

SOILS OF MIDDLESEX COUNTY

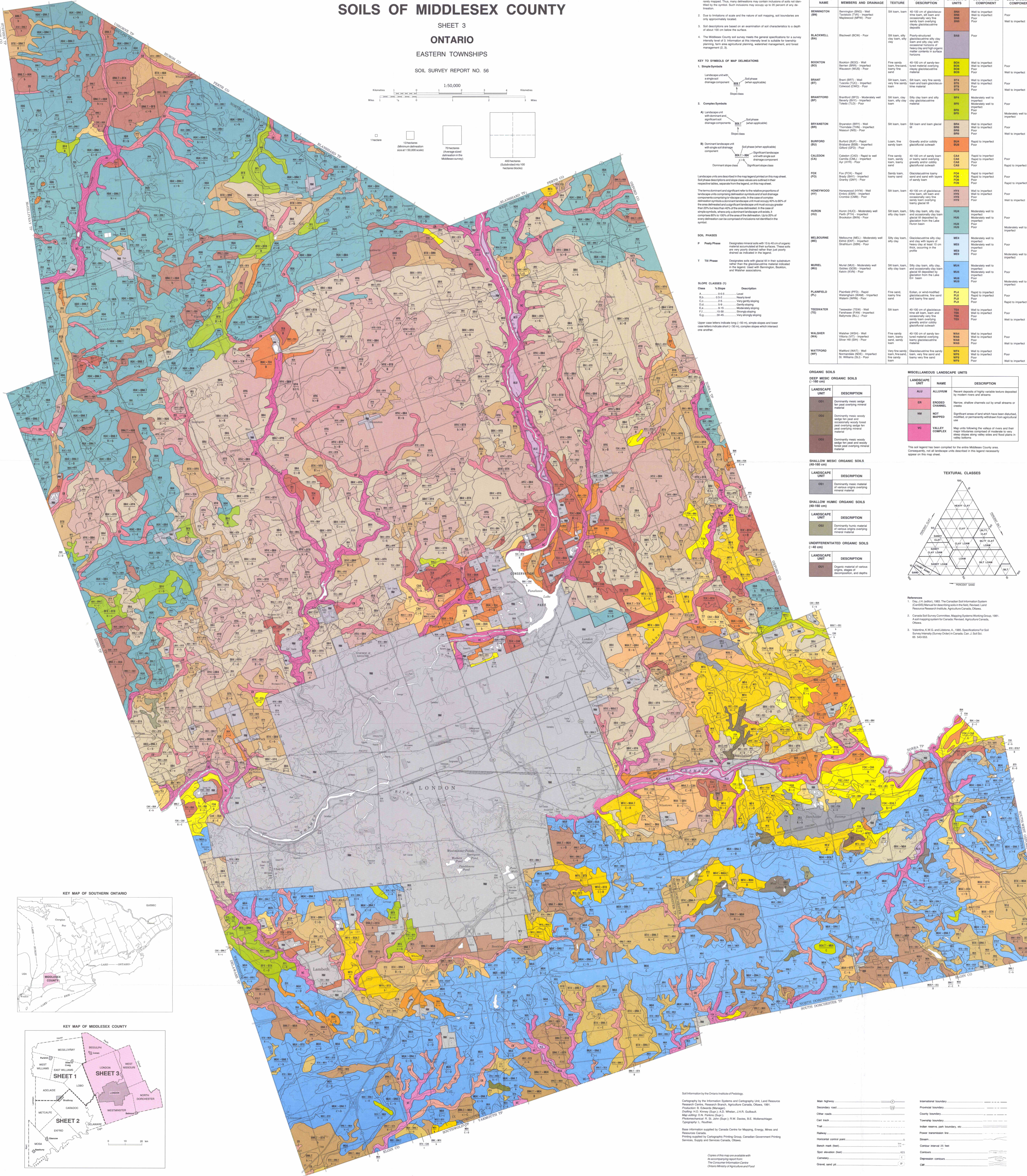
SHEET 3

ONTARIO

EASTERN TOWNSHIPS

SOIL SURVEY REPORT NO. 56

1:50,000



1. Due to limitations of scale and soil areas smaller than 15 hectares (37 acres) were not mapped. This, and other limitations, are noted in the accompanying report.

2. Due to limitations of scale and the nature of soil mapping, soil boundaries are only approximately located.

3. Soil descriptions are based on an examination of soil characteristics to a depth of about 100 cm below the surface.

4. The Middlesex County soil survey needs the general characteristics for a survey sheet of 3. Information at this level is suitable for mapping, planning, farm use, agricultural planning, watershed management, and forest management.

KEY TO SYMBOLS OF MAP DELINEATIONS

1. Landscape unit with drainage component
[Symbol] (where applicable)
[Symbol] (where applicable)
[Symbol] (where applicable)

2. Complete Symbols

A) Landscape unit with drainage component
[Symbol] (where applicable)
[Symbol] (where applicable)
[Symbol] (where applicable)
Dominant aspect: [Symbol]

B) Dominant landscape unit with drainage component
[Symbol] (where applicable)
[Symbol] (where applicable)
[Symbol] (where applicable)
Dominant aspect: [Symbol]

SOIL PHASES

M Describes mineral soils with 15 to 40 cm of organic material in the top 100 cm of soil. These soils are very poorly drained or are just poorly drained as indicated in the legend.

T Till Phase Describes soils with greater than 15 cm of organic material in the top 100 cm of soil. These soils are very poorly drained or are just poorly drained as indicated in the legend.

SLOPE CLASSES (1)

Class	% Slope	Description
A	0-3	Very level
B	3-5	Level
C	5-8	Slightly rising
D	8-15	Rising
E	15-30	Strong rising
F	30-50	Very strong rising

Upper case letters indicate long (10-40 m), single slopes and lower case letters indicate short (1-10 m), complex slopes which intersect one another.

ORGANIC SOILS

DEEP MESSIC ORGANIC SOILS (10-100 cm)

LANDSCAPE UNIT	DESCRIPTION
OS1	Dominantly moss sedge peat with underlying mineral material
OS2	Dominantly moss woody sedge peat with underlying mineral material
OS3	Dominantly moss woody sedge peat with underlying mineral material

SHALLOW MESSIC ORGANIC SOILS (40-100 cm)

LANDSCAPE UNIT	DESCRIPTION
OS4	Dominantly moss sedge peat with underlying mineral material
OS5	Dominantly moss woody sedge peat with underlying mineral material

SHALLOW HUMIC ORGANIC SOILS (40-100 cm)

LANDSCAPE UNIT	DESCRIPTION
OS6	Dominantly humic material of various origins overlying mineral material

UNDIFFERENTIATED ORGANIC SOILS (1-40 cm)

LANDSCAPE UNIT	DESCRIPTION
OS7	Organic material of various origins overlying mineral material

MISCELLANEOUS LANDSCAPE UNITS

LANDSCAPE UNIT	NAME	DESCRIPTION
ALLU	ALLUVIUM	Recent deposits of highly variable texture deposited by modern rivers and streams
ERD	ERODIBLE CHANNEL	Narrow, shallow channels cut by small streams or creeks
MAP	MAPPED	Significant areas of which have been delineated, mapped or permanently withdrawn from agricultural use
VAL	VALLEY COMPLEX	Major valleys of which have been delineated, mapped or permanently withdrawn from agricultural use

The soil legend has been compiled for the entire Middlesex County area. Consequently, not all landscape units described in the legend necessarily appear on the map sheet.

