ATTACHMENT A: TOWN OF ROXBURY LESA SYSTEM GUIDELINES

Town of Roxbury: Land Evaluation and Site Assessment System
April 2002

Background:

Early in the process of developing a new land use plan, the Town of Roxbury Board decided to consider a numeric rating system for rating sites based on their value as farmland. In January of 2001, a citizen Land Evaluation Advisory Group, composed of landowners and land users in the Town was appointed to help the Planning Committee with this process. The starting point for developing the rating system was a tool called LESA.

The Land Evaluation Site Assessment (LESA) system was developed by the USDA-Natural Resource Conservation Service in collaboration with land use planners from Arizona State University and Oregon State University. It is a numeric rating system for scoring sites to help in formulation policy or making land-use decisions on farmlands. The system is designed to take into account both soil quality and other factors affecting a site's importance for agriculture. Currently, there are over 200 LESA systems being used in 26 states.

LESA is an analytical tool, not a farmland protection program. Its role is to provide the Town with systematic and objective procedures to rate and rank sites for agricultural importance in order to help the Town Planning Commission and Town Board make decisions.

Soil quality factors are grouped under Land Evaluation (LE). The other factors are grouped under Site Assessment (SA). The SA factors that may be included are of three types: non-soil factors related to agricultural use of a site, factors related to development pressures, and other public values of a site.

The Land Evaluation (LE) component of the LESA system rates the soil-based qualities of a site for agricultural use. The factors used to determine the basic "example" agricultural Land Evaluation for Dane County townships were developed by the Natural Resources Conservation Services (NRCS) in cooperation with the Dane County Land Conservation Department. The Town of Roxbury's local Advisory Group for LESA reviewed the basic Land Evaluation factors and then revised and reformulated them based upon their knowledge of the Town.

Site Assessment (SA) factors that are part of the LESA system identify criteria other than soils that contribute to the quality of a site for agricultural use. The Site Assessment component can include social, economic, and geographic factors that affect land-use decision making. The SA criteria are used with the LE criteria to determine which sites, if converted, would be least disruptive to the agricultural economy, assuming some agricultural land is needed for development. The Site Assessment factors were selected by the Roxbury Town Board and Planning Commission, using recommendations from the Land Evaluation Advisory Committee. Those site assessment factors selected were limited to the most easily quantified and to factors related to agricultural use of the site.

The Land Evaluation Component:

The Land Evaluation (LE) component of the LESA system rates the soil-based quality of a site for agricultural use. The three classifications used for the Land Evaluation are soil productivity ratings, land capability classes, and important farmland classes. These land classification systems are based upon interpretation of soil survey information. Tables 1 and 2 (attached) include the values for each soil mapping unit (SMU) for each of the following factors.

- *Soil Productivity Ratings* use the estimated yields for specified indicator crops, this factor is taken from the USDA-NRCS Wisconsin Technical Guide for Dane County. Roxbury's Land Evaluation Advisory group recommended that the Town calculate this factor using the yields for both corn and alfalfa. They also recommended that land use productivity be used to determine 45% of the LE rating.
- *Land Capability Classification* identifies the relative degree of limitation for agricultural use inherent in the soils of a given area. The fewer the limitations, the more suitable the soil is for agriculture and the lower the costs of overcoming limitations. The Roxbury's Land Evaluation Advisory committee chose to formulate this factor by using only "drained" conditions for all soils in the Town, including "poorly" and "very poorly" drained soils. They also recommended that land capability classification be used to determine 45% of the LE rating.
- *Important Farmland Classification* uses the national criteria for definition of prime farmland and unique farmland to provide a consistent basis for comparing state and local farmland with other areas of the country. Roxbury's Land Evaluation Advisory Group also recommended that important farmland classification be used to determine 10% of the LE rating.

Town of Roxbury soils consist of 104 different soil mapping units. For the Land Evaluation portion of the LESA system, the Town Board, with the help of the Land Use Advisory Group and the Planning Commission, placed these soils in a number category from 1 to 8. Group 1 represents the best soils for crop production, and Group 8 the poorest. **The Land Evaluation Group calculated for each soil mapping unit (SMU) is listed in Tables 1 and 2 (attached)**. Parcels containing higher percentages of Group 1 soils will rate higher on the overall LESA score while those containing higher percentages of group 8 soils will rate a lower overall LESA score.

