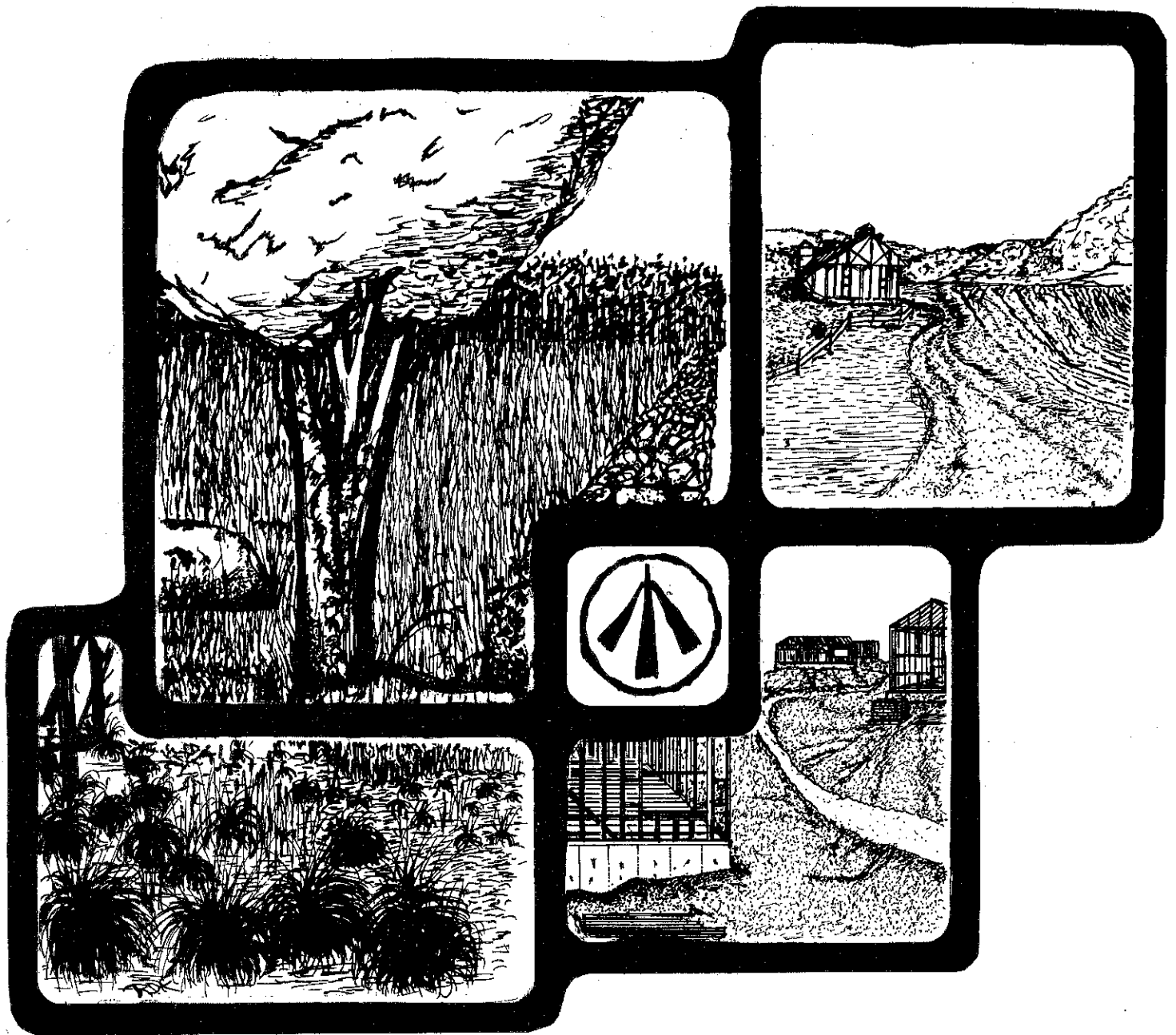


ENVIRONMENTAL REVIEW TEAM REPORT



PARADISE GAME PRESERVE HAMDEN, CONNECTICUT

Ⓢ KING'S MARK
RESOURCE CONSERVATION AND DEVELOPMENT AREA

KING'S MARK ENVIRONMENTAL REVIEW TEAM REPORT

On

PARADISE GAME PRESERVE HAMDEN, CONNECTICUT



APRIL 1979

Kings Mark Resource Conservation & Development Area

Environmental Review Team

P.O. Box 30

Warren, Connecticut 06754

ACKNOWLEDGMENTS

The King's Mark Environmental Review Team operates through the cooperative effort of a number of agencies and organizations including:

Federal Agencies

U.S.D.A. SOIL CONSERVATION SERVICE

State Agencies

DEPARTMENT OF ENVIRONMENTAL PROTECTION

DEPARTMENT OF HEALTH

DEPARTMENT OF TRANSPORTATION

UNIVERSITY OF CONNECTICUT COOPERATIVE EXTENSION SERVICE

Local Groups and Agencies

LITCHFIELD COUNTY SOIL AND WATER CONSERVATION DISTRICT

NEW HAVEN COUNTY SOIL AND WATER CONSERVATION DISTRICT

HARTFORD COUNTY SOIL AND WATER CONSERVATION DISTRICT

FAIRFIELD COUNTY SOIL AND WATER CONSERVATION DISTRICT

NORTHWESTERN CONNECTICUT REGIONAL PLANNING AGENCY

VALLEY REGIONAL PLANNING AGENCY

LITCHFIELD HILLS REGIONAL PLANNING AGENCY

CENTRAL NAUGATUCK VALLEY REGIONAL PLANNING AGENCY

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Stanley J. Pac, Commissioner

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KING'S MARK RESOURCE CONSERVATION AND DEVELOPMENT AREA

Victor Allan, Chairman, Executive Committee

Stephen Driver, ERT Committee Chairman

Moses Taylor, Coordinator

Staff Administration Provided By

NORTHWESTERN CONNECTICUT REGIONAL PLANNING AGENCY

Bruce M. Ridgway, Chairman

Thomas A. J. McGowan, Director

Richard Lynn, ERT Coordinator

Rebecca West, ERT Draftsman

Irene Nadig, Secretary

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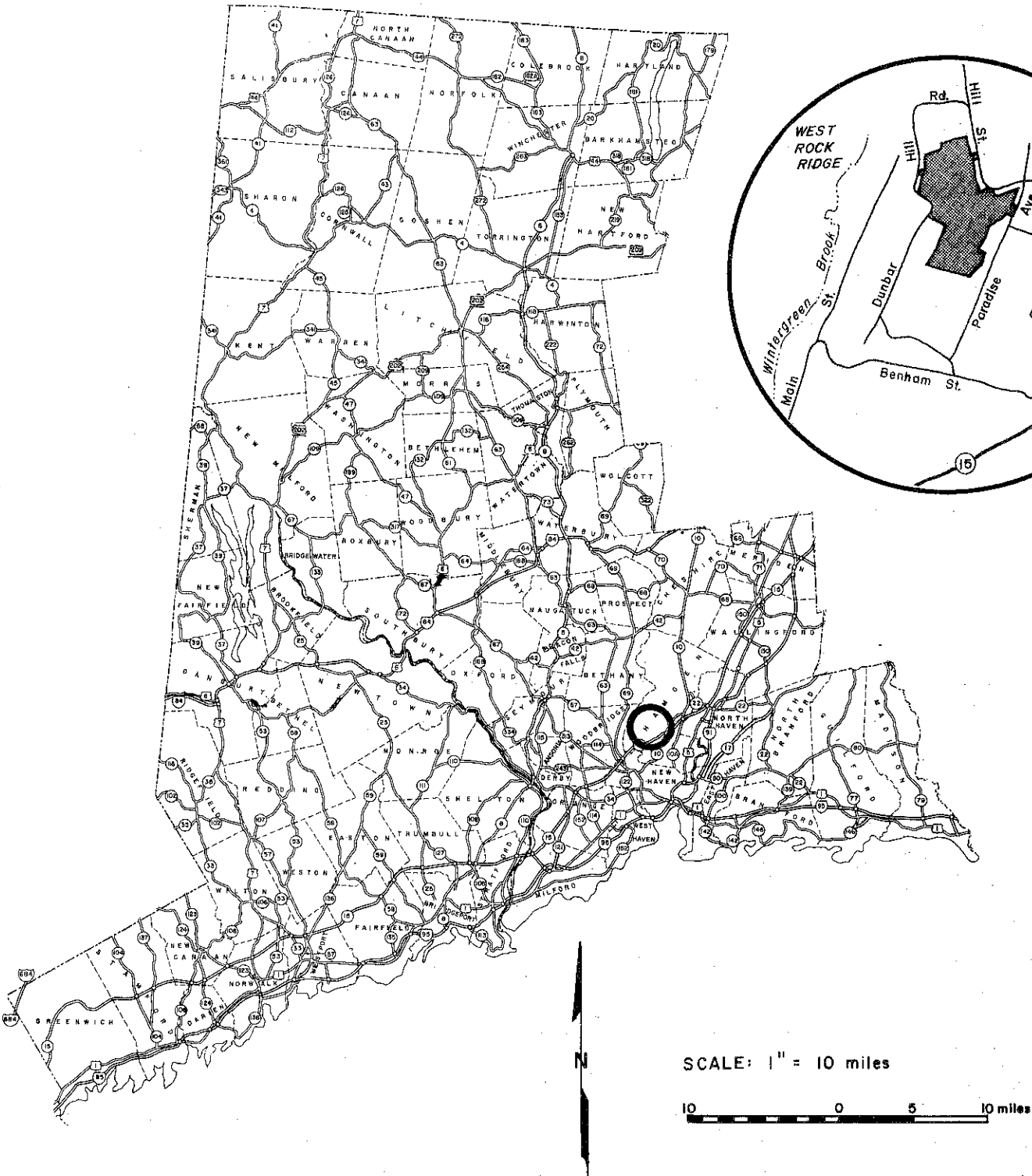
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LOCATION OF STUDY SITE