TEXTURAL CLASSES

References:

1. Doolittle, J.H., 1963. The Canadian Soil Information System. Canadian Council of Ministers of the Environment and Resource Research Institute, Agriculture Canada, Ottawa.
2. Canada Soil Survey Committee. Mapping Systems Working Group, 1981. A soil mapping system for Canada. Research Institute, Agriculture Canada, Ottawa.
3. Valeriak, W.W., and Lobb, A., 1989. Specifications for Soil Survey Mapping. Survey Report No. 10, Agriculture Canada, Ottawa.

Soil information supplied by Canada Centre for Mapping, Energy, Mines and Resources Canada.
Photos supplied by Cartographic Printing Group, Canadian Government Printing Services, Supply and Services Canada, Ottawa.

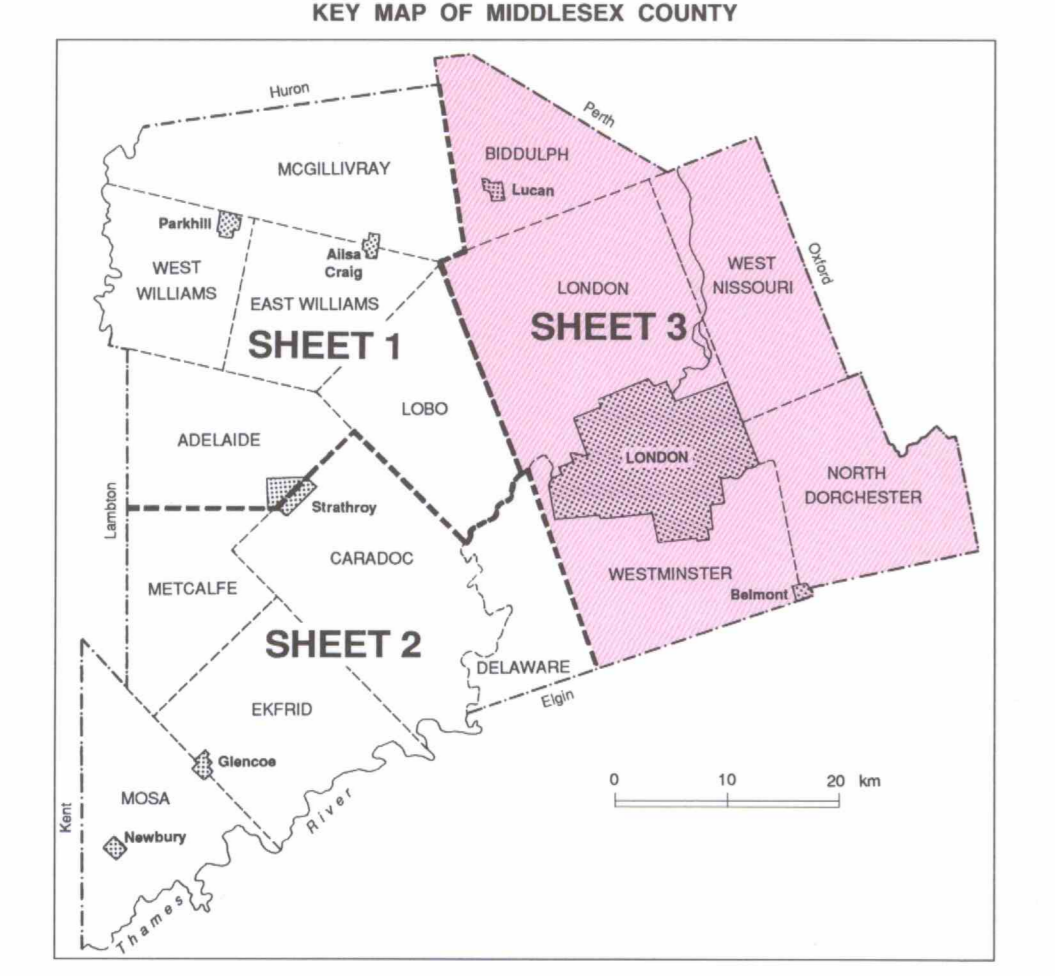
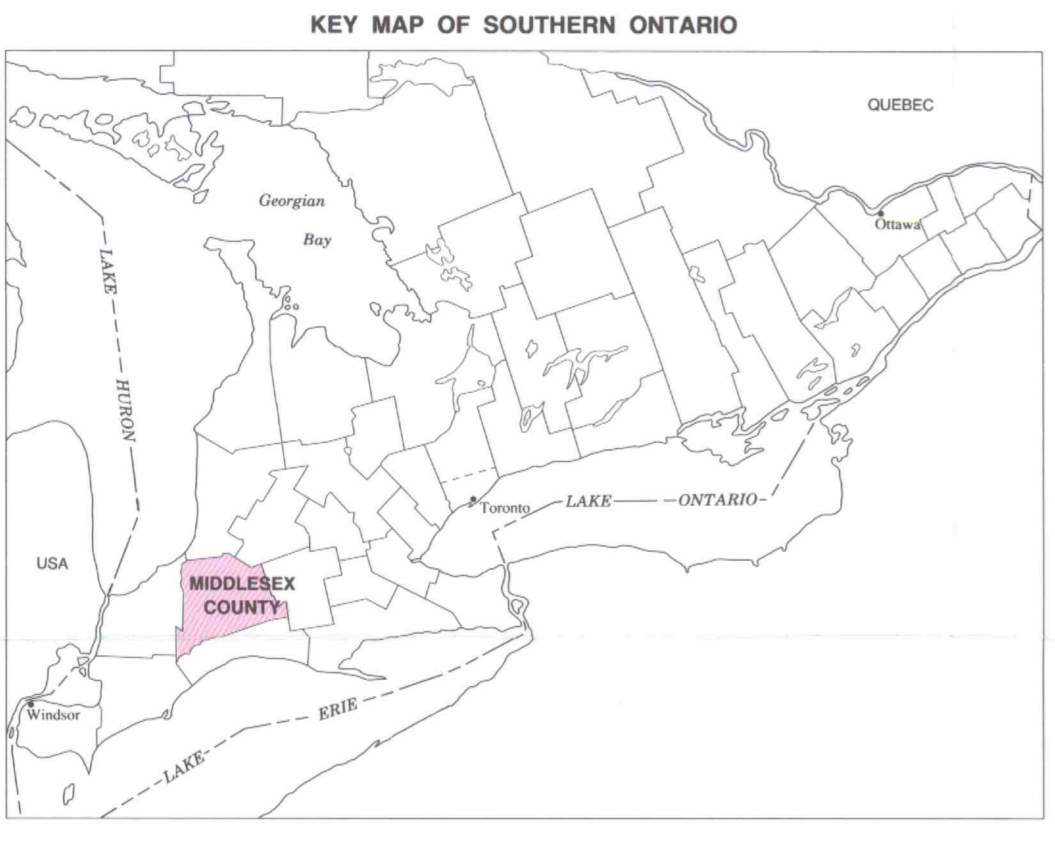
Cartography by the Information Systems and Cartography Unit, Land Resource Research Centre, Research Institute, Agriculture Canada, Ottawa.
Production: B. Edwards (Design);
Dariusz W. Kowalski (Graphic Design);
Pharmaceutical, R. St. John (Map); R.W. Davies, B.E. Wolstenholme (Topography); J. Gauthier.

