

Staff Report
Residential Density and the Land Use Policy Plan
July 13, 2010

At the June 22, 2010 City Council meeting, Council moved to support the proposed conservation subdivision ordinance and directed staff to bring it back in ordinance form for action. As a follow-up motion, Council directed staff to include the philosophy behind having a density requirement when the Conservation Subdivision Ordinance comes back to the City Council. The following report provides the philosophy as laid out in the City's Land Use Policy Plan, as well as rationale given in prevalent national and international planning movements.

Density refers to the number of dwelling units in a defined area land – e.g., units per net acre. The actual number of dwelling units achieved depends on the size of lots and/or the types of units, but density is not necessarily determined by imposing a maximum lot size. That is because density is typically averaged out over the entire parcel. Accordingly, a 30 net acre subdivision comprised of, say, 120 quarter-acre lots would have the same density as a subdivision comprised of 10 one-acre lots and 110 lots of 7,920 square feet. Either situation would result in 4 units per acre. Thus, minimum density standards do not necessarily preclude large lots. However, achieving large lots in one area requires use of smaller lots in some other location – either within the same subdivision or, if allowed by code, in some other location of the City.¹ To avoid the extremes, a development will typically have all lots similarly sized (e.g., 120 quarter acre lots in the above example).

Minimum density targets are integral components of the City's Land Use Policy Plan and are necessary to implement a number of goals, objectives and policies of the Plan. Some of these policies are described in the following sections of the Plan:

Chapters One and Two of the LUPP provide the basis for the plan in terms of projected population and needed land area to serve our population. A population of between 65,000 and 67,000 is projected for the year 2030, which is the planning horizon year in the Plan. Estimates of required land area to serve that population are based upon minimum density assumptions described in Chapter Two. It is assumed, for example, that in areas designated *Residential* we will achieve approximately 5.6 dwelling units per gross acre, or about 4.5 units per net acre. At that level of density, it is estimated in the Plan that an additional 3,000 to 3,500 gross acres of land are needed to meet projected growth through the year 2030.² The Plan further recommends as a goal that a net density of more than 5.0 dwelling units per net acre be the target. While the Plan does not intend that any single residential development achieve that goal, in the aggregate it is expected that the average of all types of residential land uses collectively will accomplish this density goal.³ Accordingly, areas of densities lower than 5 units per acre must be compensated by areas of higher densities.

¹ In theory, transferring density to an off-site location can be accomplished through the use of Transfer of Development Rights (TDR's), which is a planning tool that exchanges zoning privileges from areas with low population needs, such as farmland, to areas intended for higher populations, such as downtowns, villages or multifamily areas.

² See pg. 29 of LUPP, Future Land Use Allocation, Residential.

³ Ibid

The Plan anticipated this diversity of densities by describing those areas where lower densities are appropriate, and where higher densities must be achieved to stay in balance with projected housing needs. For example, the New Vision section of the Plan seeks to limit intensification of older areas and to seek more expansion areas of targeted growth. The third stated precept of the New Vision was to address existing and new development areas differently for compatibility reasons. This was in part a response to concerns over the introduction of apartments and higher density development in established older neighborhoods. Accordingly, Goal No. 2 of the Plan has the stated objective to allow only “limited intensification of existing areas while concentrating on the annexation and development of new areas.” In effect, the Plan anticipates that new areas will be developed more intensely to accommodate projected population needs.

Other concepts in the New Vision that are based on density pertain to policies that encourage the mixing and closer proximity of uses and more pedestrian activities. The fourth precept of the New Vision states that, “Separation of these uses has encouraged more reliance on automobiles for daily types of activities.” It was with this concern in mind that the Plan first introduced the “village” concept.⁴

Density targets by area and land use types are useful for determining the land’s capacity for future population and growth. This supports Goal No. 1 of the Plan, with its stated objective to “manage a population and employment base that can be supported by the community’s capacity for growth.” Capacity, however, involves more than land area. It also pertains to the City’s capacity to provide services. These may include police and fire services, as well as infrastructure for utilities and transportation. Accordingly, Goal No. 5 of the Plan is to “establish a cost-effective and efficient growth pattern for development in new areas and in a limited number of existing areas for intensification.” Stated objectives under this goal include “establish[ing] priority areas for growth in which there are adequate and available land resources and infrastructure to meet the major development requirements through the year 2030”, and to seek “the continuance of development in emerging and infill areas where there is existing public infrastructure and where capacity permits.” [Emphasis added]. Developing a cost-effective growth pattern in terms of services and infrastructure is directly related to density. The more units that can be served by a given stretch of sewer line, or by a given stretch of roadway, or within a 5-minute response time by fire and emergency vehicles, the less cost to both the City and the unit owner.

