

Memo

To: Mr. Alexander Mello; Director – Windham Community Development Department

From: Steven B. Keach, P.E.

Date: December 07, 2021

Subject: Windham Zoning Ordinance – Appendix A-1 to Ordinance

Prior to your arrival at the Community Development Department, staffing limitations experienced during the first several months of the present year resulted in my personal receipt of an unusually high number of inquiries from both former and interim Community Development Department staff members, as well as members of the public, regarding interpretation and administration of various provisions of Windham’s land use ordinances and regulations. This experience afforded me opportunity to consider and respond to inquiries regarding various provisions of the Zoning Ordinance having both frequent and infrequent applicability to land use matters of the Town.

One such inquiry, directed to me initially by a local land use consultant; and subsequently by a former member of the Community Development Department staff, related to reconciliation of terms and conditions of Footnotes No. 1 & No. 5 respectively to Appendix A-1 to the Zoning Ordinance. Specifically, as acknowledged by the text of Section 702 of the Zoning Ordinance, area, frontage, yard and floor area (dimensional) requirements of the Ordinance are established by a Table of Requirements, codified as Appendix A-1 to the Ordinance. As further acknowledged by a notation provided at the lower left corner of this Table, “Minimum Lot Area” requirements are established at Footnote No. 1 to this Table. Footnote No. 1 states in part: “Minimum land (lot) area requirements for all districts shall be computed based on soil types as required in Table of Requirements – Minimum Lot Area by Soil Type” which is also at Appendix A-1. Careful examination of the Minimum Lot Area by Soil Type table reveals individual minimum lot area values are specified for each of several dozen “Soil Types” corresponding to High Intensity Soil Survey (HISS) Mapping Units. In general, minimum lot area values assigned under this table are lower for land classified by soil mapping units more conducive to land development reliant on on-site water and sewer utilities than for land consisting of soils less favorable to on-site accommodation of water and sewer utilities. That is to say, Minimum Lot Area values established under Appendix A-1 increase in proportion to a corresponding decrease in soil suitability for land development. This approach to lot sizing appears generally consistent with the form of a model ordinance initially introduced by Rockingham County Conservation District in the late 1980’s.

Civil Engineering

Land Surveying

Landscape Architecture

My review of unofficial copies of annual editions of the Windham Zoning Ordinance provided by Edward N. Herbert Associates office suggests current Minimum Lot Area by Soil Type provisions of Appendix A-1 were adopted by 1989 Town Meeting amendment. Prior to adoption of that amendment, minimum lot area requirements of the Zoning Ordinance were based on the Windham Soils Survey of 1975 prepared by the USDA-SCS (now NRCS), which effectively classified soil mapping units as having either slight, moderate or severe limitations for accommodation of on-site wastewater disposal systems. Review of the 1988 edition of the Windham Zoning Ordinance identifies "base" minimum lot area values of 43,560, 54,000 and 64,000 square feet respectively for soils classified as possessing slight, moderate and severe limitations for accommodation of on-site wastewater disposal. This same 1988 edition went on to specify this series of minimum "base" lot area requirements were to be adjusted upwardly by factors ranging from 1.0 to 2.5 based on the prevailing land slope.

In contrast, despite significant amendment to Appendix A-1, including Footnote No. 1, which appear to have been adopted by 1989 Town Meeting, the text of Footnote No. 5 in the current (2021) edition of the Zoning Ordinance appears to remain similar if not identical to the text of Footnote No. 6 as written in both the 1988 and 1989 editions. Current Footnote No. 5 has direct applicability when endeavoring to determine minimum lot area and residential density requirements for duplex and multi-family residential uses in both the Residence B and Residence C Districts. As the illustrative example provided under that portion of Footnote No. 5 now codified as 5.1 suggests, Appendix A-1 requires "5,000 square feet of (additional) land area shall be added to the (base) lot area for each bedroom in excess of two (2)" for each multi-family dwelling. Similarly, portions of current Footnote No. 5, codified as 5.2 and 5.3 respectively, require additional measures of land area to be added to base lot area requirements under various applications involving multi-family or duplex uses. Interestingly, despite the true "qualitative" basis of minimum lot area by soil type provisions explicit throughout the balance of Appendix A-1, requirements for "additional land" imposed by Footnote No. 5 appear to treat all land equally regardless of suitability for development. That is to say, application of Footnote No. 5 as presently written simply ignores fundamental consideration of soil suitability upon which Appendix A-1 is based. Since this condition has prevailed since 1989, it is unclear if those responsible for ordinance amendment at that time intended this to be the case or if this departure in convention was simply an oversight. In either case, this apparent "disconnect" gave rise to inquiries this writer received earlier this year from both public and private parties.