Base information supplied by Canada Centre for Mapping, Energy, Mines and Resources Canada.
Photos supplied by Cartographic Printing Group, Canadian Government Printing Services, Supply and Services Canada, Ottawa.

Consent of the map is hereby granted with an accompanying report.
The Government of Ontario
Ontario Ministry of Agriculture and Food

Map Symbols:
Main highway: [Symbol]
Boundary road: [Symbol]
Other road: [Symbol]
Cart track: [Symbol]
Trail: [Symbol]
Power transmission line: [Symbol]
High-voltage power line: [Symbol]
Rural road: [Symbol]
Spot elevation (spot): [Symbol]
Contour: [Symbol]
Depression contour: [Symbol]
Ground and spot: [Symbol]

International boundary: [Symbol]
Provincial boundary: [Symbol]
County boundary: [Symbol]
Township boundary: [Symbol]
Indian reserve, park boundary, etc.: [Symbol]
Water transmission line: [Symbol]
Canada interval 25 feet: [Symbol]
Contour: [Symbol]
Depression contour: [Symbol]
Ground and spot: [Symbol]



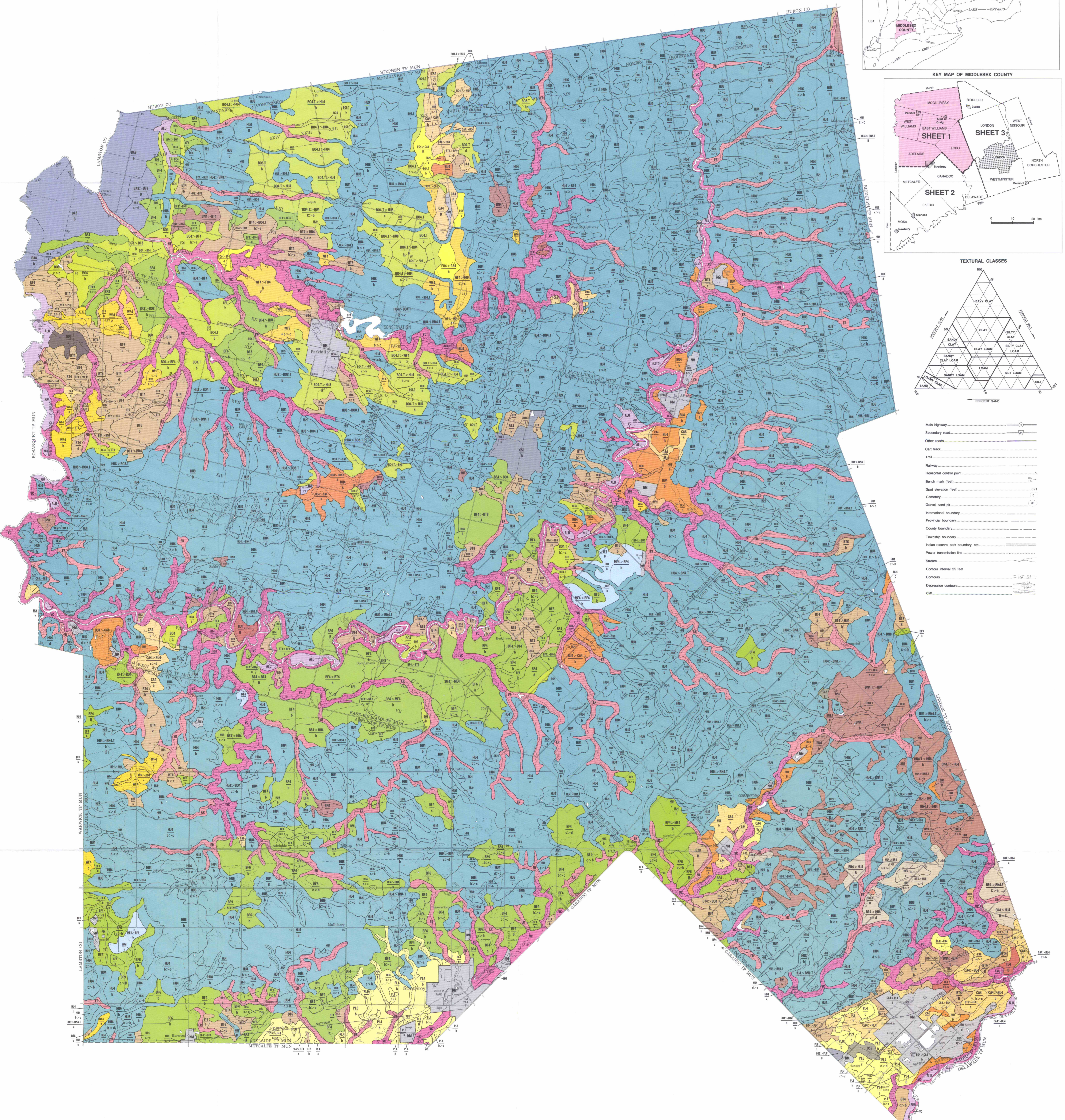
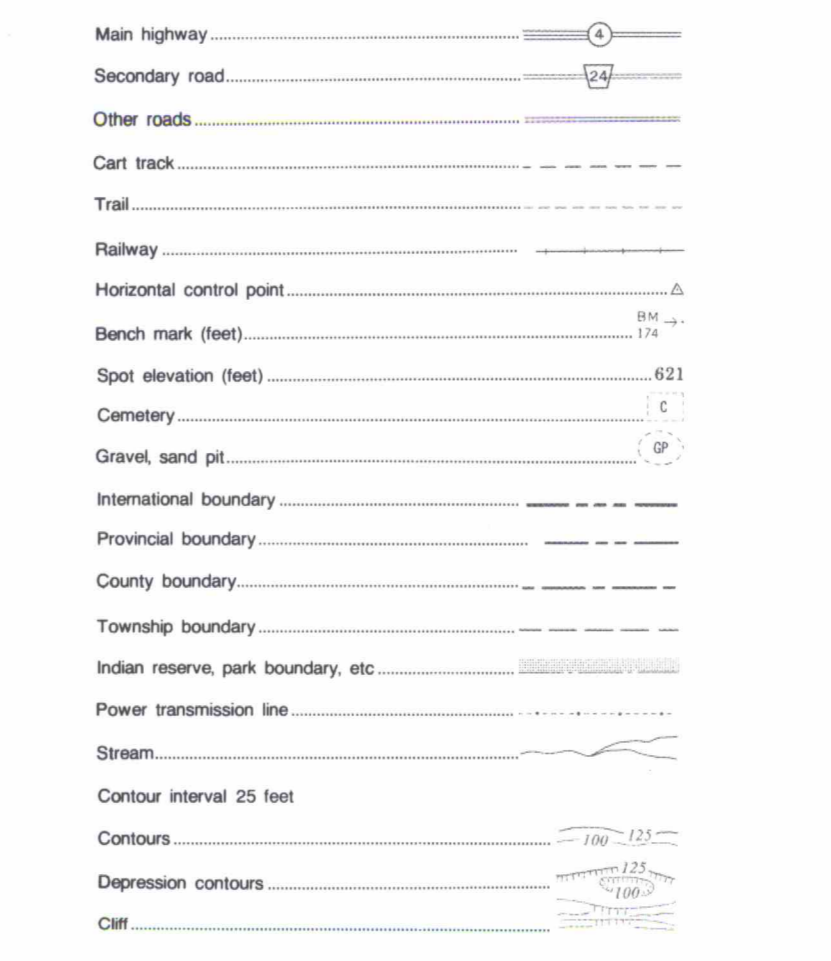
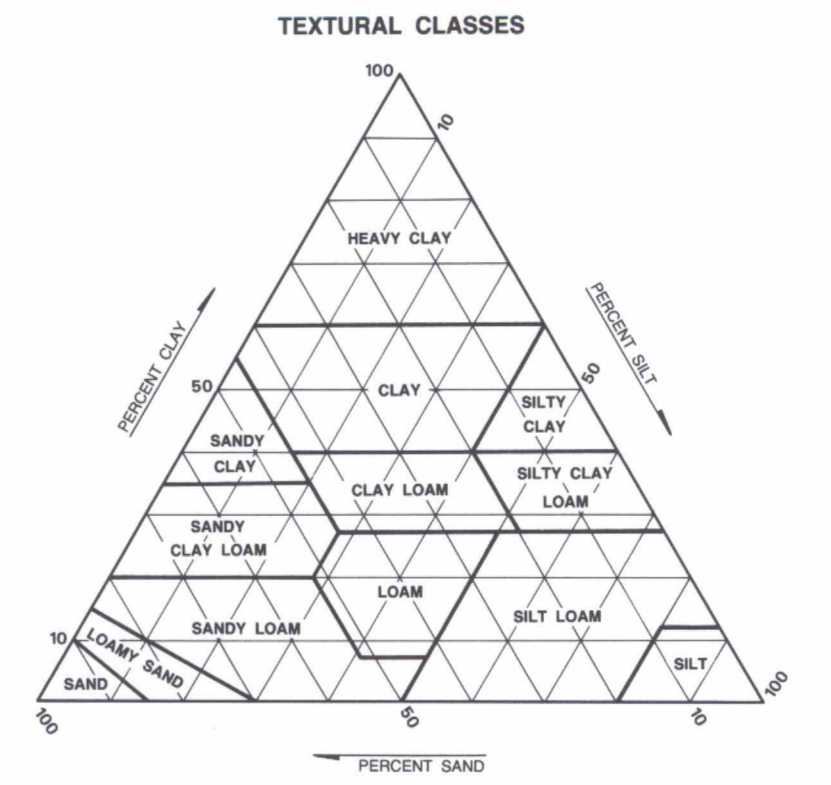
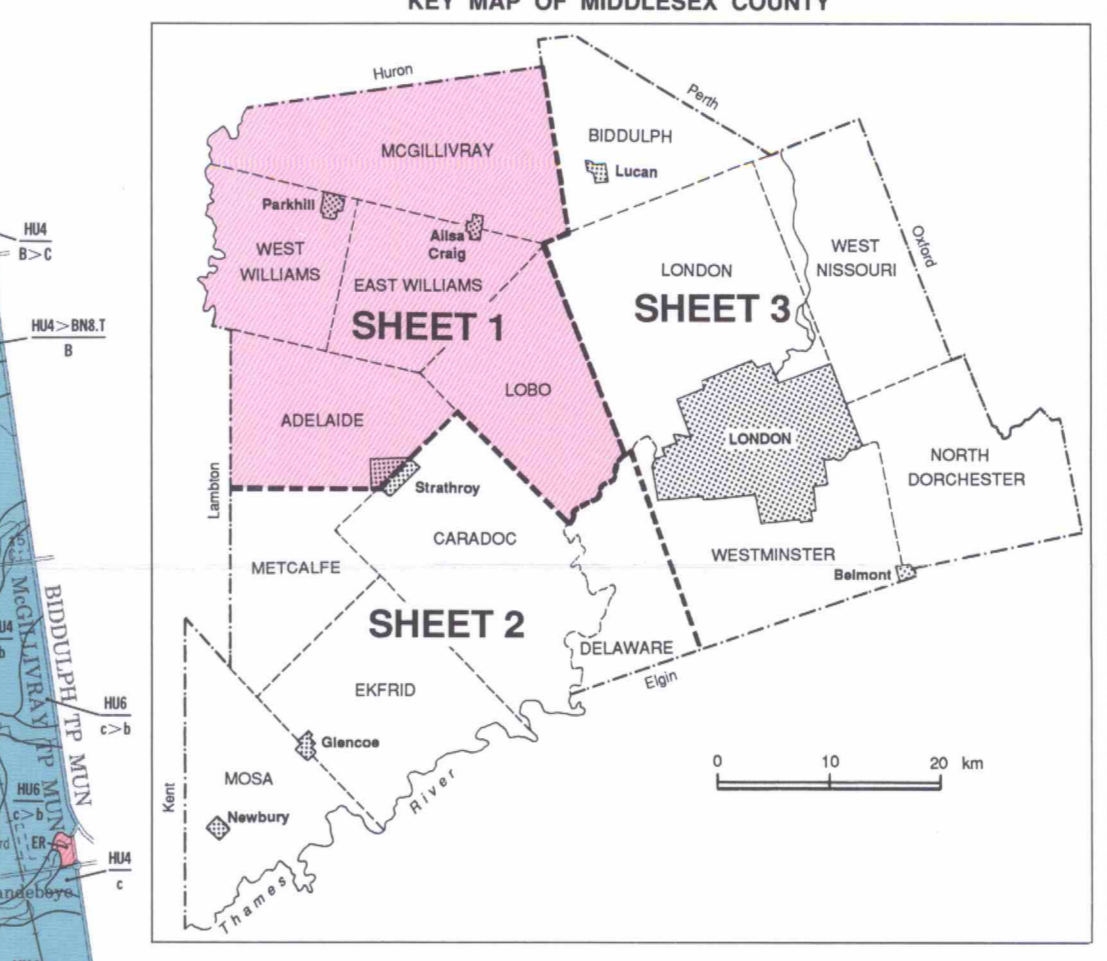
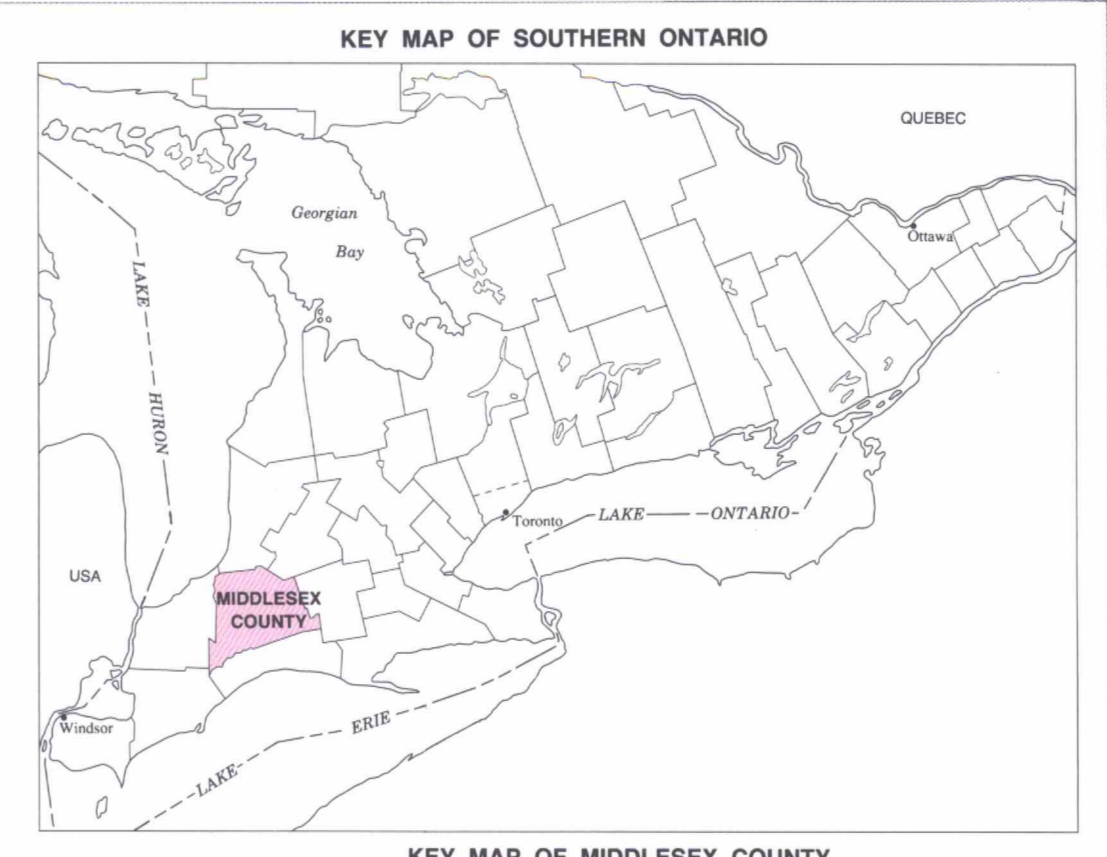
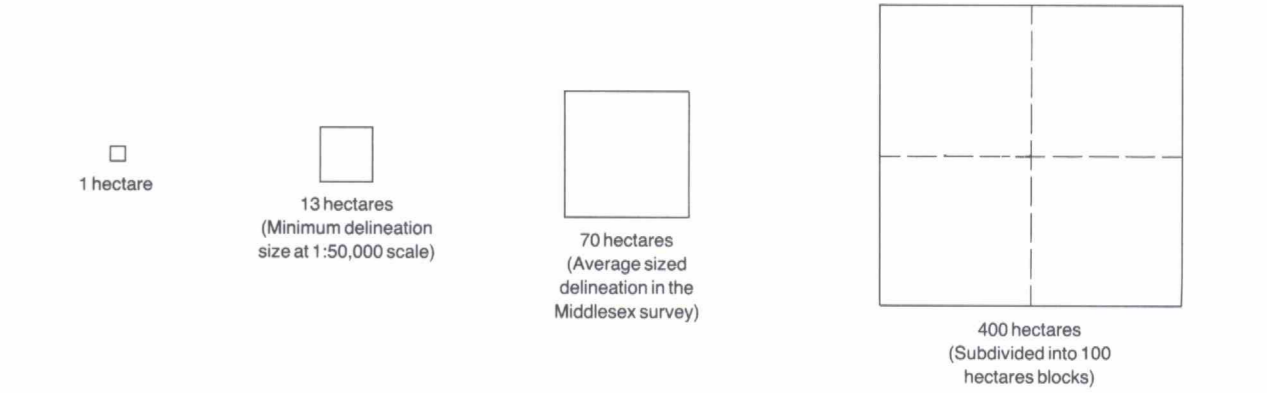
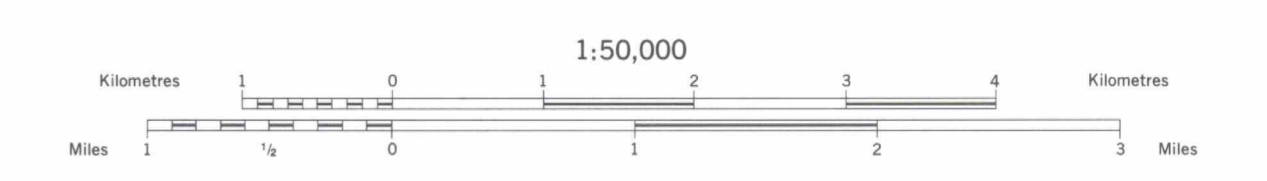