Land Evaluation Groups

(using *drained* conditions for poorly and very poorly drained soils; and calculations based on *corn and alfalfa* yields)

LE Group	Number of Acres	Final LE Calculation Ranges
Group 1	5070	93-100
Group 2	1255	85-92
Group 3	3464	74-84
Group 4	4385	59-73
Group 5	2789	54-58
Group 6	938	40-53
Group 7	310	21-39
Group 8	3002	0-20
Other Lands	1762	0
Total	22,975	

Site Assessment:

Site Assessment (SA) rates non-soil factors affecting a site's relative importance for agricultural use. In order to assess the viability of continued farming on the land, the SA used by Roxbury considers the area and shape of the entire land area being considered for development, not just the area that will be separated off for development.

The first set of site assessment factors considered by the Roxbury Board and Planning Commission were those non-soil site characteristics impacting potential agricultural productivity. Four of these were selected for inclusion in Roxbury's LESA system. They are as follows:

Size of the site:

A scale was devised to recognize the typical size for the type of commercial farming dominant in this area. Agricultural productivity can be high on small, intensively farmed operation, such as grape or berry farms. In evaluating the site the entire land area under contiguous single ownership at the time of the original application as defined in Chapter IV, Section C2 of the Town of Roxbury Comprehensive Plan will be considered when determining the size of the site. A weighting factor of 35% will be used when determining the total SA score. The scale developed for this evaluation is as follows:

- more than 75 acres 100
- 50 to 75 acres 80
- 30 to 50 acres 60
- 15 to 30 acres 40
- 5 to 15 acres 20
- less than 5 acres 0

Compatibility with adjacent non-farm residences:

Generally, adjacent non-farm residences are likely to be in conflict with surrounding agribusinesses. To provide ease of measurement all home sites adjacent to the site being evaluated that are zoned for residential use will be counted. A weighting factor of 35% will be used when determining the total SA score. The scale developed for this evaluation is as follows:

- 0 to 1 home sites 100
- 2 to 3 home sites 80
- 4 to 5 home sites 60
- 6 to 7 home sites 40
- 8 to 9 home sites 20
- 10 or more home sites 0

Compatibility with non-farm residences located within a ½ mile:

The character of surrounding uses also affects the ability of a farmer to change crops or conduct agricultural operations. For example, a rural residential development or village boundary within a one-quarter mile distance could impede a farmer from certain livestock operations, spraying activities, night operations, or moving equipment on highways. Conversely, it could increase problems of trespass or dogs harassing livestock. To provide ease of measurement all home sites zoned for residential use within a ½ mile radius of the center of the site being evaluated will be counted (note that this also includes the adjacent home sites). A weighting factor of 15% will be used when determining the total SA score. The scale developed for this evaluation is as follows:

- 0 to 4 home sites 100
- 5 to 9 home sites 80
- 10 to 14 home sites 60
- 15 to 19 home sites 40
- 20 to 24 home sites 20
- 25 or more home sites 0

Shape of the site:

Oddly shaped sites are inefficient to farm. To develop a scale for this factor the ratio of the perimeter of the site to its area is compared to the ratio of a 2:1 rectangle of the same area. For this evaluation the land area considered will be the remaining tillable portion of the land directly affected by the home site(s). Natural and manmade boundaries such as woodlands, waterways, wetlands and roads will be used to define this land area. Woodland and wetland areas will be determined using Dane County 1995 aerial photography records. A weighting factor of 15% will be used when determining the total SA score. The scale developed for this evaluation is as follows:

- Less than 1.30 100
- 1.30 to 1.49 80
- 1.50 to 1.79 60
- 1.80 to 2.09 40
- 2.10 to 2.39 20
- 2.40 or more 0

Decision Process using LE and SA scores:

The LE score is the primary factor in determining farmland viability.