Based upon the reality that all other minimum lot area and residential density dimensional standards which prevail throughout the balance of the 2021 edition of the Windham Zoning Ordinance are based exclusively on qualitative Minimum Lot Area by Soil Type requirements of Appendix A-1, it would appear desirable to amend the text of Footnote No. 5 for compatibility. Should your Department wish to consider introduction of an amendment which endeavors to achieve such an outcome, I would recommend consideration be given to amending Footnote No. 5 to read as follows:

5. Minimum lot area and residential density requirements for two-family and multi-family dwellings shall be determined in accordance with Minimum Lot Area by Soil Type requirements specified in this Appendix A-1. Specifically:
- a. Minimum lot area for any parcel of land upon which a single (one) two-family (duplex) dwelling is located shall be established by proportional adjustment of Appendix A-1 Minimum Lot Area by Soil Type values based upon bedroom count. Specifically, for any two-family (duplex) dwelling having a combined total of more than four bedrooms, minimum required lot area shall be determined by increasing the prevailing Appendix A-1 Minimum Lot Area by Soil Type value by a factor equal to the number of bedrooms proposed divided by four. As an example, Minimum Lot Area required for a duplex dwelling having a total of six bedrooms would be 1.5 (6/4) times that specified at Appendix A-1.
 - b. Maximum Multi-family residential density available for any parcel of land shall be established by determining the number of individual lots attainable on that parcel in accordance with Appendix A-1 - Minimum Lot Area by Soil Type requirements and multiplying that outcome by four to yield maximum number of bedrooms permissible. The resulting number of bedrooms may then be assigned to individual two, three, and four-bedroom dwelling units in any preferred manner that otherwise conforms with applicable provisions of this zoning ordinance.

1988

TABLE G. REQUIREMENTS

DISTRICT	MINIMUM LOT AREA IN SQUARE FEET (1)*	MINIMUM LOT FRONTAGE IN FEET(2)*	MINIMUM FRONT YARD IN FEET(3)*	MINIMUM SIDE YARD IN FEET(4)*	MINIMUM REAR YARD IN FEET	MAXIMUM % BLDG. COVERAGE OF LOT	MINIMUM FLOOR AREA PER DWELLING IN SQ. FEET
WETLAND & WATERSHED PROTECTION		SEE SECTION VI-A					
RURAL	43,560	175	50	30	30	20%	1,000
RESIDENCE A,B,C, SINGLE FAMILY DWELLING	43,560(5)*	175	50	30	30	20%	RES A.= 1,000 RES B.= 750 RES C.= 600
RESIDENCE B MULTI-FAMILY DWELLING (7)*	Minimum area plus 5,000 for each add bdrm (6)*	175 plus 30 for each add'l dwlg. unit	50(7)*	30 plus 10' for each add'l dwlg. unit (9)*	30 plus 10' for each add'l dwlg. unit (10)*	20%	750 for each dwelling unit
NEIGHBORHOOD BUSINESS (7)*	43,560	175	50	30	30	30%	
BUSINESS COMM. A, B, C (7)*	43,560	175	75	20 (8)*	30 (8)*	30%	
LIMITED INDUSTRIAL (7)*	43,560	175	50	20 (8)*	30 (8)*	30%	