Table with 7 columns: SOIL ASSOCIATION NAME, SOIL ASSOCIATION MEMBERS AND DRAINAGE, URINAL SURFACE TEXTURE, SOIL MATERIAL DESCRIPTION, LANDSCAPE UNITS, DOMINANT SOIL DRAINAGE COMPONENT, SIGNIFICANT SOIL DRAINAGE COMPONENT. Lists various soil types like BENNINGTON, BLACKWELL, BOOKTON, etc.

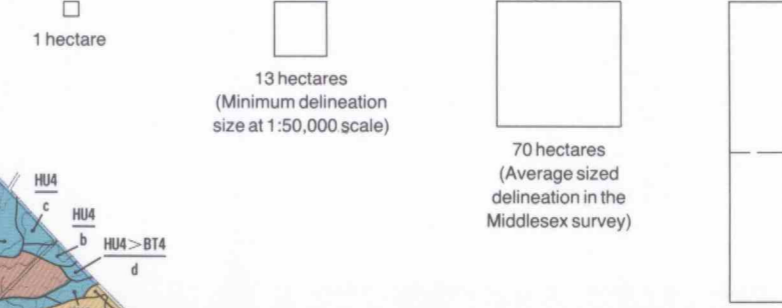
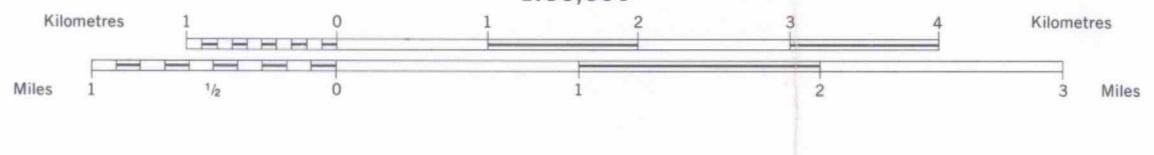
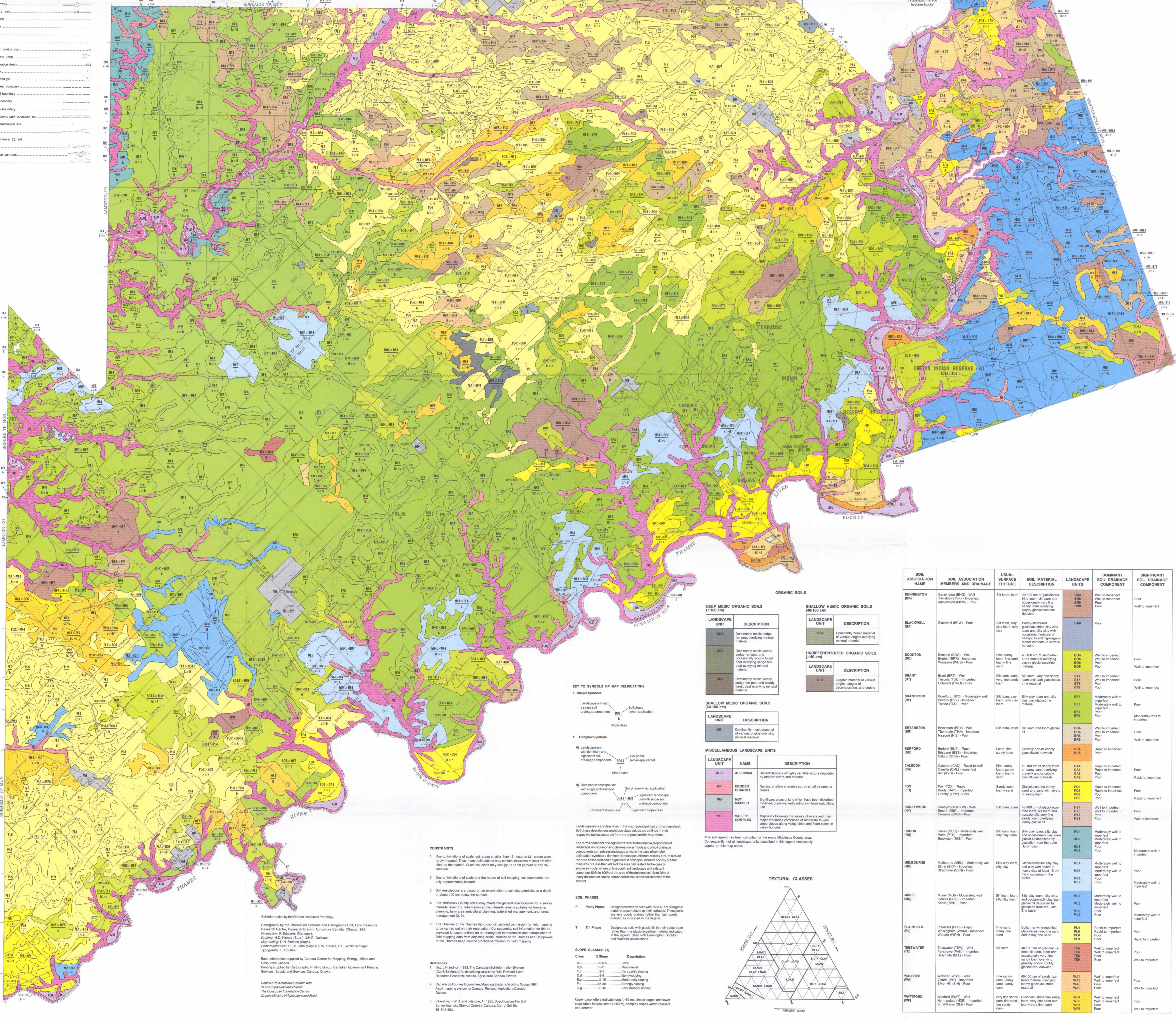
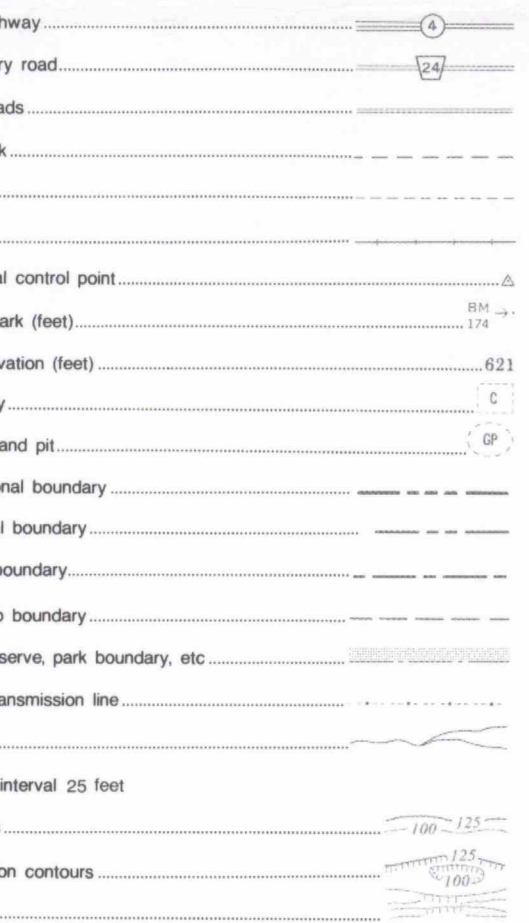
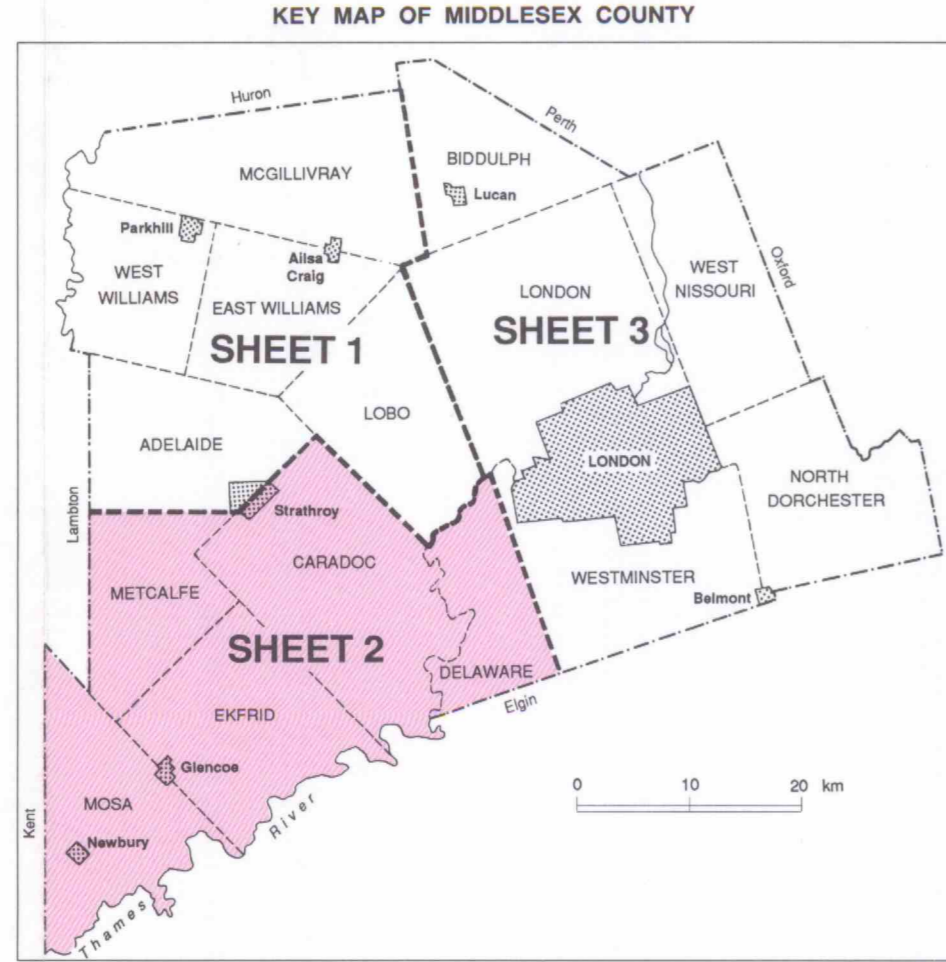
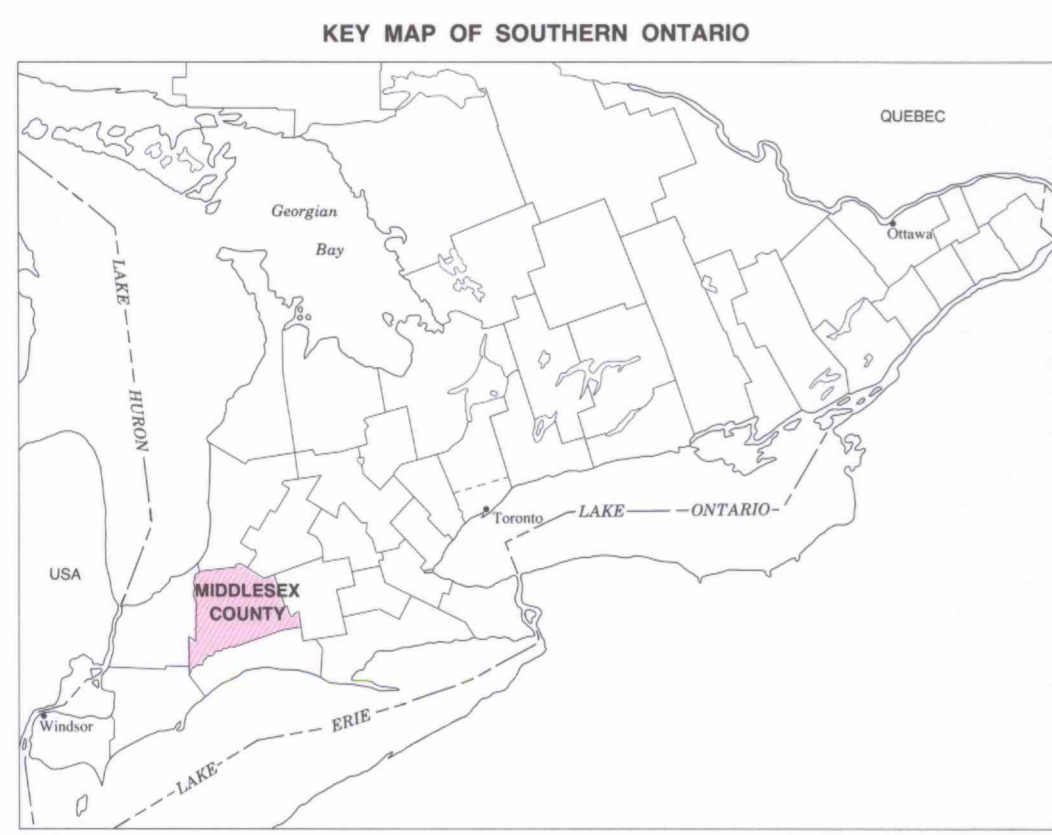
MISCELLANEOUS LANDSCAPE UNITS table with columns: LANDSCAPE UNIT, NAME, DESCRIPTION. Lists units like ALU, ENDED CHANNEL, etc.