One final area where densities in the LUPP are relied upon is in the development of the City’s Long Range Transportation Plan (LRTP). The land’s capacity as anticipated in the LUPP was taken into account when the LRTP determined which transportation improvements would be necessary to serve projected growth and development.

The goals and objectives of our city’s LUPP pertaining to density are fairly unique within Iowa. However, they are not as unique at the national and global level. Some of the more recent and prevalent planning movements rely upon minimum densities to achieve the objectives of those movements. The **sustainability movement**, for example, has a heavy focus on reducing the carbon footprint, reducing consumption of resources, improving sense of community, and providing a more walkable environment for social, health and environmental reasons. It is

⁴ See Page 13 of LUPP, *Providing Connections for People, Places and Activities*.

believed that a tighter development pattern will help achieve these goals by such means as reducing vehicle miles traveled (shorter distances between destinations), reducing water consumption per capita (less irrigation on smaller lots), creating a walker/biker friendly environment, etc.

Another planning movement that has precedent even in Iowa is the use of **conservation subdivisions** to protect environmentally sensitive areas or to preserve rural character. These subdivisions also address the density issue because their whole premise is to cluster desired densities in nodes in order to retain and protect environmentally sensitive features. Exhibits 1 through 4 provide an example of a conservation subdivision in Newtown, Connecticut, and the different scenarios considered in designing that subdivision. Each of the scenarios provide the same number of building lots and therefore achieve the same targeted density, but they illustrate different ways of configuring the building lots for purposes of conserving environmental features, providing open space, or both. As each option illustrates, lot sizes can vary from small to fairly large. The selected option will determine how much open space can be achieved above and beyond protection of environmentally sensitive features without a reduction in gross density. In the Newtown case, the approved layout was for large lots configured around the protected wetlands. No additional open space was provided, so many of the lots do not abut any open areas. However, the objectives of both protecting the wetlands and achieving a targeted density were achieved.

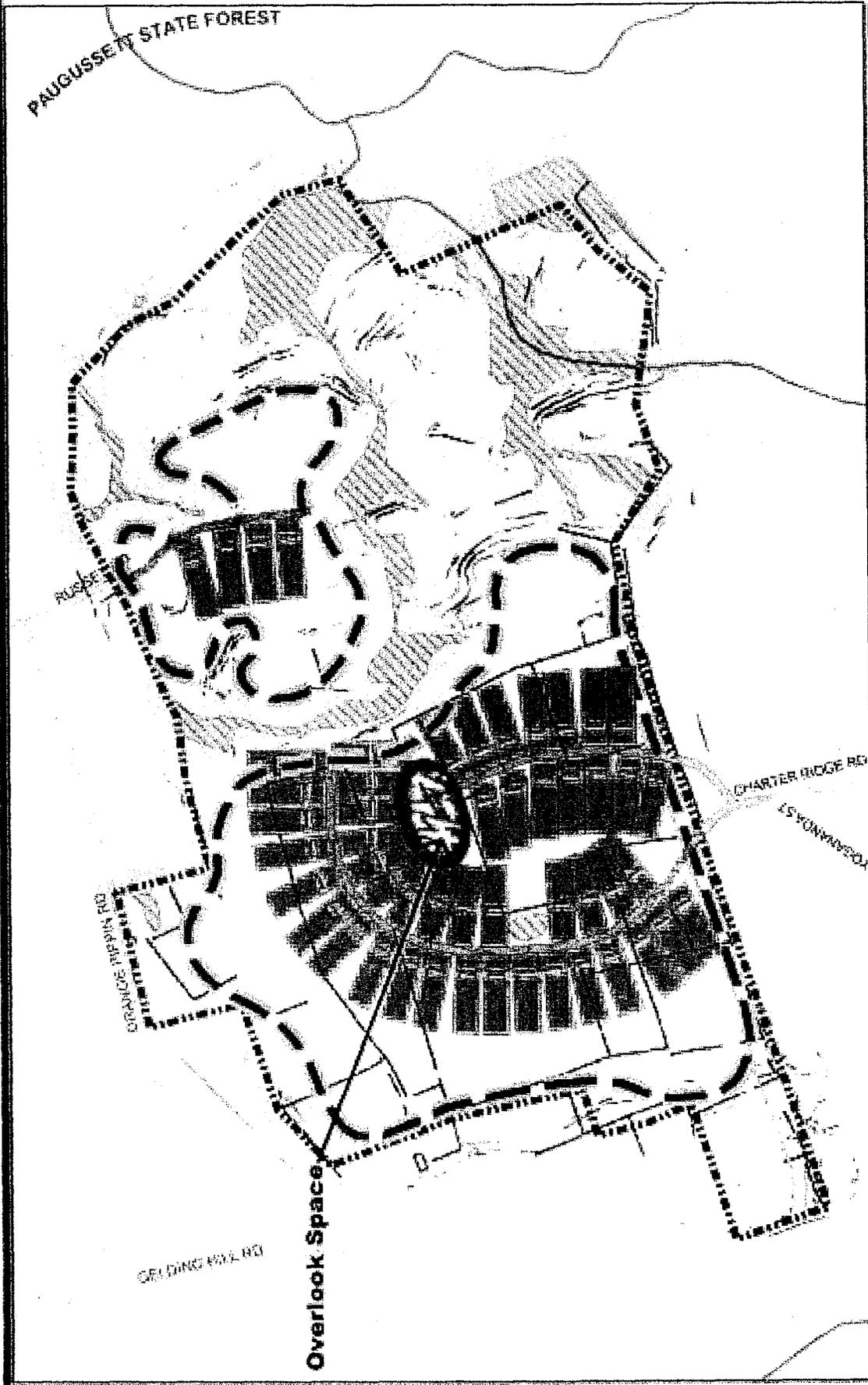
It is possible to achieve targeted densities in conservation subdivisions. That may result in lots smaller than a traditional subdivision. However, one of the defining features of a conservation subdivision is that smaller lots abutting large areas of open space may appear to be larger than they actually are. That perspective more likely pertains to the depth of the lots rather than their width. Many lots in conservation subdivisions will likely be narrow at the street face to facilitate the clustering that characterizes conservation subdivisions.