1988

* NOTES: SEE FOLLOWING PAGE

NOTES FOR TABLE:

1. Wetlands of a lot shall not be computed as part of the lot area. Minimum land area requirements for all districts: Lots consisting of soils types which have been determined by the Windham Soils Survey of 1975, or as amended, to pose slight problems for on-site waste disposal systems shall contain 43,560 square feet of land area. Lots consisting of soils types which have been determined by the Windham Soils Survey of 1975, or as amended, to pose moderate problems for on-site waste disposal systems shall contain 54,000 square feet of land area. Lots consisting of soils types which have been determined by the Windham Soils Survey of 1975, or as amended, to pose severe problems for on-site waste disposal systems shall contain 64,000 square feet of land area.

Whenever a lot contains soils having two or more types of soil which pose different degrees of problems for on-site waste disposal systems, the minimum land area shall be computed by reference to the percentage of the total usable lot taken up by each soil type. Whenever a lot contains multiple soils with two or three different degrees of limitation for on-site waste disposal systems, the leach field shall, whenever possible, be located on the soils which pose the least degree of limitation for the system. When computing minimum land areas under this Section, wetlands, flood plains, exposed ledge, easements except slope easements, and slopes greater than 25% shall not be counted. When computing minimum land area requirements for all districts with slope types A, B, C, and D as follows, the following formula shall be used:

SLOPE TYPES

	A	B	C	D
Soils to pose slight limitations = 43,560 X....	1.0	1.2	1.5	1.6
Soils to pose moderate limitations = 54,000 X..	1.0	1.2	1.5	2.0
Soils to pose severe limitations = 64,000 X....	1.0	1.3	1.6	2.5

(A = 0-3%, B = 3-8%, C = 8-15%, D = 15-25%)

- When it has been determined that a lot has two or more slope types, the same method shall be used to determine the lot area as is used when the lot has two or more soil types. On lots with slope types C or greater, driveway profiles for the first 100 feet shall be provided. (See Windham Subdivision Regulations as amended.)
2. Said measurement shall be taken at a point fifty (50) feet from the nearest front lot line.
 - a. Private roads may be allowed to satisfy frontage requirements in Residence B District. Minimum standards for such private roads shall be Town Specifications, except that the width may vary according to traffic needs.
 3. Provided that any residential front yard need only be the average of the depths of the front yards of the abutting yards on the abutting lots, considering the front yards of abutting vacant lots as having the minimum permitted.

(Notes for Table continued)

4. Except that in the case of a lot having frontage on two (2) streets, the frontage requirements apply to the side of the structure on street frontage as well as to the front.
 - a. In Residence B District, there shall be forty (40) feet minimum distance between multi-family dwellings.
5. Lot requirements in Residence C District pertain to each mobile home in a mobile home park.
6. For each multi-family dwelling, 5,000 square feet of land area shall be added to the lot area for each bedroom in excess of two (2). For example: Each multi-family dwelling containing six two-bedroom dwelling units would be required to have a minimum of 93,560 square feet (i.e., 43,560 square feet plus 5,000 square feet for each bedroom in excess of two (2), or 50,000 square feet for a total minimum land area of 93,560 square feet). This example is based on soils which pose slight problems for on-site waste disposal systems.
 - a. For a multi-family dwelling containing less than five (5) dwelling units, the area of land required per bedroom in excess of two (2) may be reduced as follows: For multi-family dwellings containing four (4) dwellings units -- 4,000 square feet per bedroom; for multi-family dwellings containing three (3) dwelling units -- 3,000 square feet per bedroom; for multi-family dwellings containing two (2) dwelling units -- 2,000 square feet per bedroom. A multi-family dwelling containing in excess of three (3) bedrooms per dwelling unit shall require 5,000 square feet per bedroom in excess of two (2).
7. Per Site Plan approval as provided in Windham Site Plan Regulations.
8. Fifty (50) feet where abuts Residential District.
9. The minimum side yard for each multi-family dwelling shall be thirty (30) feet plus ten (10) feet for each additional dwelling unit in excess of one (1). (See Table of Requirements Minimum Side Yard.)
10. The minimum rear yard for each multi-family dwelling shall be thirty (30) feet plus ten (10) feet for each additional dwelling unit in excess of one.
11. Residence A Single-Family Dwelling -- Minimum Floor Area = 1,000 square ft.
Residence B Single-Family Dwelling -- Minimum Floor Area = 750 square feet.
Residence C Single-Family Dwelling -- Minimum Floor Area = 600 square feet.