PARADISE GAME PRESERVE HAMDEN, CONNECTICUT



ENVIRONMENTAL REVIEW TEAM REPORT
ON
PARADISE GAME PRESERVE
HAMDEN, CONNECTICUT

I. INTRODUCTION

The Town of Hamden is presently reviewing a preliminary proposal for residential development of + 180 acres of land. The subject property is located in the southwestern portion of town and is known as the "Paradise Game Preserve". The site is the last vestige of an extensive private hunting preserve originally owned and developed by the late A. C. Gilbert. The present owners of the tract, Game Preserve Associates, intend to develop the property for residential use under the Planned Unit Development (PUD) provisions of the town's zoning regulations. The entire site is currently zoned R-1 which requires a minimum lot size of 80,000 square feet. A zone change from R-1 to R-2 (40,000 square feet minimum lot size) and R-3 (20,000 square feet minimum lot size) is being proposed by the developers in order to implement the proposed plan.

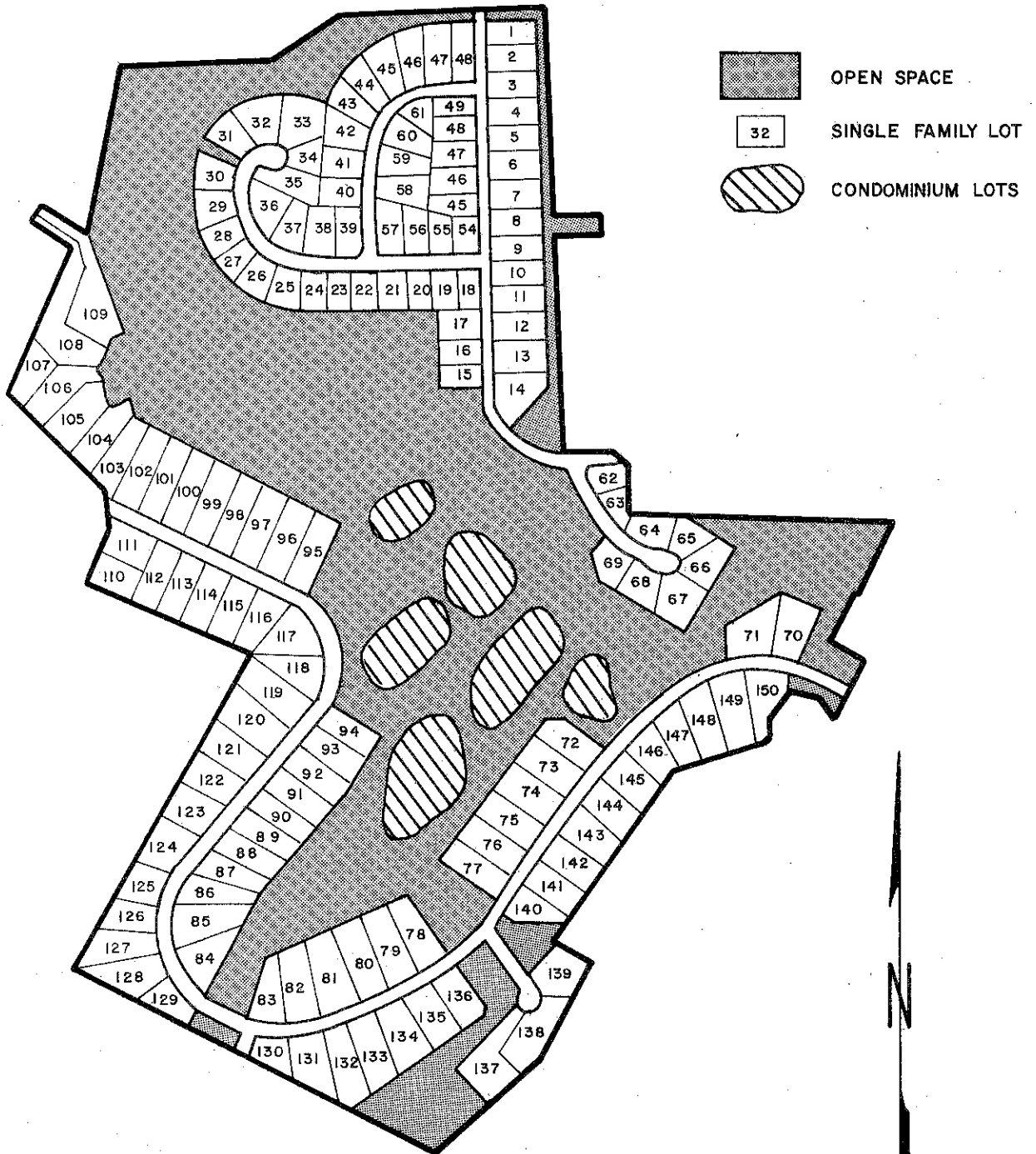
The "outline development plan" for the site calls for a mixture of single family homes and condominiums. Specifically, plans for the site include construction of 150 single family dwellings on + 86 acres of land and 135 condominium units on + 16 acres of land. The single family homes are proposed to be constructed around the perimeter of the property with the multi-family condominium portion located towards the middle of the site (see Figure 1). The entire site is proposed to be serviced by both public water supply and sanitary sewers. Access within the parcel would be provided by a series of new roads constructed off Paradise Avenue, Hill Street, Heathridge Road and Dunbar Hill Road. About 66 acres of the property, including six ponds and a scenic ravine, would remain as open space. For active recreation, a swimming pool and two tennis courts are being proposed.

The Planning and Zoning Commission from the Town of Hamden requested the assistance of the King's Mark Environmental Review Team (ERT) to help the town in analyzing the proposed development. Specifically, the team was asked to identify the natural resources of the site and to comment on opportunities and limitations for development of the land as proposed. Major concerns raised by the town in requesting this review included the impact of the project on soils, hydrology, vegetation, wildlife, transportation, stormwater runoff and sewage disposal.

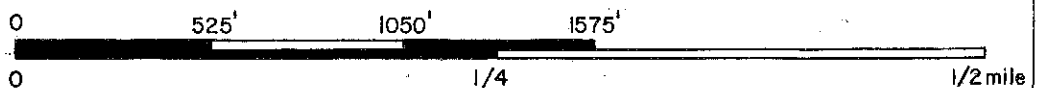
The ERT met and field reviewed the site on February 21, 1979. Team members for this review consisted of the following:

Bill Carey.....	Soil Conservationist.....	U.S.D.A. Soil Conservation Service
Martin Drobney.....	Hydrologist.....	U.S.D.A. Soil Conservation Service
Dwight Southwick	Civil Engineer.....	U.S.D.A. Soil Conservation Service
Michael Zizka.....	Geohydrologist.....	State Dept. of Environmental Protection

FIGURE I.
SIMPLIFIED SITE PLAN



SCALE: 1" = 525'



Robert Rocks	Forester.....	State Dept. of Environmental Protection
Jeffrey Schmaltz	Wildlife Biologist.....	State Dept. of Environmental Protection
Robert Orciari.....	Fishery Biologist.....	State Dept. of Environmental Protection
Edward Rizzotto	Recreation Specialist.....	State Dept. of Environmental Protection
Norris Andrews.....	Regional Planner.....	South Central Regional Planning Agency

Prior to the review day, each team member was provided with a summary of the proposed project, a checklist of concerns to address, a detailed soil survey map, a soils limitation chart, a topographic map, and a simplified site plan of the development proposal. Following the field review, individual reports were prepared by each team member and forwarded to the ERT Coordinator for compilation and editing into this final report.