SOIL PHASES table with columns: LANDSCAPE UNIT, DESCRIPTION. Lists phases like P Peaty Phase, T Till Phase.

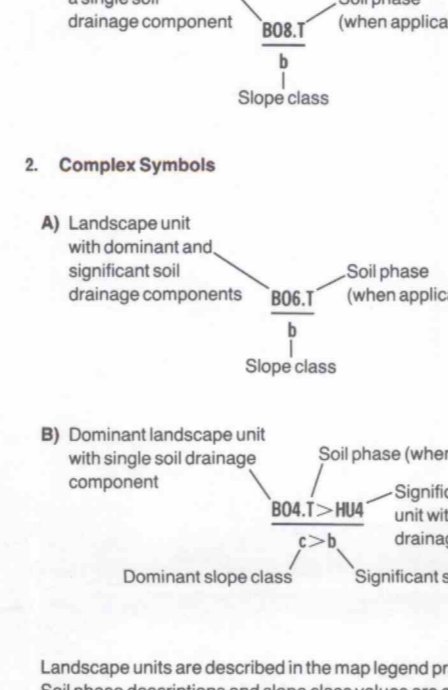
KEY TO SYMBOLS OF MAP DELINEATIONS, SOIL PHASES, REFERENCES, and other technical notes regarding the map's symbols and data sources.

SOILS OF MIDDLESEX COUNTY

SHEET 2
ONTARIO
SOUTHWESTERN TOWNSHIPS
SOIL SURVEY REPORT NO. 56



KEY TO SYMBOLS OF MAP DELINEATIONS



Landscape units are described in the map legend printed on this map sheet. Soil phase descriptions and slope class values are outlined in their respective tables, separated from the legend on this map sheet.

The terms dominant and significant refer to the relative proportions of landscape units comprising delineation symbols and of soil drainage components comprising landscape units. In the case of complex delineation symbols a dominant landscape unit must occupy 70% to 80% of the area delineated and a significant landscape unit must be greater than 20% the less than 40% of the area delineated. In the case of simple symbols, there is no dominant landscape unit and it comprises 80% to 100% of the area of the delineation. Up to 20% of every delineation may be composed of undifferentiated or not delineated soil.

CONTRIBUTORS

1. Due to limitations of scale, soil areas smaller than 13 hectares (32 acres) were rarely mapped. This many delineations may contain indications of soils not delineated by the symbol. Such indications may occupy up to 20 percent of any delineation.
2. Due to limitations of scale and the nature of soil mapping, soil boundaries are only approximately located.
3. Soil descriptions are based on an examination of soil characteristics to a depth of about 100 cm below the surface.
4. The Middlesex County soil survey meets the general specifications for a survey intensity level of 3. Information at this intensity level is suitable for township planning, farm area agricultural planning, watershed management, and forest management (2, 3).
5. The Ontario of the Thames band council declined permission for field mapping to be carried out in their substation. Consequently, soil information for this substation is based entirely on air photograph interpretation and extrapolation of field mapping data from adjoining areas. Many of the Thames and Chippewa of the Thames band council granted permission for field mapping.

SOIL PHASES

- P Peaty Phase: Desagregate mineral soils with 15 to 40 cm of organic material accumulated on their surface. These soils are very poorly drained rather than just poorly drained as indicated in the legend.
- T TB Phase: Desagregate soils with gleyic Bt in their subsoil rather than the gleyocretic material indicated in the legend. Used with Springbrook, Boddon, and Waterloo associations.

SOIL CLASSES (1)

Class	% Slope	Description
A	0.0-5.0	Level
B	5.0-10.0	Nearly level
C	10.0-15.0	Slightly sloping
D	15.0-20.0	Very slightly sloping
E	20.0-25.0	Gently sloping
F	25.0-30.0	Moderately sloping
G	30.0-35.0	Strongly sloping
H	35.0-40.0	Very strongly sloping

Upper class letters indicate long (1-50 m), steep slopes and lower class letters indicate short (<15 m), complete slopes which intersect one another.