1. No homes, driveways, or other structural non-farm uses may be placed on agricultural land with soil mapping units that are in LE Groups 1, 2 or 3 according Roxbury's LESA system detailed in this document and its attached tables. This does not prohibit development elsewhere on the proposed site. Suitability for the whole proposed development site will be determined based on steps 2 through 4 listed below.
2. If the LE score is over 74 for the proposed development site, then on average the soils fall into Groups 1-3, and the development will *not be allowed* as proposed unless the site is within an area already designated for potential residential development in Roxbury's land use plan or if the site is entirely in a mature woodland as revealed on Dane County's aerial photography record from 1995. Note, the SA does not need to be calculated for this situation unless the exceptions are applied.
3. If the LE score is between 54 and 74 for the proposed development site, then on average the soils fall into Groups 4 and 5, and the development *is in a "gray area"*. The SA will be used to further evaluate the site's suitability for development.
4. If the LE score is below 54 for the proposed development site then, on average, the soils fall into Groups 6, 7 or 8, and the development will be supported provided all other policies in the Roxbury's land use plan are met.
5. If the SA score of a proposed development is over 80, with a LE score in the "gray area", then the Town will oppose the development unless the site is within an area already designated for potential residential development in Roxbury's land use plan or if the site is entirely in a mature woodland as revealed on Dane County's aerial photography record from 1995.
6. If the SA score of a proposed development is between 80 and 60, with a LE score in the "gray area", then the Town will consider any other factors that detract or add to the site's value to agriculture to assist in making a decision.
7. If the SA score of a proposed development is under 60, with a LE score in the "gray area", then the Town will support development provided all other policies in Roxbury's land use plan are met.

Town of Roxbury Soils - Ranked by LE Rating

Land Evaluation using corn yeild, alfalfa yield, and a combination corn/alfalfa yield.

DRAINED conditions for poorly and very poorly drained soils.

LE factors		LE groups	
SMU	PRIME	corn/alf group	acres in twp
BbA	1	1	230.0
BbB	1	1	172.3
EgA	1	1	1.7
GsA	1	1	9.5
PnB	1	1	5.2
PoA	1	1	123.8
PoB	1	1	62.2
PrB	1	1	6.7
ScA	1	1	27.4
ScB	1	1	97.8
SmB	1	1	3082.4
TrB	1	1	752.6
VrB	1	1	33.1
VwA	1	1	465.2
ChB	1	2	46.9
DnB	1	2	242.7
DsB	1	2	34.8
GsB	1	2	29.6
HuA	1	2	8.9
HuB	1	2	150.0
KeB	1	2	174.8
MdB	1	2	258.8
NeB2	1	2	15.4
Or	1	2	21.2
RaA	1	2	252.9
RnB	1	2	18.5
BbC2	0	3	39.4
DkB	1	3	119.6
HaA	1	3	20.4
KcB	1	3	244.6
KdB	1	3	11.3
MdC2	0	3	886.9
PnC2	0	3	30.2
PrC	0	3	11.4
ScC2	0	3	20.4
SeB	1	3	20.1
ShA	1	3	16.6
SmC2	0	3	1927.7
SnC2	0	3	24.8
WxB	1	3	90.5
BoB	1	4	98.6
DnC2	0	4	820.2
DsC2	0	4	564.0
GaC2	0	4	2.0

Town of Roxbury Soils - Ranked by LE Rating

Land Evaluation using corn yeild, alfalfa yield, and a combination corn/alfalfa yield.

DRAINED conditions for poorly and very poorly drained soils.

LE factors		LE groups	
SMU	PRIME	corn/alf group	acres in twp
KdC2	0	4	259.8
NeC2	0	4	44.5
Os	0	4	168.8
ScD2	0	4	29.7
SeC2	0	4	25.1
SmD2	0	4	654.2
SnD2	0	4	43.6
WrC2	0	4	5.3
WxC2	0	4	405.0
BoC2	0	5	135.1
Co	0	5	74.9
DkC	0	5	2.8
DoC2	0	5	82.0
DrD2	0	5	214.3
EhC2	0	5	21.1
Ev	0	5	77.4
GaD2	0	5	10.5
Ho	0	5	282.9
KdD2	0	5	1196.2
KrD2	0	5	15.1
MdD2	0	5	1089.5
MhC2	0	5	15.5
NeD2	0	5	1.9
Ot	0	5	3.7
SaA	0	5	101.8
Wt	0	5	1.7
WxD2	0	5	726.3
Ad	0	6	38.3
BoD2	0	6	42.0
BrA	0	6	13.0
DmA	0	6	0.1
DuC2	0	6	171.2
EhD2	0	6	8.7
Gn	0	6	68.8
HbD2	0	6	7.4
Mc	0	6	56.9
MhD2	0	6	8.8
Pa	0	6	146.7
PfB	0	6	60.2
SpB	0	6	77.9
SpC	0	6	68.2
Wa	0	6	169.9
Af	0	7	18.1
DuD2	0	7	210.9

ATTACHMENT B: RURAL DESIGN GUIDELINES

Three landscape personalities, including the Hill Country, Driftless Valleys (southwest portion) and the Wisconsin River Corridor (northwest portion), characterize the Town of Roxbury.