This report presents the team's findings and recommendations. It is important to understand that the ERT is not in competition with private consultants, and hence does not perform design work or provide detailed solutions to development problems. Nor does the team recommend what ultimate action should be taken on a proposed project. The ERT concept provides for the presentation of natural resources information and preliminary development considerations--all conclusions and final decisions rest with the town and developer. It is hoped the information contained in this report will assist the Town of Hamden and the landowner/developer in making environmentally sound decisions.

If any additional information is required, please contact Richard Lynn, (868-7342), Environmental Review Team Coordinator, King's Mark RC&D Area, P. O. Box 30, Warren, Connecticut 06754.

* * * * *

II. SUMMARY

- . Most of the soils on the property present severe limitations for urban development. Principal limiting factors on various soil types include shallowness, wetness, slope, stoniness, and frost action. Although these limitations do not necessarily preclude development of the land as proposed, they do indicate that extensive and costly measures will be needed to overcome these limitations. With any development of this property, it is essential that the above mentioned site limitations be recognized and properly addressed prior to any construction.
- . The soils at this site can be easily eroded if not properly protected during construction. With implementation of the proposed project, it is recommended that an erosion and sediment control plan for the entire development process be prepared and followed.
- . Approximately 130 acres of the 180 acre tract are forested. The large number and variety of vegetation types on this site are a direct result of intensive wildlife habitat management practices carried out in the past. Several stands with crowded sawlog-size trees would benefit from a commercial thinning. Thinning the trees on these stands would reduce competition and increase the health, vigor, and stability of the residual trees.
- . The diversity of wildlife habitat types found on this parcel is unusually high for a parcel of this size in Connecticut. The proposed development will have a significant adverse impact on wildlife through direct loss of habitat, habitat change, and increased human presence in the area.
- . One perennial stream and six small ponds are located on the property. The stream should be capable of supporting common "warm water" species of fish. Recreational fishing of the ponds will be quite limited due to the shallowness of the ponds, however two of the ponds do appear to be of sufficient size to support a viable fisheries. Although the proposed project can be expected to increase loads of silt and nutrients in the ponds, it is not believed the development will adversely affect an important fisheries resource.
- . Development of the property may be expected to generate both runoff volume and peak flow increases in Farm Brook. These increases may be quite significant in view of the present flooding situation on Paradise Avenue. There is an obvious need for careful, detailed hydrologic analysis of the site and its streams both before and after development. Measures for accommodating runoff and peak flow increases should be outlined or, if none are proposed, reasons given for this.
- . The unavailability of sewer service to the area due to the recent town moratorium on hookups to the sewer line is obviously a major concern. This event clearly affects the ability of the project site to support the proposed development, which was designed to tie into the town sewer system. Soils underlying the area presently proposed for development indicate that on-site septic systems may not be compatible with the proposed one-half acre residential scheme.

- . There are a number of engineering related areas of concern with implementation of proposed development plan. These concerns, discussed in the text, focus on street construction, homesite excavation, and storm runoff control.
- . The Paradise Game Preserve has significant general open space value and offers an attractive setting for passive recreation such as hiking, ski-touring, nature study, and jogging. Existing trails developed throughout the parcel provide suitable access for these activities. The ponds on the property offer good potential for skating and a limited amount of "put-and-take" fishing.
- . The proposed project appears to be consistent with advisory state and regional plans.
- . Preliminary review of existing conditions indicate that the roads surrounding the project area can accommodate the increased traffic generated by the project. It is also anticipated that the existing schools in Hamden can adequately handle the increased number of students.

III. SETTING, TOPOGRAPHY, LAND USE

The "Paradise Game Preserve" property is irregularly shaped but bounded more or less by Heathridge Road on the north, Paradise Avenue on the east, Dunbar Hill Road on the west, and woodland or farmland on the south (see Figure 2).

The property is predominantly wooded with several hayfields located in the northern and southeastern portions of the site. There are six ponds scattered throughout the tract plus one perennial stream which enters the property at its northwestern corner. This stream flows southeasterly through the center of the site to the Farm River, which flows along the eastern border of the property.

An extensive trail system has been developed on the property together with one interior road. This road winds its way from Paradise Avenue up to a six-bedroom hunting lodge located in the north central portion of the property. Several other buildings are also present on the property.

The topography of the area varies from gently sloping hills to steep ravines. Relief generally rises from east (100' elevation) to west (300' elevation) with slopes of 3-15% predominating (see Figure 2). Steeper slopes exist along the stream cove and in scattered sections of the southern portion of the property.

Land use immediately surrounding the project area is predominantly single-family residential with lot sizes varying from one-half acre to one acre in size. Most of this development has occurred since 1965. Just south of the site, open fields and woods are the predominant land use. Northeast of the site is the Paradise Park Country Club.

North of the site adjacent to Dunbar Hill Road and Hill Street is a parcel of 65 acres which contains a large pond and a flood control structure completed as one element of the Farm Brook Watershed project. To the south of the site, an additional 72 acres, principally wetlands, serves flood control purposes with a large earthen dam north of Cooper Lane. Between these two parcels, the town owns some additional open space just east of Paradise Avenue. Thus, in the immediate vicinity of the project site is an almost continuous band of open space from the West Rock Ridge State Park on the north to Cooper Lane on the South.

IV. GEOLOGY

The Paradise Game Preserve is located in the Mount Carmel topographic quadrangle. Bedrock and surficial geologic maps of that quadrangle have been published by the U.S. Geological Survey (map GQ-199, by C. E. Fritts, 1963) and the Connecticut Geological and Natural History Survey (Quadrangle Report No. 12, by R. F. Flint, 1961), respectively. Bedrock cropping out on and underlying the site is part of a sedimentary unit known as the New Haven Arkose. The unit consists of interbedded conglomeratic arkose (a sandstone with scattered pebbles and a high percentage of the mineral feldspar) and arkosic (feldspar-rich) siltstone. The coarser-grained beds are grayish-orange-pink to very pale orange, and the finer-grained beds are grayish-red to dark reddish-brown. The beds dip southeast at 10-15 degrees. The locations of bedrock outcrops observed on the site are shown in Figure 3.

FIGURE 2.
TOPOGRAPHIC MAP



0 1/4 1/2 mile
0 1000' 2000' 3000'

SCALE: 1" = 1000'

FIGURE 3.
LOCATION OF BEDROCK OUTCROPS IN PARADISE GAME PRESERVE.
(ADAPTED FROM CONN. GEOLOGICAL NAT. HISTORY QUAD. REPORT 12)



Overlying bedrock in most places is a glacial sediment known as till. Till is a nonsorted mixture of rock particles of widely varied sizes and shapes. Because it was deposited largely underneath a thick ice sheet, the till tends to be quite compact and resistant to both digging and groundwater movement. The thickness of the till appears to be extremely variable: a minimum thickness of zero occurs in areas of rock outcrops, while maximum thickness, based on a survey of wells in the area (reference: Connecticut Water Resources Bulletin No. 26), may be greater than 40 feet. The validity of the latter estimate is uncertain; because the bedrock is an easily disaggregated sort, it may have been present at shallower depths in some of the wells without being recognized as bedrock by the well drillers.

V. SOILS

A detailed soil survey map and soils limitation chart of the tract is presented in the Appendix of this report. The soils map illustrates the geographic location of all soils identified on the property. The soils limitation chart identifies limiting factors for various land uses on individual soil types and also rates the severity of the limitations as determined by the U.S.D.A. Soil Conservation Service.

Soil Descriptions

Presented below is a brief description of the soils which have been identified on the tract (refer to Soils Map in Appendix).

Cheshire Soils (Map Symbol 37B, 37C) - The Cheshire soils, which make up about 11% of the site, have developed over friable to firm glacial till. The soils are deep and well drained and do not have a high water table during any part of the year. Permeability of this soil is moderate or rapid. Stones and large boulders are common in these glacial deposits and add difficulty when excavating or earth moving operations are needed. Soil conditions are generally favorable, however, for homes with basements, landscaping and roads. Slopes greater than 8 percent add difficulty to site preparation.

Branford Soils (Map Symbol 138B) - These soils have developed in the silty mantles over stratified sand and gravel. They are moderately permeable above the sand and gravel which is characterized by very rapid permeability. These soils are also well suited for homesites, landscaping and roads.