1989

TABLE OF REQUIREMENTS

DISTRICT	MIN LOT FRONTAGE IN FEET (2)*	MIN FRONT YARD IN FEET (3)*	MIN SIDE YARD IN FEET (4)*	MIN REAR YARD IN FEET	MAX % BLDG. COVER- AGE OF LOT	MIN FLOOR PER DWELLING IN SQ. FT.
WETLAND & WATERSHED PROTECTION	SEE SECTION VI-A					
RURAL	175	50	30	30	20%	1,000
RES. A, B, C SINGLE FAMILY DWELLINGS (5)*	175	50	30	30	20%	RES. A=1000 RES. B=750 RES. C=600
RES. B MULTI-FAM. DWELLING (6)* & (7)*	175 PLUS 30 FOR EACH ADD'L DWELLING	50(7)*	30 PLUS 10 FOR EACH ADD'L DWELLING	30 PLUS 10 FOR EACH ADD'L DWELLING	20%	750 FOR EACH DWELLING UNIT
NEIGHBORHOOD BUSINESS (7)*	175	50	30	30	30%	
BUSINESS COMMERCIAL A, B, C, (7)*	175	75	20(8)*	30(8)*	30%	
LIMITED INDUSTRIAL (7)*	175	50	20(8)*	30(8)*	30%	

MINIMUM LOT AREA SEE NOTE #1

NOTES FOR TABLE

1. Wetlands of a lot shall not be computed as part of the lot area. Minimum land area requirements for all districts shall be computed based on soil types as required in Table of Requirements Minimum Lot Area by soil type. Whenever a lot contains soils having two or more types of soil which pose different degrees of problems for on-site waste disposal systems, the minimum land area shall be computed by reference to the percentage of the total usable lot taken up by each soil type.

Whenever a lot contains multiple soils with two or three different degrees of limitation for on-site waste disposal systems, the leachfield shall, whenever possible, be located on the soils which pose the least degree of limitation for the system. When computing minimum land areas under this Section, wetlands, flood plains, exposed ledge, easements except slope easements, and slopes greater than 25% shall not be counted.

When it has been determined that a lot has two or more slope types, the same method shall be used to determine the lot area as is used when the lot has two or more soil types. On lots with slope types C or greater, driveway profiles of the fire 100 feet shall be provided. (See Windham Subdivision Regulations as amended.)

2. Said measurement shall be taken at a point fifty (50) feet from the nearest front lot line.
 - a. Private roads may be allowed to satisfy frontage requirements in Residence B District. Minimum standards for such private roads shall be Town Specifications, except that the width may vary according to traffic needs.
3. Providing that any residential front yard need only be the average of the depths of the front yards of the abutting lots; the front yards of the abutting vacant lots shall be considered to have the minimum permitted.
4. Except that in the case of a lot having frontage on two (2) streets, the front yard requirements apply to the side of the structure on street frontage as well as to the front.
 - a. In Residence B District, there shall be forty (40) feet minimum distance between multi-family dwellings.
5. Lot requirements in Residence C District pertain to each mobile home park.

6.

For each multi-family dwelling, 5,000 square feet of land area shall be added to the lot area for each bedroom in excess of two (2). For example: Each multi-family dwelling containing six two-bedroom dwelling units would be required to have a minimum of 100,000 square feet (i.e., 50,000 square feet plus 5,000 square feet for each bedroom in excess of two (2), or 50,000 square feet for a total minimum land area of 100,000 square feet. This example is based on soils which pose slight problems for on-site waste disposal systems.