The predominant upland area of the Town (Hill Country) includes scenic agricultural valleys, agricultural and wooded rolling terrain, and wooded ridges and ridge-top agriculture. This area also includes a large marsh and several lakes. The northwest corner of the Town borders the Wisconsin River and is characterized by steep wooded terrain and bluffs. The southwest portion of the Town (Driftless Valleys) contains long ridges and valleys of the driftless area.

Highway 12 traverses the Town through a scenic agricultural valley. County roads primarily follow valley and ridge patterns connecting Highway 12, lake and river-oriented development, and nearby communities. The Town has one small rural community (the "Village" of Roxbury), scattered farmsteads and single-family residences, and several rural subdivisions with between five and thirty-five homes.

TOWN CHARACTER PRESERVATION PRINCIPLES

Rural Development Guidelines

Goals of the Rural Development Guidelines:

- ❑ Preserve the existing agricultural character of the Town's landscape
- ❑ Preserve valuable farmland and productive agricultural areas
- ❑ Preserve wildlife habitat
- ❑ Protect ground and surface water quality

Strategies to accomplish these goals:

- ❑ Careful siting of proposed development
- ❑ Sensitive treatment of the development site (landscaping, location of drive, etc.)

Examples of the specific strategies include:

- ❑ Optimize the shape and configuration of farmable parcels
- ❑ Minimize visual impact of development from roadsides
- ❑ Integrate development with existing landscape patterns (fields, fencerows, farmsteads, natural features)
- ❑ Use existing vegetation to screen new development
- ❑ Use new landscaping to screen and enhance development
- ❑ Minimize visual impact of development through sensitive home siting on hillsides and limiting placement of development on hilltops
- ❑ Retain wooded areas
- ❑ Minimize number of driveways, and regulate placement and grade
- ❑ Integrate development with existing topography and vegetation pattern
- ❑ Mimic typical farmstead features for "exposed" new development clusters
- ❑ Concentrate new development at edge of existing developed area
- ❑ Concentrate new development in compact configurations
- ❑ Avoid placement of buildings in groundwater infiltration and recharge areas
- ❑ Provide a mechanism to permit Transfer of Development Rights (TDR) from areas with high agricultural value to those with less agricultural value

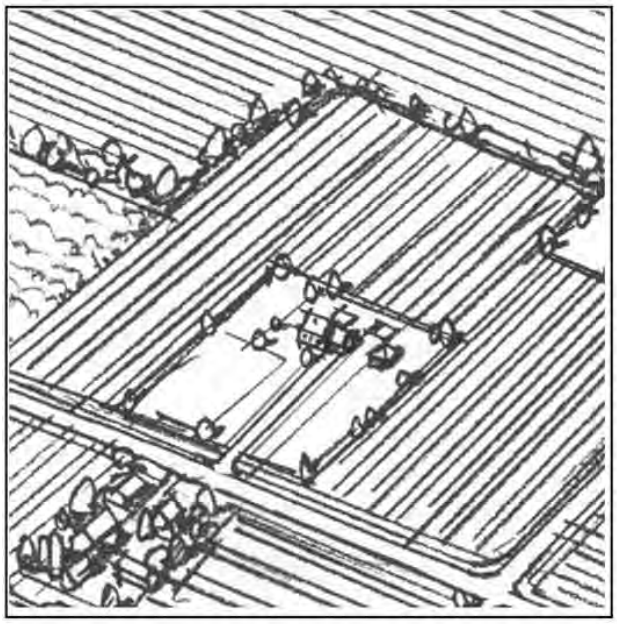
SINGLE LOT RESIDENTIAL

Rural Development Guidelines

The siting and treatment of a **single residential lot** in the Town's **agricultural lands** according to the policies included in this Comprehensive Plan will have an impact on valuable farmland and the existing visual character of the Town. Utilize the following strategies and case study below to guide proposed residential development. Case study assumes that existing fence row does not divide land ownership.