Belgrade Soils (Map Symbol 890) - These soils are present on nearly level to gently sloping topography. They have a moderately-high water table during wet seasons. During the period of high saturation, usually in early spring, the water table remains 15 to 20 inches below the soil surface. The surface and subsurface layers are friable to very friable and permeability is moderate to slow. The seasonal water table presents problems in the construction of streets, parking lots and homes with basements.

Holyoke Soils (Map Symbol 946D, 94MD) - These soils which occupy about 21% of the site, are well drained and underlain by bedrock at shallow depths. The depth to bedrock is variable, but generally less than twenty inches. Surface outcrops may occupy up to fifty percent of the surface. These soils impose severe limitations for urban development.

Yalesville Soils (Map Symbol 033B, 033C) - These soils, which occupy about 36% of the site, are nearly level to moderately steep soils. Bedrock occurs at about 36 inches below the soil surface. These soils are moderately permeable, and as with the Holyoke Soils, shallow to bedrock conditions cause severe problems when developing this land for urban uses. Occasional pockets of deeper soils can be utilized for individual home sites.

Watchaug Soils (Map Symbol 55B) - These soils, which occupy approximately 25% of the site, are moderately well drained, and developed on glacial till. During the period of highest saturation, usually in early spring, the water table remains within 15 to 20 inches of the soil surface. This seasonally high water table presents problems in the construction of homes with basements. Measures such as footing drains are necessary to prevent seepage into basements. The high water table presents a moderate problem in the design, construction and maintenance of streets and parking lots.

Wilbraham Soils (Map Symbol 28) - These soils are poorly drained and occur on uplands. They have developed in glacial till and have a fragipan at 18 to 24 inches. This soil is considered an "inland wetland soil" as defined by Public Law 155 as amended.

Alluvial Land (Map Symbol 58) - This land type occurs on nearly level flood plains in stream valleys. Because of the variable nature of the soil on this land type, it is difficult to classify the material into a single soil type. These areas range in texture from sands or loamy sands to silts and in drainage from well drained to very poorly drained. This soil is considered an "inland wetlands soil" as defined by Public Law 155, as amended.

Raynham Soils (Map Symbol 790) - These soils occupy low-lying nearly level areas on terraces. They are somewhat poorly to very poorly drained and are considered an "inland wetland soil" as defined by Public Law 155, as amended.

Soils vs. Proposed Land Use

It is clear from the foregoing soil descriptions and the information presented in the Soils Limitation Chart (see Appendix) that the majority of the soils on this property present severe limitations for urban development. Principal limiting factors include shallowness, wetness, slope, stoniness, and frost action. Although these limitations do not necessarily preclude the development of this land for the proposed urban use, they do indicate that extensive and costly measures will be needed to overcome these limitations. With any development of this property, it is essential that the above mentioned site limitations be recognized and properly addressed prior to any construction.

Soil Loss and Sedimentation

The soils at this site can be easily eroded if not properly protected during construction. With implementation of the proposed project, it is recommended that an erosion and sediment control plan for the entire development process be prepared and followed. Erosion and sediment control practices are described in the "Erosion and Sediment Control Handbook--Connecticut" (U.S.D.A. Soil Conservation Service, 1976). Additional assistance in the preparation and review of erosion and sediment control plans is available from the New Haven County Conservation District.

It is difficult at this time to make specific recommendations for erosion and sediment control due to the preliminary nature of the subdivision proposal. With implementation of the project, however, it is recommended that the following practices be implemented as part of the erosion and sediment control plan:

1. All disturbed areas, (including areas around homes, road cuts and fills, and stockpiled topsoil) should be vegetated as follows:
 - . Permanent vegetation where final grading is completed in time for seeding dates (April 1 - June 15; August 15 - September 30) and where areas will be exposed for 12 months or more.
 - . Temporary vegetation where final grading is not done in time for permanent seeding. Seeding dates for temporary vegetation are August - October 15.
2. Roads and driveways should be constructed as close to the land contour as possible.
3. Road cuts and fills should be finished on 2:1 side slopes (3:1 for sandy and gravelly soils).
4. Hay bale erosion checks around all catch basins are suggested, especially before paving roads. The streams on the property should also be protected with hay bales.
5. Top soil should be stockpiled and spread over areas that would otherwise be critical to establish in vegetation because of adverse soil conditions.
6. Consider using sediment traps and energy dissipators where appropriate in the storm water management system.

VI. FORESTRY

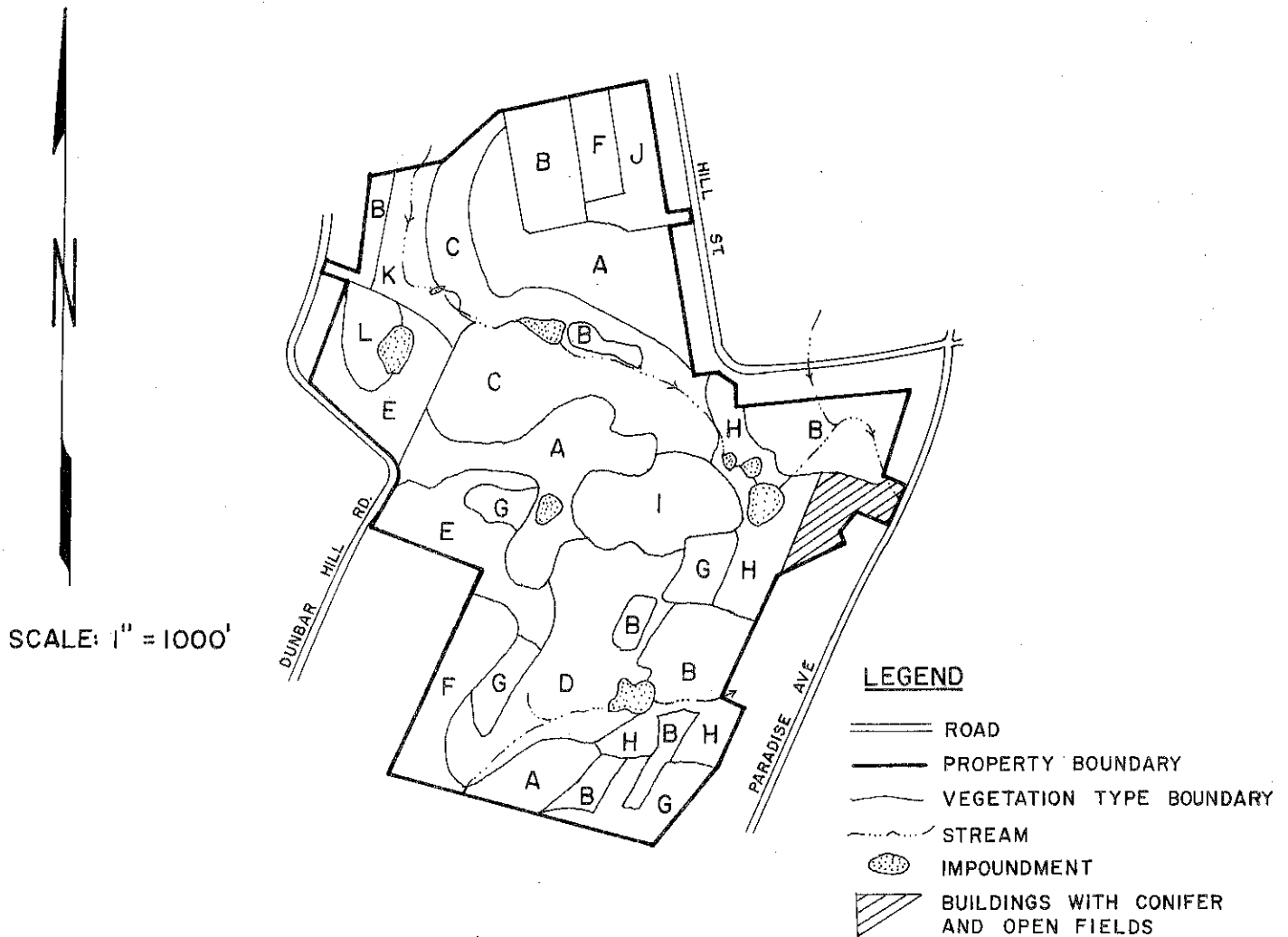
Approximately 130 acres of the 180 acre tract are forested. Fields, ponds, and lodges make up the remaining 50 acres.

The property may be classified into twelve distinct vegetation types or forest stands (see Figure 4). The composition of these forest stands is described below, followed by a discussion of a number of forestry related concerns.