- a. For a multi-family dwelling containing less than five (5) dwelling units, the area of land required per bedroom in excess of two (2) may be reduced as follows: For multi-family dwellings containing four (4) dwelling units, 4,000 square feet per bedroom; for multi-family dwellings containing three (3) dwelling units, 3,000 square feet per bedroom; for multi-family dwellings containing two (2) dwelling units, 2,000 square feet per bedroom. A multi-family dwelling containing in excess of three (3) bedrooms per dwelling unit shall require 5,000 square feet per bedroom in excess of two (2).
7. Per Site Plan approval as provided in Windham Site Plan Regulations.
8. Fifty (50) feet where abuts Residential District.
9. The minimum side yard for each multi-family dwelling shall be thirty (30) feet plus ten (10) feet for each additional dwelling unit in excess of one (1). (See Table of Requirements Minimum Side Yard.)
10. The minimum rear yard for each multi-family dwelling shall be thirty (30) feet plus ten (10) feet for each additional dwelling unit in excess on one.
11. Residence A Single-Family Dwelling--- Minimum Floor Area= 1,000 square feet.

Residence B Single-Family Dwelling---Minimum Floor Area= 750 square feet.

Residence C Single-Family---Minimum Floor Area= 600 square feet.

APPENDIX A-1:

TABLE OF REQUIREMENTS (9, 12)

District	Min. Lot Frontage in feet <i>Footnote (2)</i>	Min. Front Yard in feet <i>Footnote (3)(4) (16)</i>	Min. Side Yard in feet <i>Footnote (4)(12)</i>	Min. Rear Yard in feet <i>Footnote (12)</i>	Max. % Bldg. Coverage of lot <i>Footnote (15)</i>	Min Floor Area Per Dwelling in sq. feet
Single Family Dwellings						
Rural District	175	50	30 (11)	30 (11)	20%	1,000
Res. A District	175	50	30	30	20%	1,000
Res. B District (5)	175 plus 30' for each additional dwelling unit	50	30 plus 10' for each additional dwelling unit (7)	30 plus 10' for each additional dwelling unit (8)	20%	750
Res. C District (5)	175 plus 30' for each additional dwelling unit	50	30 plus 10' for each additional dwelling unit (7)	30 plus 10' for each additional dwelling unit (8)	20%	750
Neighborhood Business District	175	50	30	30	30%	0
Gateway Commercial District	50	0 (13)	0 (14)	0 (14)	70%	0
Business Commercial A and B Districts	175	75	20 (6)	30 (6)	30%	0
Limited Industrial District	175	50	20 (6)	30 (6)	30%	0
Village Center District	50	30	20	0	100%	0
Professional, Business, and Technology District	175	50	20 (6)	30 (6)	30%	0

Minimum Lot Area See Note #1

301 NOTES FOR TABLE:

1. Wetlands of a lot shall not be computed as part of the lot area. Minimum land area requirements for all districts shall be computed based on soil types as required in Table of Requirements Minimum Lot Area by soil type. Whenever a lot contains soils having two or more types of soil which pose different degrees of problems for on-site waste disposal systems, the minimum land area shall be computed by reference to the percentage of the total usable lot taken up by each soil type.

Whenever a lot contains multiple soils with two or three different degrees of limitation for on-site waste disposal systems, the leach field shall, whenever possible, be located on the soils which pose the least degree of limitation for the system. When computing minimum land areas under this Section, wetlands, flood plains, exposed ledge, easements except slope easements, and slopes greater than 25% shall not be counted.

When it has been determined that a lot has two or more slope types, the same method shall be used to determine the lot area as is used when the lot has two or more soil types. On lots with slope types C or greater, driveway profiles of the first 100 feet shall be provided. (See Windham Subdivision Regulations as amended.)