- ❑ Minimize loss of valuable farmland
- ❑ Optimize the shape and configuration of farmable parcels
- ❑ Minimize visual impact of development from roadsides
- ❑ Integrate development with existing landscape patterns (fields, fencerows, farmsteads, natural features)
- ❑ Use existing vegetation to screen new development

Typical



- Large isolated lot
- Homes and outbuildings visible from roadside
- Fragmented farmland and wildlife habitat

Preferred

- Cohesive farm fields
- Home and outbuildings set back from road
- Development located at edge of farmland
- Driveway located along fencerow
- Home screened with existing vegetation or new landscaping

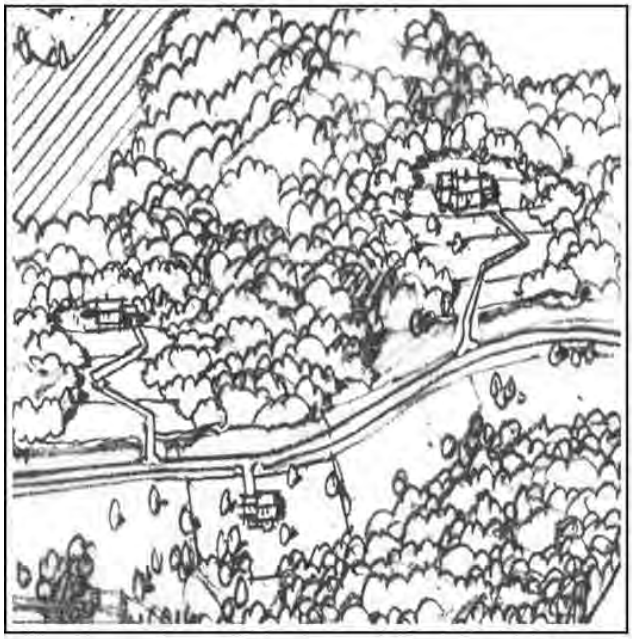
HILLSIDE RESIDENTIAL

Rural Development Guidelines

The siting and treatment of **residential lot(s)** on the Town's **hills and steep slopes** will have a substantial visual impact on the existing character of the Town. Utilize the policies included in this Comprehensive Plan pertaining to steep slopes, the following strategies, and the case study below to guide proposed residential development.

- ❑ Minimize visual impact of development through hillside siting below ridge
- ❑ Minimize visual impact of homes from adjacent roadside
- ❑ Retain wooded areas
- ❑ Minimize number of driveways
- ❑ Use existing vegetation to screen new development
- ❑ Integrate development with existing topography and vegetation pattern

Typical



- Home built on hilltops
- Multiple driveways, each serving a seperate home
- Vegetation removed from hillside

Preferred

- Homes built on hillside, not on the hilltop
- Homes set back from road
- Development screened with existing vegetation or new landscaping
- Walls and roofs of structures to blend with hillside
- Driveway shared by residences; across from others
- Vegetation cleared only for drive, house and immediate yard
- Driveway configuration minimizes views of development and meets requirements of Town driveway ordinance

TOWN OF ROXBURY

Growth Management Project
Dane County USH 12

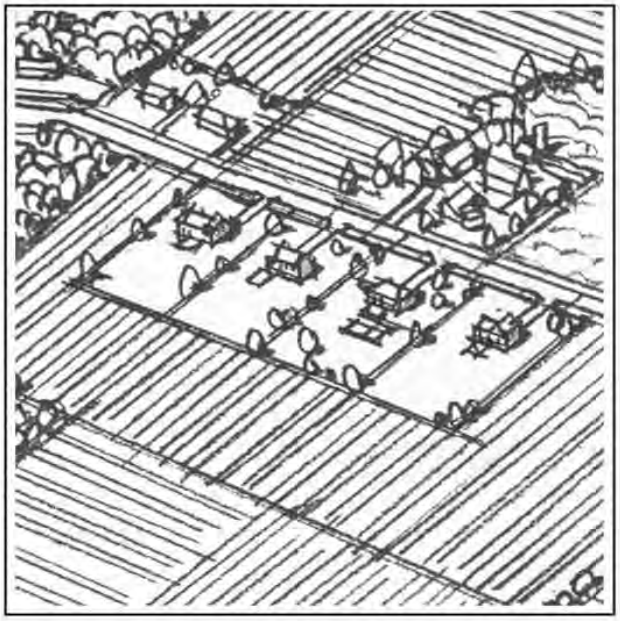
MULTIPLE LOT RESIDENTIAL ("FARMSTEAD" OPTION)

Rural Development Guidelines

The siting and treatment of **multiple residential lots** in the Town's **agricultural lands** according to the policies included in this Comprehensive Plan will have an impact on valuable farmland and the existing visual character of the Town. The following guidelines are **modeled after a typical farmstead building arrangement**. Utilize the following strategies and case study (typical siting pattern versus preferred siting pattern) below to guide proposed residential development.