Vegetation Type Descriptions

Stand A - Mixed hardwoods. Predominantly sawlog-size red, white, scarlet and chestnut oak with tulip tree, black birch, red maple, American beech and hickory are present in this 31 acre fully-stocked stand. Scattered mountain laurel, blue-beech, dogwood, highbush blueberry and hardwood tree seedlings make up this areas understory. Huckleberry, Christmas ferns and club mosses form a spotty ground cover in this stand. Four acres of this stand have received a thinning within the last 10 years.

FIGURE 4.
VEGETATION TYPE MAP



VEGETATION STAND DESCRIPTIONS*

- STAND A - MIXED HARDWOODS, FULLY-STOCKED, SAWLOG SIZE, 31 ACRES.
- STAND B - OPEN FIELDS, 31 ACRES.
- STAND C - MIXED HARDWOODS, FULLY-STOCKED, SAWLOG SIZE, 25 ACRES.
- STAND D - MIXED HARDWOODS, FULLY-STOCKED, POLE SIZE, 16 ACRES.
- STAND E - LAUREL GROVE, 15 ACRES.
- STAND F - MIXED HARDWOODS, UNDER-STOCKED, POLE TO SAWLOG SIZE, 11 ACRES.
- STAND G - OLD FIELDS, 11 ACRES.
- STAND H - PLANTATION, SAWLOG SIZE, 10 ACRES.
- STAND I - HEMLOCK, FULLY-STOCKED, SAWLOG SIZE, 9 ACRES.
- STAND J - MIXED HARDWOODS, FULLY-STOCKED, SEEDLING TO SAPLING SIZE, 5 ACRES.
- STAND K - MIXED HARDWOODS, FULLY-STOCKED, SAWLOG SIZE, 4 ACRES.
- STAND L - HARDWOOD SWAMP, UNDER-STOCKED, SEEDLING SIZE, 3 ACRES.

* SEEDLING SIZE - LESS THAN 1" IN DIAMETER AT BREAST HEIGHT (D.B.H.)
 SAPLING SIZE - 1" TO 5" IN D.B.H.
 POLE SIZE - 5" TO 11" IN D.B.H.
 SAWLOG SIZE - 11" AND GREATER IN D.B.H.

- Stand B - Open Fields. Approximately 31 acres of open fields are present within this tract. Grasses are the dominant form of vegetation, with milkweed, bayberry, red cedar, hawthorn and assorted legumes becoming more wide spread. The borders of many of these fields have been planted with exotic shrub species to improve wildlife habitat.
- Stand C - Mixed Hardwoods. This 25 acre fully-stocked stand is made up of sawlog-size red oak, sugar maple and scattered hemlock. A dense understory of mountain laurel has effectively shaded out all other species of understory and ground cover vegetation.
- Stand D - Mixed Hardwoods. Pole-size black birch and red maple are becoming crowded in this 16 acre fully-stocked stand. Scattered hardwood tree seedlings, mountain laurel and red cedar are present in the understory, along with spicebush in the wet areas. The ground cover species present are huckleberry, club mosses and grasses, with ferns and skunk cabbage in the wetter areas along the brooks.
- Stand E - Laurel Grove. Dense mountain laurel and scattered sapling to pole-size red cedar dominate this 15 acre site. Occasional sawlog-size red oak and white pine are also present. Not enough sunlight reaches the soil to sustain any form of ground cover.
- Stand F - Mixed Hardwoods. This 11 acre stand is understocked with poor quality pole to sawlog-size black birch, red maple and hickory. Greenbrier and Japanese honeysuckle are becoming excessive over this entire site. Multi-flora rose, dogwood, blue-beech, highbush blueberry and scattered mountain laurel, red cedar, gray birch and apple trees form a dense understory which excludes most ground cover vegetation.
- Stand G - Old Field. Old field brush species such as red cedar, black cherry, multi-flora rose, dogwood, gray birch and mountain laurel are present on this 11 acre site. Bayberry, milkweed, goldenrod, club mosses and grasses form a dense ground cover in this area.
- Stand H - Plantation. Sawlog-size white pine, red pine, white spruce, Norway Spruce and Colorado blue spruce have been introduced on this 10 acre site. Old field species (red cedar, gray birch and black birch) are present in some places where the understory has not been removed or shaded out. Ground cover is primarily grasses, club mosses and goldenrod.
- Stand I - Hemlock. Sawlog-size hemlock dominate this 9 acre fully-stocked stand. Red oak, atlantic white cedar and black birch are also present but in low numbers. The understory is dominated by mountain laurel and flowering dogwood. These shrubs are becoming dense around the edges of this stand, where they are able to take advantage of the direct sunlight which reaches them.
- Stand J - Mixed Hardwoods. Seedling and sapling-size tulip tree, red maple and dogwood with occasional red cedar making up this fully-stocked 5 acre stand. Multi-flora rose, bayberry, grapevines, smooth sumac, grasses and goldenrod are present around the edges of this stand.

Stand K - Mixed Hardwoods. Sawlog-size red oak, white ash, tulip tree and sugar maple are becoming crowded in this 4 acre fully-stocked stand. Many of the trees in this steeply sloped ravine are mature and in good health. Barberry, multi-flora rose and mountain laurel have invaded from surrounding areas. Ground cover vegetation where present is predominantly made up of grasses and ferns.

Stand L - Hardwood Swamp. This 3 acre stand is understocked with seedling size red maple. Dense thickets of alder cover some of this site. Marsh grasses are the principle form of ground cover present.

Aesthetics and Preservation

The great variety of vegetation types created by intensive wildlife habitat management and the introduction of ornamental trees for aesthetics, make this 180 acre tract beautiful and unique. The diversity and uniqueness of the physical and biological environment make it a prime area for nature study and environmental education.

The dense groves of mountain laurel and flowering dogwood present in stands E and I are extremely valuable for aesthetics; they also provide cover and food for wildlife. Every effort should be made with development of this land to preserve these groves, especially when they are located near proposed roads.

The large healthy ornamentals planted years ago along existing roads are also valuable. They increase the aesthetics of the area, provide year-round shelter for birds, act as wind and visual barriers and add to the variety of the property. Preservation of these trees is desirable.

The ravine which runs through this property is particularly valuable because it is still in a relatively natural state. The steep rocky slopes, rushing water, and mature trees add to its beauty. Undeveloped, this ravine will provide a unique experience for all those that hike through or along it. Conversely, development of this area will destroy its natural qualities.

Limiting Conditions

The canopy of mountain laurel is so dense in stands C, E and I, that very little sunlight can penetrate through to the forest floor. As a result no ground cover vegetation or future forest trees can become established. Access through these stands is limited to presently existing trails.

Greenbrier and Japanese honeysuckle are becoming the dominant vegetation form in stand F. They are rapidly reducing the quality of the other plant species present, through intense competition. Access by foot into this area is difficult due to the density of vines present.

The high water table and poor soil aeration in the hardwood swamp (stand L) limits vegetative growth to species tolerant of excessive moisture. Red maple will survive under these conditions, however, growth rates are usually slow and tree quality is poor. Management of these areas for timber production is not economically feasible.

Potential Hazards and Mitigating Practices

Dead or dying trees which are in danger of falling may become a hazard when they are near road ways, utility lines, buildings, intensive use areas or recreation areas. These trees should be identified and removed prior to land development.

Excavating, filling and grading for construction of roads, driveways or buildings will cause changes in soil conditions which may in time affect tree health and vigor. Trees are sensitive to changes which affect the aeration, moisture level and physical constitution of the soil within their root zones. This zone corresponds to the entire area under a tree's crown. Soil disturbances in this area may cause a decline in the trees' health and perhaps death within 3 to 5 years. It is clear then that soil disturbance near trees which are to be preserved must be minimized to maintain tree health and vigor. Care must also be taken during construction to avoid mechanical injury to trees.

Saving trees in small groups or "islands" helps to protect trees from excessive soil alteration and mechanical injury. The operation of equipment, near trees that are to be saved, during the winter months when the ground is frozen will also reduce the likelihood of permanent soil disturbance, increasing the chance of tree survival. In general, trees which are healthy and full crowned can withstand disturbances better than unhealthy, slow growing trees.

Suggested Management Techniques

A commercial thinning of sawlog-size trees would be feasible in stands A and C. The trees in these stands are becoming crowded causing a general decline in their health and vigor. The same conditions hold true for the trees in stand D; however, these trees are not large enough for a commercial thinning. A fuelwood thinning in this stand would prove beneficial.

