowed by the Planning Board.

F. Pavements: Minimum standards for the base layer of pavement shall be the MDOT specifications for Plant Mix Grade B with an aggregate size of no more than 3/4" maximum. This base course may be placed between April 15 to November 15, provided

the air temperature in the shade at the paving location is 35 degrees F or higher and the area to be paved is not frozen or unreasonably wet.

Minimum standards for the surface layer of pavement shall meet the MDOT specifications for Plant Mix Grade C with an aggregate size of no more than 1/2" maximum. This surface course shall be placed between April 15 and October 15 provided the air temperature is 50 degrees F or higher.

G. Construction Monitoring: It shall be the responsibility of the developer to contract with the Public Works Foreman or the Code Enforcement Officer to continuously inspect aspects of road construction for conformance with standards as outlined in this Ordinance. The inspector shall report in writing to the Town Manager or designated representative detailing and reporting construction activities at each of the following stages:

1. After grading and before placing of sub-base gravel;
2. After placement of sub-base gravel and base gravel, if required;
3. Prior to placement of base course and pavement;
4. Prior to placement of surface course and pavement; and
5. Completion of construction, yet prior to final acceptance.

9 Erosion Control.

A. All slopes and ditches shall be protected to prevent erosion. All ditches having grades less than 2% shall be protected with hay or wood mulch or any of the various temporary erosion control products such as excelsior mat, jute mesh, etc. This includes sod and direct seeding.

B. For grades of 2% or steeper, waterways shall be lined with stone with diameters ranging from 4" to 12". Proper bedding of the stone should be provided by at least 6" of bank-run gravel or an Erosion Control Geotextile meeting MDOT Specifications.

C. Construction operations should be scheduled to allow immediate seeding within channels during optimum grass-growing periods (mid-April to late June or August through September). All seeding should be completed within 24 hours after excavation of a ditch.

D. For a more detailed presentation on erosion control, refer to SCS Best Management Practices.

E. Dust control shall be approved by the Code Enforcement Officer prior to being applied and shall be applied at time of construction with either calcium chloride, or an approved alternative, by being mixed with the gravel or sprayed on at completion of the driveway.

10 Culverts.

A. Minimum diameter of all driveway pipes is 15 inches and road-crossing pipes is 18 inches. These minimums may be altered by the Planning Board, the Public Works Department, or by the recommendation of the Soil Conservation Service Office.

B. Plastic Pipes are the only type of culvert to be used.

11 Modifications.

A. Where the Planning Board finds extraordinary and unnecessary hardships may result from strict compliance with these standards, or where there are special circumstances of a particular application, it may vary these standards so that substantial justice may be done and the public interest is secured.

B. In granting modifications, the Planning Board may require conditions that in its judgment, will secure the objectives of the requirements.

12 Appeals.

An appeal may be taken within thirty (30) days from the Planning Board's decision on an application, by any party to Superior Court in accordance with Rule 80B of the Maine Rules of Civil Procedure.