2. Said measurement shall be taken at a point fifty (50) feet from the nearest front lot line.
 - 2.1. Private roads may be allowed to satisfy frontage requirements in Residence B District. Minimum standards for such private roads shall be Town Specifications, except that the width may vary according to traffic needs.
3. Providing that any residential front yard need only be the average of the depths of the front yards of the abutting lots; the front yards of the abutting vacant lots shall be considered to have the minimum permitted.
4. In the case of a corner lot, all front lot lines shall be subject to the minimum front yard requirements, and the remaining lot lines shall be considered side lot lines subject to the minimum side yard requirements.
 - 4.1 In Residence B and Residence C Districts, when there is more than one (1) structure containing dwelling units on a lot, there shall be forty (40) feet minimum distance between such structures.

5. The following modifications to the "base" lot size (See Note #1) shall be made when dealing with multifamily or duplex dwellings:

5.1 For each multifamily dwelling, 5,000 square feet of land area shall be added to the lot area for each bedroom in excess of two (2). For example: Each multifamily dwelling containing six two-bedroom dwelling units would be required to have a minimum of 100,000 square feet (i.e., 50,000 square feet plus 5,000 square feet for each bedroom in excess of two (2)), or 50,000 square feet for a total minimum land area of 100,000 square feet. This example is based on soils which pose slight problems for on-site waste disposal systems.

5.2 For a multifamily dwelling containing less than five (5) dwelling units, the area of land required per bedroom in excess of two (2) may be reduced as follows: For multifamily dwellings containing four (4) dwelling units, 4,000 square feet per bedroom; for multifamily dwellings containing three (3) dwelling units, 3,000 square feet per bedroom. A multifamily dwelling containing in excess of three (3) bedrooms per dwelling unit shall require 5,000 square feet per bedroom in excess of two (2).

5.3 For duplex dwellings, 2,000 square feet of land area shall be added for each bedroom in excess of two (2), provided further that if any unit in a duplex contains in excess of three (3) bedrooms, such unit shall require an additional 5,000 square feet per bedroom over three (3).

6. Fifty (50) feet where abuts Residential District.
7. The minimum side yard for each duplex or multifamily dwellings shall be thirty (30) feet plus ten (10) feet for each additional dwelling unit in excess of one (1). (See Table of Requirements Minimum Side Yard.)
8. The minimum rear yard for each duplex or multifamily dwellings shall be thirty (30) feet plus ten (10) feet for each additional dwelling unit in excess of one (1).
9. If a non-residential use (building, parking area, or driveway) is proposed closer than 100' from a residential zoning district, a vegetative buffer or earthen berm 50' wide must be provided, which will provide screening for the residential use."
10. Intentionally omitted
11. For uses other than residential in the Rural District, there shall be one-hundred (100) feet where abuts a residentially developed area.
12. Except that the minimum shoreland setback in non-WWPD areas for non-accessory buildings shall be fifty (50) feet from the reference line (Reference Line: For natural fresh water bodies = natural mean high water level; For artificially impounded fresh water bodies = water line at full pond).
13. A minimum setback from Range Road and Route 111 and Route 111A shall be fifty feet (50').
14. A minimum fifty-foot (50') landscaped buffer shall be required on any lot line where the abutting parcel is not situated within the Gateway Commercial District.
15. Building coverage of lot shall only measure those buildings that have a roof and any attached and detached accessory buildings.
16. A front setback of 50 ft. shall be required from Route 111

MIMIMUM LOT AREA BY SOIL TYPE

NOTE: The following may not be a complete list of soil types in Windham. Contact the Soil Conservation Service or the Rockingham County Conservation District for assistance. The minimum lot area shall be 50,000 square feet and shall contain 30,000 square feet of contiguous area, except as defined in the Village Center District and the Open Space Residential Overlay District. The 30,000 square feet of contiguous area shall not include wetlands, the Wetland Watershed Protection District, or drainage easements. The area within the 30,000 square feet shall accommodate a minimum rectangular area of 10,000 square feet with a minimum dimension of 100 feet. The Planning Board may approve areas meeting the required area even though they do not meet the rectangular requirement. The principal structure shall be located entirely in the 10,000 square foot area. The Planning Board can allow the 10,000 square foot area to be located outside the 30,000 square foot area when the Board determines that the purpose of this ordinance would be better served with the required area in another location.