Thinnings, removing between 1/4 and 1/3 of the trees throughout stands A, C and D, would result in a healthier more stable residual forest (especially if the thinning focused on removing poor quality, damaged, and undesirable trees).

The harvest operation recommended for stands A and C would provide fuelwood if tree tops were left by the operator. Laneways may be cut through the dense mountain laurel in stand C as the thinning progresses, providing access into this area.

The hemlock in stand I are also becoming crowded, a light thinning at this time would reduce competition and allow some sunlight to reach the forest floor stimulating ground cover vegetation. Abrupt openings in this stand should be avoided as hemlock that is newly exposed to direct sunlight may die from sunscald. If this area is intensely developed, the hemlock should be harvested to avoid future hazards.

If the suggested thinning operation is agreed to, a consultant should be contacted to mark the trees to be removed and to oversee the thinning operation.

VII. WILDLIFE

The fact that Paradise Game Preserve was once managed to benefit wildlife is immediately apparent as one walks the 180 acre site. It is obvious that at one time, much effort was put into creating and maintaining a diversity of habitats on the property. These habitats can be grouped into six major types (see Figure 5).

Wildlife Habitat Types

Six small ponds are located on the property. Aquatic vegetation found along the margins include cattails, pickerel weed, and water lilies. These areas provide a home for green frogs, bull frogs, water snakes, painted and snapping turtles, muskrats, little green herons, and waterfowl such as mallard ducks.

Several open field areas appear to have been cultivated, or at least hayed, until recently. The major vegetation present is grass. Cottontail rabbits, meadow voles, white-footed mice, and other small rodents live here. Owls, hawks, and foxes come here to hunt them. Birds such as the bobolink and meadowlarks nest here. Many birds and woodland species of wildlife use these areas for feeding.

The reverting fields have not been cultivated for some time and are being invaded by shrubs and sapling trees. Wildlife found in the open fields will be found here. In addition, other species will be found here because of the increase in cover and variety of foods. Red-winged blackbirds and cardinals are two birds which could be found nesting on these areas.

The conifer areas consist of both plantation and natural stands. Species present include white and red pine and hemlock. These areas are avoided by most species of wildlife due to the lack of cover close to the ground. There are some exceptions, such as the purple grackle and mourning dove which will nest in this habitat type.

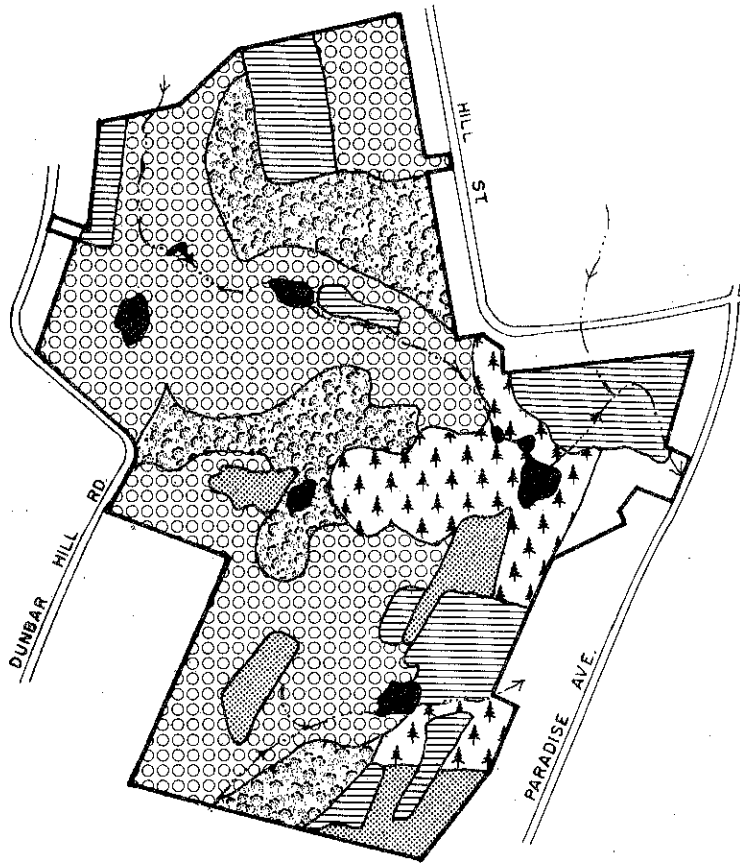
Some of the hardwood forest areas have little or no evergreen understory. Tree species include oaks, maples, birch, aspen, and ash. Deciduous species such as dogwood and viburnum are found in the understory. Grey squirrel, chipmunk, ruffed grouse, scarlet tanager, black and white warbler, and box turtle are examples of wildlife species which utilize this habitat type.

The remaining area is a mixture of both evergreen and hardwood species. It contains a variety of interesting plant associations, including laurel thickets and cedar stands invaded by hardwood saplings. These diverse covers provide habitat for many of the wildlife species already mentioned.







Impact of Proposed Development

The diversity of wildlife habitat types found on this parcel is unusually high for a parcel of this size in Connecticut and is a result of the past management practices. The primary impact of the proposed development on wildlife will be the loss of this diversity as much of the area will be turned into structures and lawns. Buildings, roads, driveways, parking lots, sidewalks, and recreational facilities such as pools and tennis courts represent a direct loss of habitat. Conversion of fields and forests to lawns represents a change in habitat type rather than a loss of habitat. In the case of the Paradise Game Preserve, this change will result in a drastic decrease in the kinds and number of wildlife. This

FIGURE 5.
WILDLIFE HABITAT TYPES



KEY

-  OPEN FIELD
-  REVERTING FIELDS
-  CONIFERS
-  HARDWOODS WITH LITTLE EVERGREEN UNDERSTORY
-  MIXED HARDWOODS AND EVERGREENS
-  PONDS



SCALE: 1" = 1000'

loss will be even more acute with 20,000 and 40,000 square foot zoning than it would be with 80,000 square foot zoning,

Another impact of the proposed development will be the increased human presence, vehicular traffic, and roaming cats and dogs. This will drive the less tolerant wildlife species from the remaining open space, even though it has not been physically changed.

Steps can be taken to maintain and enhance some wildlife habitat under this proposal. Buildings, roads, etc. should be constructed with care and with as little disturbance of unbuilt areas as possible. Homeowners and the condominium management can enhance their yards, and the surrounding open space, as wildlife habitat by planting shrubs which provide food and cover for wildlife, erecting birdhouses, and by keeping cats and dogs under control. Habitat diversity on the open space lands can be maintained by occasional mowing of fields with a large rotary mower and by creating more openings through the removal of trees as cordwood.

As in any suburban area, there is potential for wildlife problems if vegetable gardens are planted and if garbage can lids are not secured.

VIII. FISHERIES

One brook and six small ponds are located on the Paradise Game Preserve Property. The brook should be capable of supporting common stream species of fish such as blacknose dace, tessellated darters and creek chubs. The brook appears to be of sufficient size to support native brook trout. However, a flood control pond, located approximately one-half mile upstream from the property, will cause water flowing in the brook to become warmed during the summer. This warming will tend to prevent cold water species of fish, such as trout, from inhabiting the brook.

Although there are a number of ponds located on the property, recreational fishing will be quite limited. Four of the ponds are very shallow, causing fish populations, if present, to be subject to frequent winter kill. Two of the ponds do appear to be of sufficient size for supporting a viable fisheries. The southern-most pond (approximately three-quarter of an acre) should provide suitable habitat for largemouth bass, sunfish species, and bullheads. A small amount of fishing for these species should be possible. The one-half acre pond, located by the main lodge, could support a small "put-and-take" stock trout fishery. Although this pond may have been fairly deep at one time, it is likely to have filled with silt over time. This filling-in process would function to reduce the chances for stocked trout holding over through the summer.

In the opinion of the ERT's Fisheries Biologist, the proposed development would not negatively affect an important fisheries resource. However, the brook and ponds should be allowed to remain in their natural and aesthetic condition. It can be expected that development will increase loads of silt and nutrients in the ponds and cause them to become even more shallow and prone to nuisance growth of aquatic vegetation unless maintenance measures are implemented to control this.

IX. HYDROLOGY

The principal drainage channel on the site is a stream that enters from the north, at Dunbar Hill Road, and flows south to southeast through the site, ultimately joining Farm Brook. At the point where Farm Brook flows under Paradise Avenue, near the intersection of Howard Drive, it possesses a watershed (drainage area) of approximately 925 acres (see Figure 6). Development would increase the volume of runoff shed from the site during periods of precipitation; the added runoff would, in turn, increase the peak flows in Farm Brook for a given amount of rainfall.