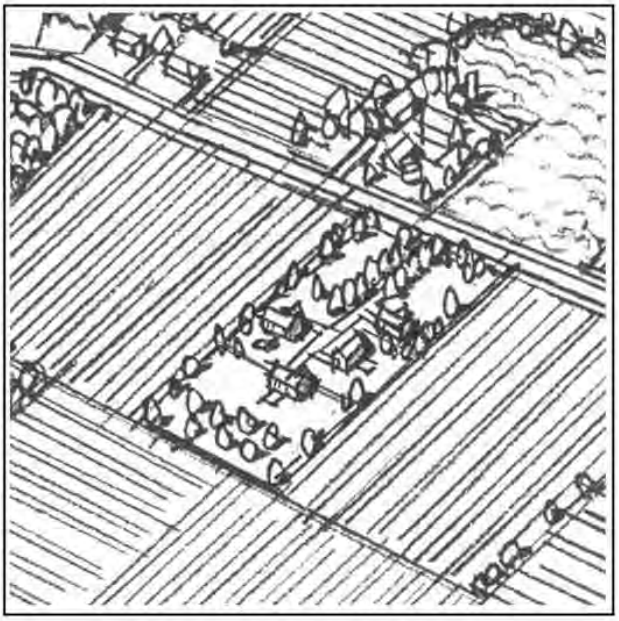
- ❑ Mimic typical farmstead pattern
  - Clustered buildings
  - Single drive or road
  - Fence rows and formal landscaping
- ❑ Minimize loss of valuable farmland
- ❑ Optimize shape and configuration of farmable parcels

Typical



- Roadside lots with all homes visible from roadside
- Multiple driveways, each serving a separate house
- Long stretch of road interrupted by driveways

Preferred



- Residences clustered in the form of a typical Roxbury farmstead
- Shared driveway or cul-du-sac road (Tree-lined)
- Development set back from road
- Residences screened with new "farmstead" vegetation
- Cohesive farm fields
- Fence rows define farmable parcels and developed area
- Reduced perimeter of developed area adjacent to farmland

TOWN OF ROXBURY

Growth Management Project
Dane County USH 12

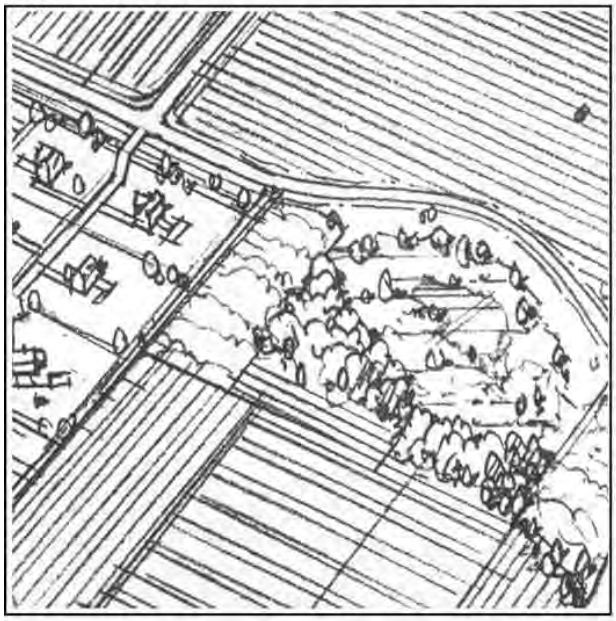
MULTIPLE LOT RESIDENTIAL (NATURAL FEATURE)

Rural Development Guidelines

The siting and treatment of **multiple residential lots** in the Town's **agricultural lands** according to the policies included in this Comprehensive Plan will have an impact on valuable farmland and the xisting visual character of the Town. The following guidelines are based on the strategy of sensitive **integration with a natural feature** (woods, pond, etc.).Utilize the following strategies and case study below to guide proposed residential development.