SOIL TYPE	LOT SIZE	SOIL TYPE	LOT SIZE	SOIL TYPE	LOT SIZE
111BH	50000	111CH	55000	111DH	75000
111EH	NA	112BH	95000	112CH	100000
112DH	120000	112EH	NA	114*	NA
11XBH	100000	11XCH	125000	11XDH	160000
11XEH	NA	121BH	50000	121CH	55000
121DH	75000	121EH	NA	122BH	95000
112CH	100000	122DH	120000	122EH	NA
124*H	NA	12XBH	100000	12XCH	125000
12XDH	160000	12XEH	NA	161BH	60000
161CH	70000	161DH	90000	161EH	NA
164*H	NA	166*H	NA	16XBH	110000
16XCH	140000	16XDH	160000	16XEH	NA
211BH	50000	211CH	55000	211DH	75000
211EH	NA	21XCH	125000	212BH	95000
212CH	100000	212DH	120000	212EH	NA
213BH	60000	213CH	95000	213DH	125000
213EH	NA	214*H	NA	21XBH	100000
21XDH	160000	21XEH	NA	221BH	50000
221CH	55000	221DH	75000	221EH	NA
222BH	95000	222CH	100000	222DH	120000
222EH	NA	223BH	60000	223CH	95000
223DH	125000	223EH	NA	224*H	NA
22XBH	100000	22XCH	125000	22XDH	160000
22XEH	NA	231BH	50000	231CH	55000
231DH	75000	231EH	NA	233BH	60000
233CH	95000	233DH	125000	233EH	NA
234*H	NA	23XBH	100000	23XCH	125000
23DXH	160000	23XEH	NA	241BH	60000
241CH	95000	241DH	125000	241EH	NA
243BH	60000	243CH	95000	243DH	125000
244*H	NA	24XBH	110000	24XCH	160000
24XDH	180000	24XEH	NA	251BH	110000
251CH	160000	251DH	160000	251EH	NA
253BH	110000	253CH	160000	253DH	160000

SOIL TYPE	LOT SIZE	SOIL TYPE	LOT SIZE	SOIL TYPE	LOT SIZE
253EH	NA	254*H	NA	25XBH	160000
25XCH	190000	25XDH	240000	25XEH	NA
261BH	60000	261CH	70000	261DH	90000
261EH	NA	263BH	75000	263CH	105000
263DH	140000	263EH	NA	264*H	NA
266*H	NA	26XBH	110000	26XCH	140000
26XDH	160000	26XEH	NA	275*H	NA
311BH	75000	311CH	110000	311DH	150000
311EH	NA	312BH	120000	312CH	155000
312DH	160000	312EH	NA	313BH	75000
313CH	110000	313DH	150000	313EH	NA
314*H	NA	31XBH	125000	31XCH	150000
31XDH	160000	31XEH	NA	321BH	60000
321CH	95000	321DH	125000	321EH	NA
322BH	105000	322CH	125000	322DH	160000
322EH	NA	323BH	75000	323CH	110000
323DH	150000	323EH	NA	324*H	NA
32XBH	125000	32XCH	150000	32XDH	160000
32XEH	NA	331BH	95000	331CH	125000
331DH	155000	331EH	NA	333BH	95000
333CH	125000	333DH	155000	333EH	NA
33XBH	145000	33XCH	160000	33XDH	205000
33XEH	NA	334*H	NA	341BH	95000
341CH	125000	341DH	155000	341EH	NA
343BH	95000	343CH	125000	343DH	155000
343EH	NA	344*H	NA	34XBH	145000
34XCH	160000	34XDH	205000	34XEH	NA
351BH	110000	351CH	160000	351DH	160000
351EH	NA	353BH	110000	353CH	160000
353DH	160000	353EH	NA	354*H	NA
35XBH	160000	35XCH	190000	35XDH	240000
35XEH	NA	361BH	90000	361CH	125000
361DH	160000	361EH	NA	363BH	90000
363CH	125000	363DH	160000	363EH	NA
364*H	NA	366*H	NA	36XBH	140000
36XCH	160000	36XDH	170000	36XEH	NA
375*H	NA	411BH	110000	411CH	160000
412BH	160000	412CH	190000	413BH	110000
413CH	160000	414*H	NA	41XBH	160000
41XCH	180000	421BH	95000	421CH	145000
422BH	160000	422CH	165000	423BH	110000
423CH	160000	424*H	NA	42XBH	160000
42XCH	180000	431BH	145000	431CH	160000
433BH	145000	433CH	160000	434*H	NA
43XBH	175000	43XCH	235000	441BH	145000
441CH	160000	443BH	145000	443CH	160000
444*H	NA	44XBH	175000	44XCH	235000
451BH	160000	251CH	205000	453BH	160000
453CH	205000	454*H	NA	45XBH	195000
45XCH	285000	461BH	130000	461CH	16000
463BH	130000	463CH	160000	464*H	NA
466*H	NA	46XBH	165000	46XCH	195000