This issue then, takes us to the current proposal before the Ames City Council to adopt conservation subdivision standards. If the Council does not believe that minimum densities should be imposed in conservation subdivisions, there may be a need to adjust for any loss of anticipated densities by either expanding the areas identified for serving projected populations, or by increasing densities in other areas of the City. This could involve review of and/or amendments to the LUPP goals and policies cited above. Long-term, it could also involve a reevaluation of the City's Long-range Transportation Plan. The likelihood of this need increases as the area that would be exempt from density standards increases. As drafted, the conservation subdivision standards would be required within the undeveloped portions of the Ada Hayden watershed, which represents a sizeable portion of the City's potential growth area.

The existence of targeted densities make it easier for a city to effectively plan for growth, because the amount of land needed to serve growth and the amount of infrastructure and services required to accommodate growth can be reasonably estimated. It should be noted that our ability to plan for growth based upon targeted densities does not mean we have to adopt high densities. We could adopt very low density targets and still be able to estimate the amount of land, services and infrastructure needed to serve projected populations. However, some could argue that the adoption of lower densities may be contrary to goals pertaining to creating an efficient, cost effective and sustainable development pattern. If you concur with this position, those goals could

be reevaluated and/or amended if the broader goals change in favor of a lower, more open development pattern.

Since the issue of minimum densities is imbedded in the LUPP for all of our residential land use categories, it is suggested that any discussion related to the discontinuance of this planning technique be considered in a broader context, and not isolated to the adoption of conservation subdivision standards.