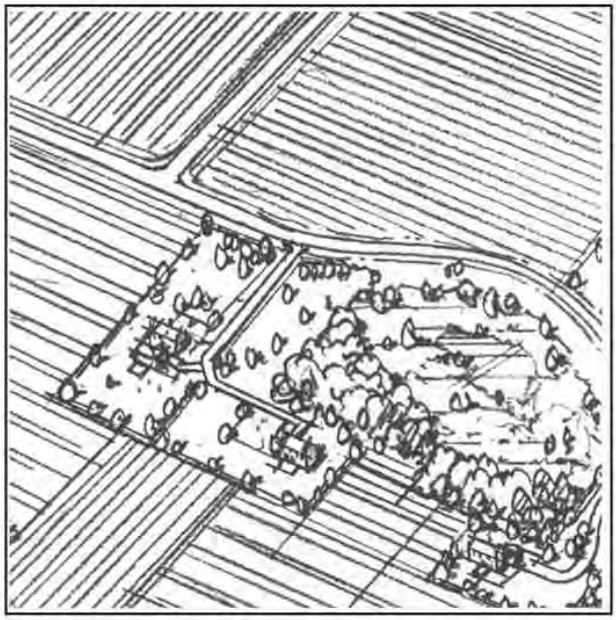
- ❑ Integrate development with existing landscape patterns (fields, fencerows, farmsteads, natural features)
- ❑ Use existing vegetation to screen new development
- ❑ Minimize loss of valuable farmland
- ❑ Optimize shape and configuration of farmable parcels
- ❑ Minimize visual impact of development from roadside

Typical



- Roadside lots
- Multiple driveways, each serving a separate house
- Development visible from roadside
- Fragmented farmland and wildlife habitat

Preferred



- Cohesive farm fields
- Homes set back from road
- Development located at edge of farmland and natural feature
- Shared driveway or road located along fencerow or natural feature
- Minimize the amount of developed land adjacent to farmland
- Residences screened with existing vegetation or new landscaping

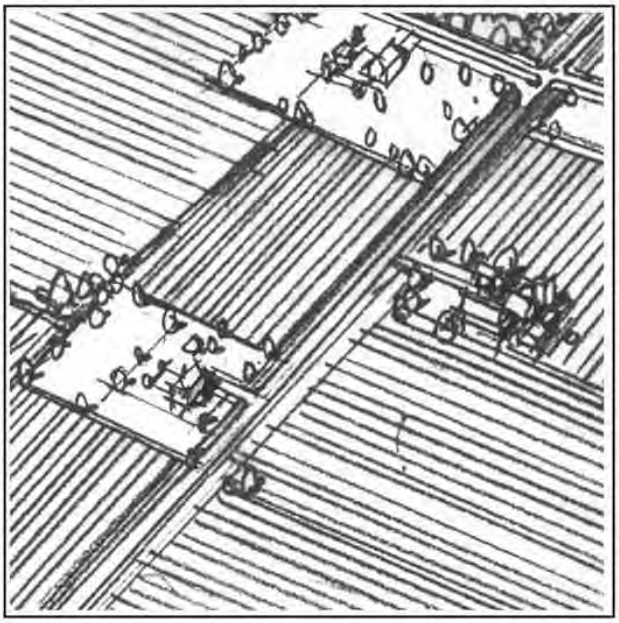
"HOMESTEAD ADDITION" RESIDENTIAL

Rural Development Guidelines

The siting and treatment of a **residential lot being added to an existing homestead** in the Town's **agricultural lands** will have an impact on valuable farmland and the existing visual character of the Town. Utilize the policies included in this Comprehensive Plan, the following strategies, and the case study below to guide proposed residential development.

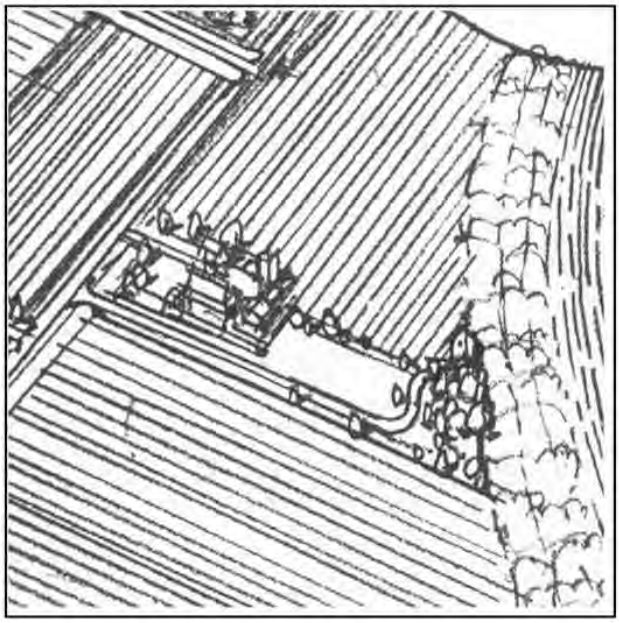
- ❑ Minimize loss of valuable farmland
- ❑ Optimize shape and configuration of farmable parcels
- ❑ Minimize visual impact of development from roadsides
- ❑ Integrate development with existing landscape patterns (fields, fencerows, farmsteads, natural features)
- ❑ Use existing vegetation to screen new development
- ❑ Identify sites on the homestead to site a new home