A calculation was made of the peak flow increases to be expected in Farm Brook for the 25-year, 24-hour storm and the the 50-year, 24-hour storm (these are storms which occur on a statistical average of once every 25 years and once every 50 years respectively, and which produce certain amounts of rainfall within a 24-hour period). The design point is the underflow of Farm Brook at Paradise Avenue. The method used in the calculation is based on a procedure outlined in the Soil Conservation Service's Technical Release No. 55. Because a complete calculation by that procedure requires a detailed analysis of soil types, present and proposed land uses, engineering measures, and other factors, and because of the existing data concerning Farm Brook's hydrology, the team decided to use a simplified version of this method, employing several broad assumptions and generalizations. Although the specific peak-flow estimates may therefore lack precision, the estimated post-development percentages of increase in those flows should be reasonably accurate. For instance, the peak flow for the 25-year, 24-hour storm before development is estimated to be 492 cubic feet per second. The post-development figure represents a 7 percent increase. Whereas the actual pre-development peak flow may be greater or less than 492 cfs, the percentage of increase following development is still likely to be about 7 percent. Table 1 shows the results of the calculations. It must be noted that, although the projected percentages of increase are relatively small, they may be quite significant in view of the present flooding situation on Paradise Avenue.

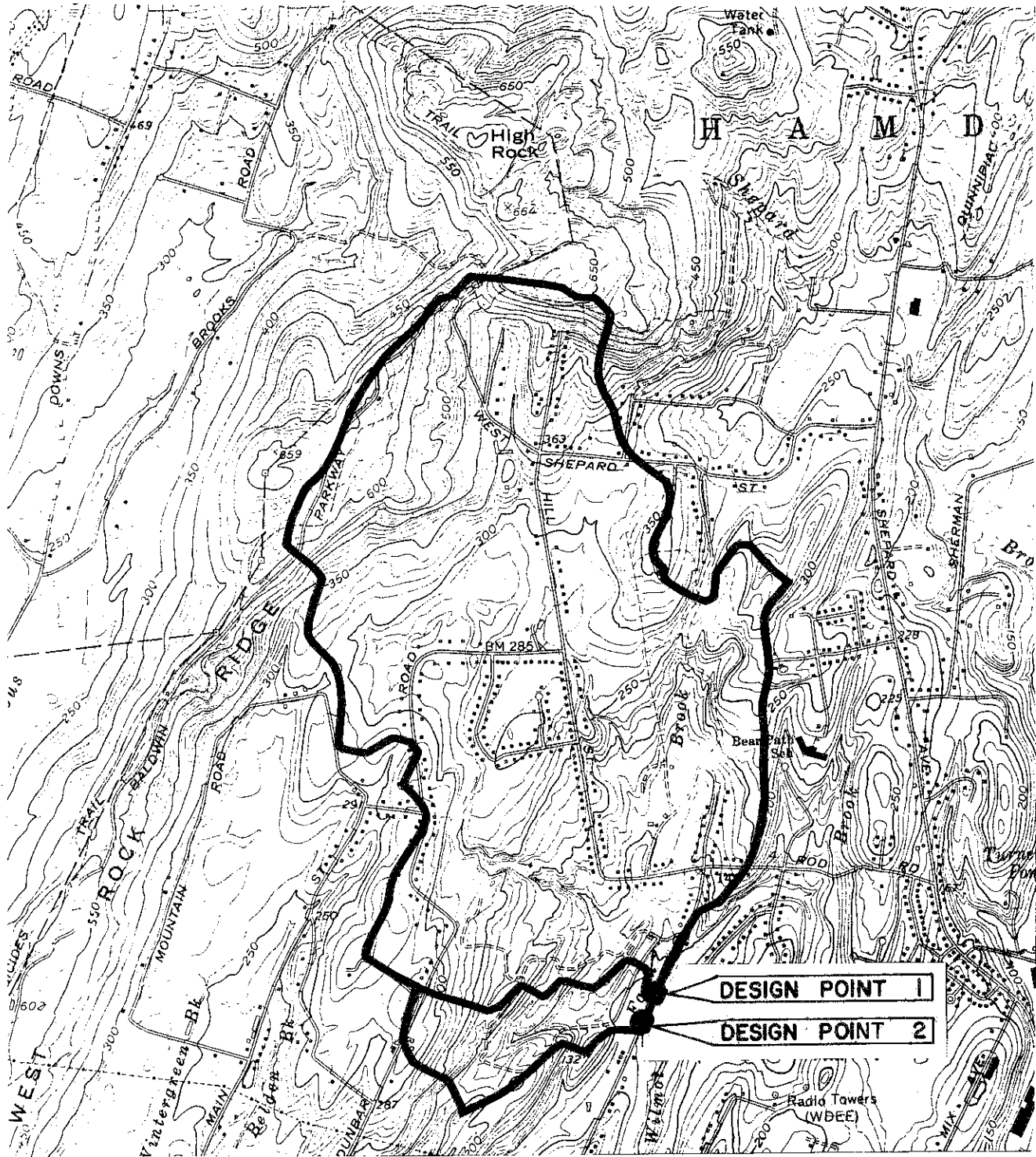
Hydrologic calculations were also made for a creek that drains most of the southern quarter of the site (see Table I). This creek is channeled under Paradise Avenue approximately 700 feet south of Howard Drive. Because a large proportion of the drainage area of the creek would be developed under the proposed plan, the anticipated peak flow increases are substantial.

Table 1. Estimated peak flows for design points shown in Figure 6. both before and after development. All flows given are cubic feet per second (cfs).

<u>Design Point #1</u>	<u>Before Development</u>	<u>After Development</u> (% increase)
25-year, 24 hr. storm	492	526 (7%)
50-year, 24-hr. storm	649	688 (6%)
<u>Design Point #2</u>		
25-year, 24-hr. storm	132	179 (36%)
50-year, 24-hr. storm	173	228 (32%)

FIGURE 6.

DRAINAGE AREAS FOR STREAMS IN PARADISE GAME PRESERVE, AND LOCATION OF THEIR ASSOCIATED DESIGN POINTS.



It should be recognized that the magnitude of runoff change will be more severe in immediate areas of development. During construction and prior to establishment of vegetation, major stormwater runoff in localized areas where development is intense will increase more than 200 percent. Runoff increases from smaller, more frequent storms will increase more than 600 percent. Peak discharge increases associated with this runoff change will be even greater due to changes in drainage paths. Even after project completion and the establishment of vegetation, runoff will still range from 100-200 percent of prior project runoff in localized areas.

The above discussion demonstrates the need for careful, detailed hydrologic analysis of the site and its streams both before and after development. Measures for accommodating runoff and peak flow increases should be outlined or, if none are proposed, reasons given for this.

X. SEPTIC SYSTEMS

At the time of the ERT field review, sewage disposal for the subdivision was planned to be provided by the town sewer system. The team was asked to review the potential for the site for individual septic systems should sewer facilities prove to be unavailable. The potential for successfully locating a septic system on any lot depends upon the specific geologic and hydrologic conditions within and adjacent to that lot. The major limiting conditions on this site appear to be locally high water tables and shallow depths to bedrock. The soils map and limitations chart included in this report can provide insight as to general areas of concern, but because of the variability of till textures and thicknesses, each potential system location must ultimately be based upon evaluation of soil conditions at that location.

It was presumed that drinking water for the subdivision would be provided by the town's public supply facilities. If individual wells were used, there would be a high potential for wellwater contamination from septic systems because of the density proposed for the subdivision. Under a public water-supply scheme, even though groundwater would still be affected, the major concerns would be the possibility of failing systems or of surface-water contamination. In areas where bedrock or a compact till layer is near the surface, or in any area where the water table is permanently or seasonally at high levels, water may flood a septic system, causing backups and other difficulties. In some instances, effluent may break out at the surface, with the attendant potential for health and aesthetic problems. Such conditions could also lead to contamination of local streams and to eutrophication of ponds, depending on the extent of the problem and its proximity to such water bodies.

In view of general soil conditions in the area proposed for development, it appears that individual on-site septic systems may not be compatible with a one-half acre residential scheme, even assuming public water supply is available.

XI. FOUNDATION DEVELOPMENT, STORMWATER CONTROL, AND INTERIOR ROADS

Proposed Condominium Development

The proposed condominium units are all planned in areas of shallow to bedrock soils (Yalesville soil series). These soils present severe limitations for development of home sites with basements and moderate limitations for streets and parking lots.

There are several small, shallow ponds in this area, which would indicate that any excavated side slopes would seep water in spring and late fall. Foundation drains would seem a must in this area with implementation of the project. Additional drainage measures might also prove necessary to prevent soil sloughing on side slopes.