Open Space Conservation Subdivision: Suburban Sketch

Cider Mill Farm
Newtown, Connecticut

Open Space Conservation Subdivision Analysis

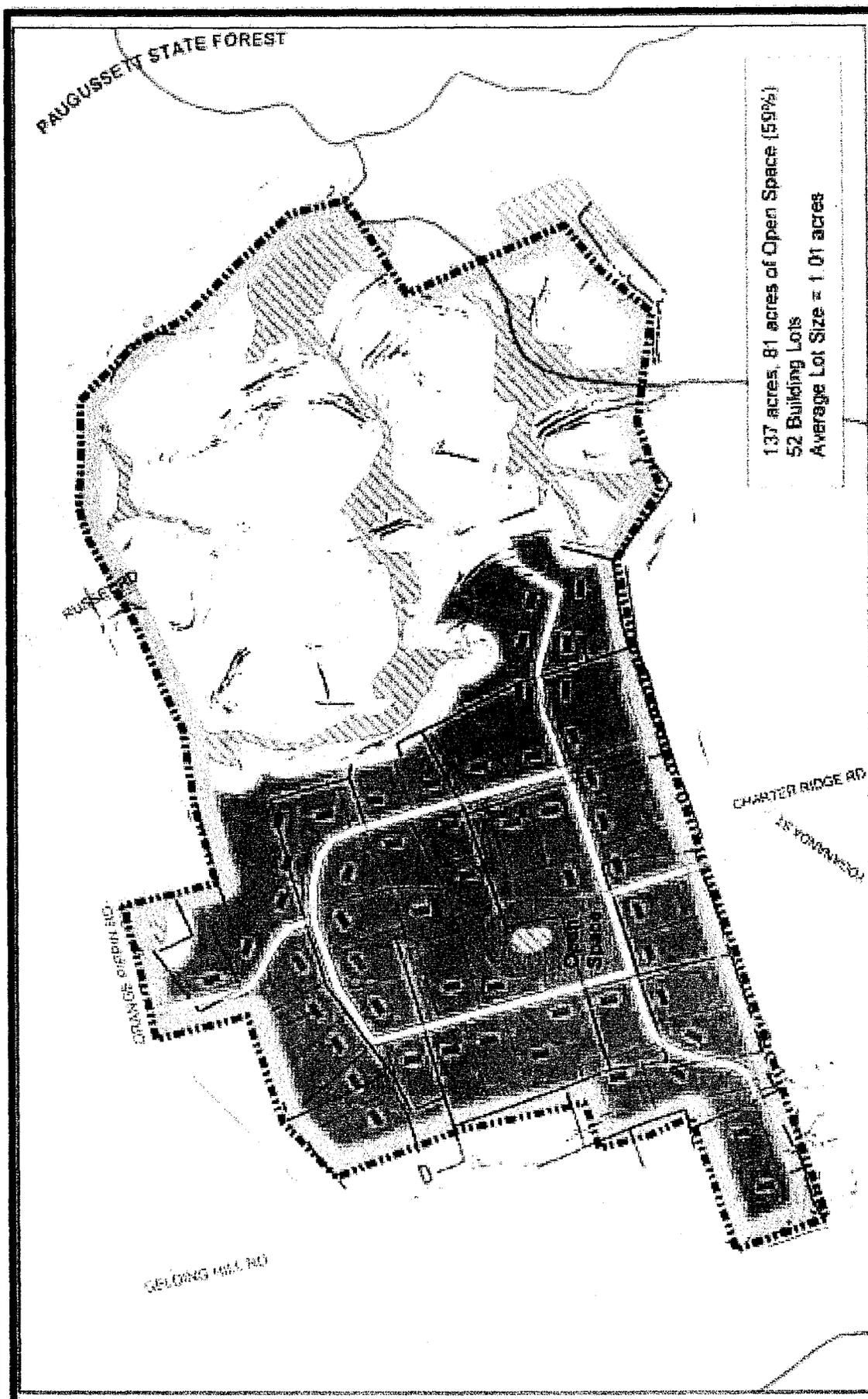
ICARRALL, MITCHELOWSKI
ASSOCIATES, Inc. (preparation)
Hamden, Connecticut April 2003

0 200 400 800 1,200 1,600 Feet

Legend

Areas Recommended for Development	Roads	Topography 10' Feet Interval
Delineated Wetlands	Water Course	Steep Slopes 25% +
Edges and Easements	100' Wetland Buffer	Stone Walls
Gasline		Site Outlines

Page 24



137 acres, 81 acres of Open Space (59%)
 52 Building Lots
 Average Lot Size = 1.01 acres

Open Space Conservation Subdivision: Suburban Layout

Cider Mill Farm
 Newtown, Connecticut
 Open Space Conservation Subdivision Analysis

HARRALL-MICHALOWSKI ASSOCIATES
 Hamden, Connecticut
 (Incorporated April 2001)