APPENDIX TO SECTION 601.2.1

1. Bogs are underlain by peat or muck deposits of significant depths and are characterized by a distinct group of trees and plants which are adapted to the bog's highly acidic conditions. The water in a bog is practically devoid of oxygen and nutrients. Bogs usually develop in undrained glacial depressions.
 - 1.1. Typical of the bog are: Sphagnum Moss (*Sphagnum*); Cotton grass *Eriophorum* spp.; Bog rosemary (*Andromeda Glaucophylla*); Leather leaf (*Chamaedaphne Calyculata*); Bog laurel (*Kalmia polifolia*); Pitcher plant (*Sarracenia purpurea*); Sundews (*Drosera* spp.); Cranberries (*Vaccinium oxycoccus* and *V. macrocarpon*); Sweet Gale (*Myrica gale*); Bogbean or Buckbean (*Menyanthes trifoliata*); Bladderworts (*Urticularia* spp.); Black Spruce (*Picea mariana*); Larch or Tamarack (*Larix laricina*).
2. Marshes are treeless wetlands dominated by soft stemmed herbaceous plants. The surface of the marsh is covered with water though seasonal fluctuations in water depth are expected. Marshes range from the wet meadows variety to deep marshes which can be covered with several feet of water.
 - 2.1. Typical plants of the marsh are: Bur reeds (*Sparganiaceae*); Sedges, including bulrushes, cotton grasses and wool grasses (*Cyperaceae*); Rushes (*Junca*-*ceae*); Cat tails (*Typhaceae*); Arums (*Araceae*); Smart weeds (*Polygonum* spp); Hydrophyllous grasses (*Gramineae*); Frog's bits (*Hydrocharitaceae*); Pickerel-weeds (*Pontederia* spp.); Water lilies (*Nymphaeaceae*); Duckweeds (*Lemnaceae*).
3. Swamps are dominated by trees and shrubs. The water table is at or near the ground surface for a significant part of the year.
 - 3.1. Typical plants of swamps are: Red maple (*Acer rubrum*); Black ash (*Fraxinus nigra*); Willows (*Salix* spp.); Alders (*Alnus* spp.); Black Gum (*Nyssa sylvatica*); Common Elder (*Sambucus canadensis*); Winterberry (*Ilex verticillata*); Marsh rose (*Rosa palustris*); Arrow wood (*Viburnum recognitum*); Wood reedgrasses (*Cinna* spp.); Skunk cabbage (*Symplocarpus foetidus*); Marsh marigold (*Caltha palustris*); Button bush (*Cephalanthus occidentalis*); White hellebore (*Veratrum viride*).