Typical



- Large isolated lot
- Development visible from roadside
- Fragmented farmland and wildlife habitat

Preferred



- Cohesive farm fields
- Homes set back from road
- Development located at edge of farmland
- Driveway located along fencerow
- Homes screened with existing farm buildings, vegetation or new landscaping
- Attempt to minimize driveways

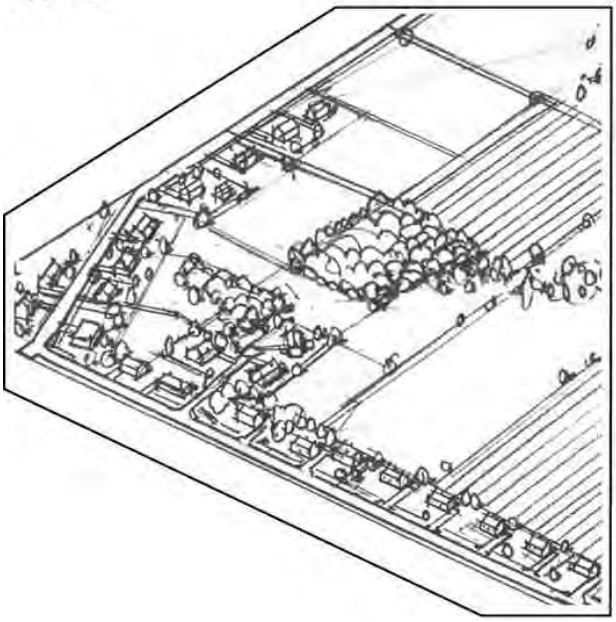
RURAL COMMUNITY EDGE RESIDENTIAL

Rural Development Guidelines

The siting and treatment of **multiple residential lots** on **the edge of the "Village" of Roxbury** will have an impact on valuable farmland and the existing visual character of the Town. Utilize the policies included in this Comprehensive Plan, the following strategies, and the case study below to guide proposed development.

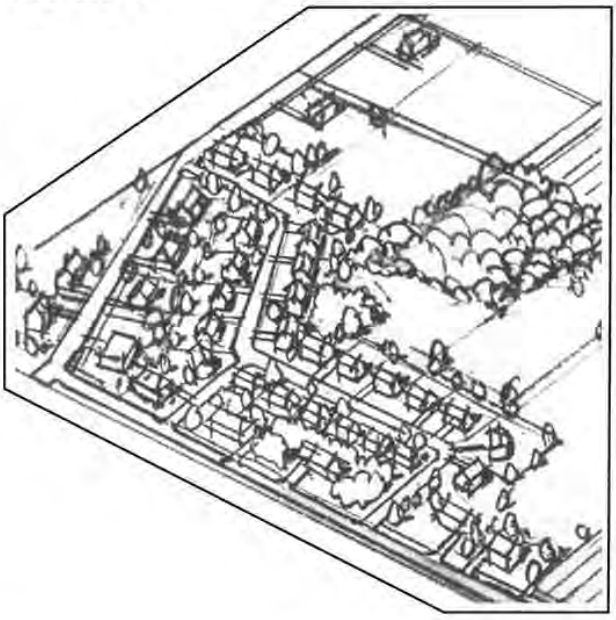
- ❑ Concentrate new development in existing developed area
- ❑ Avoid endless strips of houses on sides of roads
- ❑ Make wise use of deep parcels
- ❑ Emphasize connectivity of road system for future

Typical



- Larger scattered lots arranged on individual cul-de-sacs
- Strips of houses on sides of roads
- Fragmented development edge
- Dispersed lot arrangement

Preferred



- Compact network of streets or local roads
- Compact lot arrangement
- Well-defined development edge
- Cohesive farm fields remain
- Accessible open spaces and public areas