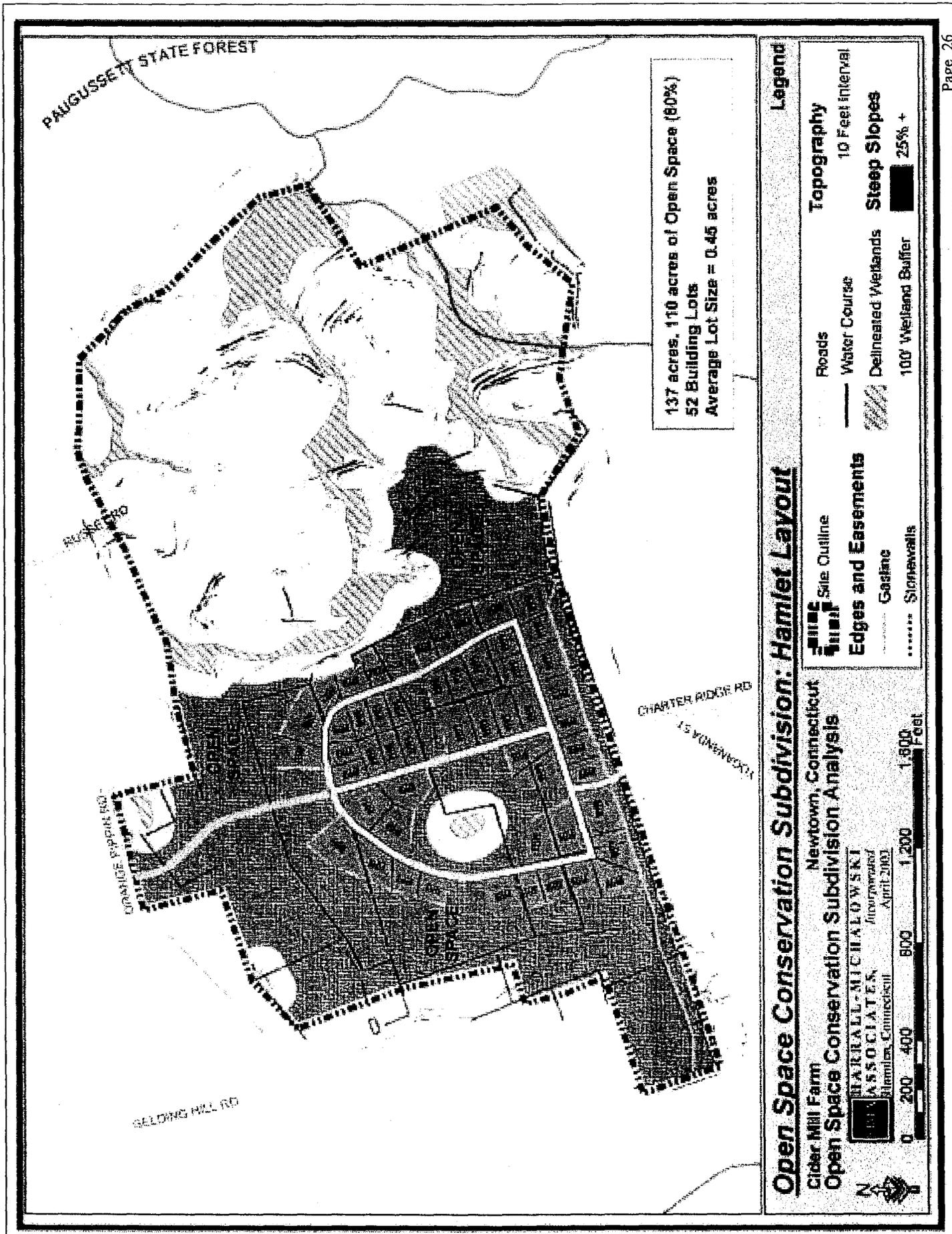


Legend

	Roads		Topography 10 Feet Interval
	75' Site Outline Buffer		Steep Slopes 25% +
	Delineated Wetlands		Water Course
	100' Wetland Buffer		

Edges and Easements

	Site Outline
	Easement
	Gating
	Stone walls



137 acres, 110 acres of Open Space (60%)
 52 Building Lots
 Average Lot Size = 0.45 acres