DEEP MESSIC ORGANIC SOILS (140-180 cm)

LANDSCAPE UNIT	DESCRIPTION
OD1	Dominantly mesic wedge bed overlying mineral material
OD2	Dominantly mesic woody wedge bed overlying mineral material
OD3	Dominantly mesic woody wedge bed overlying forest peat overlying mineral material

SHALLOW HUMIC ORGANIC SOILS (40-140 cm)

LANDSCAPE UNIT	DESCRIPTION
OS1	Dominantly humic material of various organic overlying mineral material

SHALLOW MESSIC ORGANIC SOILS (40-140 cm)

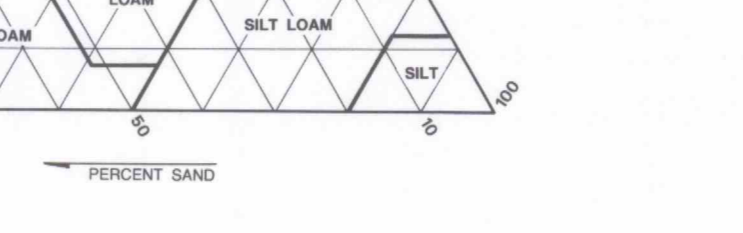
LANDSCAPE UNIT	DESCRIPTION
OS1	Dominantly mesic material of various organic overlying mineral material

MISCELLANEOUS LANDSCAPE UNITS

LANDSCAPE UNIT	NAME	DESCRIPTION
ALU	ALUMINUM	Recent deposits of highly variable texture deposited by modern rivers and streams
ER	ERODED CHANNEL	Narrow, shallow channels cut by small streams or creeks
NM	NOT MAPPED	Significant areas of land which have been disturbed, modified, or permanently withdrawn from agriculture
VC	VALLEY COMPLEX	Map units following the valleys of rivers and their tributaries composed of materials to which the soil moisture regime is not related to the soil moisture regime of the valley floor

This soil legend has been completed for the entire Middlesex County area. Consequently, not all landscape units depicted in this legend necessarily appear on the map sheet.

TEXTURAL CLASSES



SOIL ASSOCIATION NAME	SOIL ASSOCIATION MEMBERS AND DRAINAGE	USUAL SURFACE TEXTURE	SOIL MATERIAL DESCRIPTION	LANDSCAPE UNITS	DOMINANT SOIL DRAINAGE COMPONENT	SIGNIFICANT SOIL DRAINAGE COMPONENT
BENNINGTON (BN)	Bennington (BN) - Well drained (W) - Poor	Silt loam, loam	40-100 cm of glaucochthonic fine loam, silty clay and occasionally very fine sandy loam with 15-20 cm of heavy clay and organic matter contents in surface horizon	BN1, BN2, BN3	Well to imperfect	Poor
BLACKWELL (BA)	Blackwell (BA) - Poor	Silt loam, silty clay loam, silty clay	From unstratified glaucochthonic silty clay loam and clay with occasional horizons of heavy clay and organic matter contents in surface horizon	BA1	Poor	
BOOKTON (BO)	Bookton (BO) - Well drained (W) - Imperfect Missouri (MS) - Poor	Fine sandy loam, fine sand, loamy sand	40-100 cm of sandy-loam, silty loam and loam overlying heavy clay and organic matter contents in surface horizon	BO1, BO2, BO3, BO4	Well to imperfect	Poor
BRANT (BT)	Brant (BT) - Well drained (W) - Imperfect Colwood (CW) - Poor	Silt loam, loam, silty loam, very fine sandy loam and loam glaucochthonic fine material	Silt loam, very fine sandy loam and loam glaucochthonic fine material	BT1, BT2, BT3, BT4	Well to imperfect	Poor
BRANFORD (BP)	Branford (BP) - Moderately well drained (M) - Imperfect Toledo (TL) - Poor	Silt loam, clay loam, silty clay loam, silty clay	Silt loam and silty clay glaucochthonic material	BP1, BP2, BP3, BP4	Moderately well to imperfect	Poor
BRYANSTON (BS)	Bryanston (BS) - Well drained (W) - Imperfect Missouri (MS) - Poor	Silt loam, loam	Silt loam and loam glaucochthonic fine material	BS1, BS2, BS3, BS4	Well to imperfect	Poor
BURFORD (BU)	Burford (BU) - Rapid to imperfect Gales (GA) - Poor	Loam, fine sandy loam, loamy sand	Gravelly and/or cobbly glaucochthonic material	BU1, BU2, BU3	Rapid to imperfect	Poor
CALESON (CA)	Caleson (CA) - Rapid to well drained (R) - Imperfect Ay (AY) - Poor	Fine sandy loam, fine sand, loamy sand	40-100 cm of sandy loam, silty loam and loam overlying glaucochthonic material	CA1, CA2, CA3, CA4	Rapid to imperfect	Poor
FOX (FO)	Fox (FO) - Rapid to well drained (R) - Imperfect Gravelly (GR) - Poor	Sandy loam, loam, loamy sand	Glaucochthonic silty sand and sand with layers of sandy loam	FO1, FO2, FO3, FO4	Rapid to imperfect	Poor
HONEYWOOD (HW)	Honeywood (HW) - Well drained (W) - Imperfect Crooked (CR) - Poor	Silt loam, loam	40-100 cm of glaucochthonic fine loam, silty loam and occasionally very fine sandy loam overlying loamy glaucochthonic material	HW1, HW2, HW3, HW4	Well to imperfect	Poor
HURON (HU)	Huron (HU) - Moderately well drained (M) - Imperfect Brookston (BR) - Poor	Silt loam, silty clay loam, silty clay	Silty clay loam, silty clay and occasionally silty loam glaucochthonic material in surface horizon	HU1, HU2, HU3, HU4	Moderately well to imperfect	Poor
MESROUSE (ME)	Mesrouse (ME) - Moderately well drained (M) - Imperfect Stratton (ST) - Poor	Silty clay loam, silty clay	Glaucochthonic silty clay and clay with layers of fine sand, occurring in the profile	ME1, ME2, ME3, ME4	Moderately well to imperfect	Poor
MUSSEL (MU)	Muskel (MU) - Moderately well drained (M) - Imperfect Keweenaw (KE) - Poor	Silt loam, loam, silty clay loam	Silty clay loam, silty clay and occasionally silty loam glaucochthonic material from the Lake Erie basin	MU1, MU2, MU3, MU4	Moderately well to imperfect	Poor
PLAINFIELD (PL)	Plainfield (PF) - Rapid to imperfect Waterloo (WA) - Imperfect Gales (GA) - Poor	Fine sand, loamy fine sand, loamy sand	Ellen, or wind-modified glaucochthonic, the sand and loamy sand	PL1, PL2, PL3, PL4	Rapid to imperfect	Poor
TESWATER (TE)	Teswater (TE) - Well drained (W) - Imperfect Fairmount (FA) - Imperfect Baltimore (BL) - Poor	Silt loam	40-100 cm of glaucochthonic fine loam, silty loam and occasionally very fine sandy loam overlying glaucochthonic material	TE1, TE2, TE3, TE4	Well to imperfect	Poor
WALSHER (WA)	Walsher (WA) - Well drained (W) - Imperfect Silver Hill (SH) - Poor	Fine sandy loam, loamy sand, very fine sandy loam	40-100 cm of sandy loam, silty loam and loam overlying loamy glaucochthonic material	WA1, WA2, WA3, WA4	Well to imperfect	Poor
WATSFORD (WF)	Watsford (WF) - Well drained (W) - Imperfect Normanville (NE) - Imperfect St. Williams (SW) - Poor	Glaucochthonic fine sandy loam, very fine sand and loamy very fine sand	Glaucochthonic fine sandy loam, very fine sand and loamy very fine sand	WF1, WF2, WF3, WF4	Well to imperfect	Poor