Open Space Conservation Subdivision: Hamlet Layout

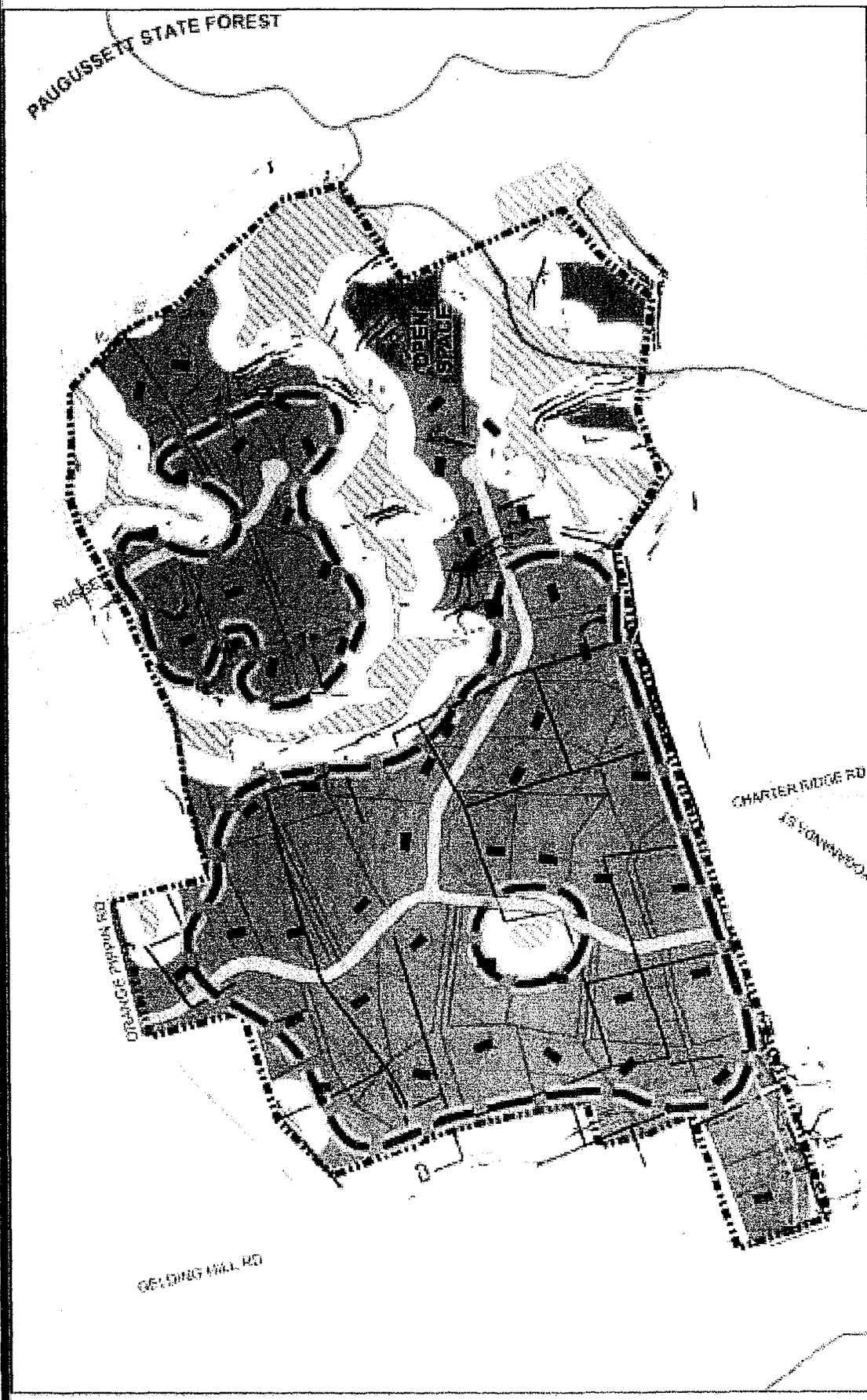
Cider Mill Farm
 Newtown, Connecticut
 Open Space Conservation Subdivision Analysis

BARRELL-MICHALOWSKI
 ASSOCIATES, Incorporated
 Hamden, Connecticut
 April 2003



Legend

- Site Outline
- Roads
- Water Course
- Delineated Wetlands
- Steep Slopes 25% +
- 100' Wetland Buffer
- Edges and Easements
- Gasline
- Stonewalls



Legend

Areas Recommended for Development	Roads	Topography 10 Feet Interval
Edges and Easements	Water Course	Steep Slopes 25% +
Gasline	Designated Wetlands	Site Outlines
Stonewalls	100' Wetland Buffer	Page 29

Approved Cider Mill Farm Subdivision
 Assessment of Subdivision Impacts Newtown, Connecticut
 Open Space Conservation Subdivision Analysis

BARRALL-MICHALOWSKI ASSOCIATES, Inc.
 Hartford, Connecticut
 Incorporated April 2003

0 200 400 800 1,200 1,600 Feet