Topographic maps of the site indicate that relief varies from 3 - 15% in this area. This could mean that the condominium units might have to be put on foundation soils with varying consolidation potential. Special construction cautions should be exercised here to eliminate foundation cracks and settlements.

Siting of the proposed condominium units should be careful not to cross any of the existing drainageways. Some of the existing small ponds in the area might be able to be converted into sediment basins and runoff detention basins.

Proposed Single Family Lots

About 75 of the proposed 150 lots are underlain by shallow to bedrock soils. These soils present severe limitations for development of home sites with basements.

About 4000 feet of the proposed 10,500 feet of streets are on shallow to bedrock soils. The steeper street grades are found adjacent to lots #14, 78, 84 and 85. Roads in these areas can probably be constructed at a maximum 10% grade, however, the cuts and fills would make access to the adjacent lots not too convenient or scenic. Steep grades in these areas would also make the construction and landscaping of the lots and streets more costly.

As shown in the Soils Limitation Chart (see Appendix), some of the soils on this site are suitable as a source of road fill. However, the location of these soils is largely in areas where no excavation is planned (i.e. open space areas). Hence, there may not be enough fill available from disturbed portions of the site to meet the demands for street sub-base and building foundations.

Many of the soils on-site are susceptible to frost heave (see Soils Limitation Chart in Appendix). Street sub-bases in these areas should have proper provisions for drainage of groundwater to mitigate the effects of frost heaving.

The side slopes of cuts for buildings and streets in the Watchaug fine sandy loam soils will seep and cause slope instability. Foundation drains would seem a must in these soils. The Watchaug soils, as well as the Cheshire soils, are easily erodible and will require judicious erosion and sediment control planning.

Sediment basins could be constructed in some of the more sloping areas to reduce the amount of sediment entering the streams on-site. These basins might be able to be sized so that they could serve as runoff detention basins during and after construction. These could be incorporated with the project plans so that prior project peak runoff conditions would be maintained. One area for a sediment basin and increased detention basin is the area behind lots 80 - 83.

The northern portion of the parcel (lots 1 - 61) has a drainage area of about 26 acres that drains along and over streets, as planned, and ends in the corner by lot #14. This is a very critical spot and the disposition of increased runoff in this area needs to be considered very carefully. Presently, there are rather defined drainageways down the slopes in this area which indicate the area produces a considerable amount of runoff. The pattern of proposed streets, for the most part, cuts across the drainage ways and will require provisions for surface water across the streets.

Another area of surface runoff concern is in the area of lots 123 - 129. Drainage easements may need to be provided along the natural drainage way that exists.

The site plan indicates that proposed housing is located away from the main water courses; therefore, it appears that flooding will not be a problem. The existing pond adjacent to the Hunting Lodge could present a hazard however to properties immediately downstream in the event of dam failure. No signs of dam structure weakness were noted, although ice and snow cover obscured telltale signs of seepage or foundation deterioration the day of the ERT field review. The limited spillway size, without question, would suggest that the entire structure would be overtopped during a major storm. Overtopping could result in structure damage and possible failure. From the developer's site plan it appears that proposed lots 145, 146 and 147 and the axis road would be in the path of the floodwave that could occur. A determination of the magnitude of flooding resulting from dam failure and associated depths of flooding could be made. This might indicate the need to provide a floodway of adequate size to allow passage of this flow without endangering persons or property. An alternative would be to upgrade the dam.

Finally, it should be mentioned that concentrating surface runoff over the steep banks of the principal streams on-site should be avoided. To promote this principle, a system of road catch basins and storm drainage should be incorporated into site design.

XII. RECREATION

As mentioned previously in this report, the Paradise Game Farm has significant general open space value. The natural ravine which bisects the property has particularly high aesthetic value and plans to preserve this ravine are commendable. The ravine, together with the ponds on the property and impressive laurel groves, offer an attractive setting for passive recreation such as hiking, ski touring, nature study, and jogging. The ponds on the property offer good potential for skating and a limited amount of "put-and-take" fishing.

The existing trails developed throughout the proposed open space parcel will provide suitable access for prospective residents. Care should be taken with the development of this property, to protect these trails from overuse or misuse. It is recommended that motorized use of these pathways be restricted or prevented with implementation of the project.

Although the present biological diversity of this site is of high value, it should be recognized that without proper landscape maintenance, these values will diminish or disappear.

It is difficult at this time to make substantive comments on the potential of the site for active recreational development due to the lack of specificity in the developer's preliminary plans. A swimming pool and two tennis courts are being proposed but no location for these has yet been designated. In general, development of these and other active recreation facilities will likely face many of the same obstacles confronting homesite development on this site (slopes, shallow to bedrock soils, frost heaving, etc.). It is important that these obstacles be fully recognized and properly addressed in recreational facility development on the site.

The use of the proposed hunting lodge is unclear, but it would undoubtedly have to be limited to relatively small groups owing to its structural constraints.

It should be noted that the northwest border of the land is within several feet of a major state park acquisition now in progress. Although the "Paradise Game Preserve" development proposed is geared for a "member only" land pattern, a connecting corridor between the two open space parcels could prove valuable for general public use.

XIII. PLANNING CONSIDERATIONS

Consistency of Proposed Project with State and Regional Plans

The "State of Connecticut - Conservation & Development Policies Plan 1979-1982" is before the General Assembly for their review and action during this session. The Locational Guide Map which accompanies that report indicates that the subject area is designated as an "Urban Growth" area. Therefore, it appears that the proposed development is in harmony with this advisory State Plan.

The proposed project is also in agreement with the "Regional Land Use Plan - 1968" of the South Central Regional Planning Agency. The Plan identifies the Game Preserve Property for low-to-moderate density residential use.

Local Transportation Facilities and Traffic Impact

The site is one mile west of Dixwell Avenue, Connecticut Route 10. In the past twenty years, significant commercial and high-density residential development has taken place in this area. The Town of Hamden, recognizing the steady growth to the west of Dixwell Avenue extended Skiff Street beyond Dixwell Avenue to Howard Drive. As a result, there is a direct connection from the Paradise Game Preserve site to Dixwell Avenue. Alternate access for the site is provided by Paradise Avenue, a narrow two-lane relatively unimproved road, running on the eastern border of the site southerly to Benham Street. On the west, Dunbar Hill Road runs southerly to Cooper Lane and Benham Street. The upper section of Dunbar Hill Road has been recently widened and paved, while the lower or southern section is relatively unimproved. Additional east-west access is provided by Hill Street and Four Rod Road to Shepard Avenue, a major north-south street.

The nearest public transportation is on Dixwell Avenue--Mix Avenue, designed to provide not only service to the high-density residential development on Mix Avenue but the Hamden Plaza--Hamden Mart retail complex on Dixwell Avenue.

Immediately to the south of the Plaza-Mart on Dixwell Avenue is a complete interchange with the Wilbur Cross Parkway.

Preliminary review of traffic standards and existing conditions indicate that the surrounding roads have adequate capacity to accommodate the increased travel generated by the proposed project. It would be judicious, however, for the developer to provide a traffic engineering analysis of the proposed project to ensure that the project will not create traffic problems in the surrounding area.

Water Supply and Sewage Disposal

Sewer and water service is located on Hill Street and the northern part of Dunbar Hill Road. Future water service needs of the proposed project can be adequately met. However, the immediate future of adequate sewer service is questionable for two reasons. First, sewage from Hamden is treated in one of the New Haven Water Treatment Plants; specifically, for this particular area, the Boulevard Primary Water Treatment Plant. The City of New Haven is under orders to expand this plant to 90 MGD secondary treatment and an Environmental Impact Statement is nearing completion. However, there is a serious overload at the present plant which constrains much further development. The second and even more critical constraint is the availability of an adequate size interceptor and trunk to receive any more sewage. The lack of capacity of the Thorpe Drive Sewer Line, which serves the project area, has prompted the Hamden Sewer Commission to place a moratorium on hookups to this sewer line. This moratorium is scheduled to be in effect through January 1, 1980 to allow the completion of a comprehensive study of town sewer lines. Pending the results of that study, the moratorium may or may not be lifted.

This unavailability of sewer service is obviously a major concern and clearly affects the ability of the Paradise Game Preserve to support the proposed development, which was designed to tie into the town sewer system.

Services to Support Development

. Safety

The site is approximately two miles from both Fire and Police Headquarters. An additional Volunteer Fire Company is one and one-half miles from the site on Shepard Avenue. Fire hydrants are located on Paradise Avenue and Hill Street and service would be extended to the development.

. Education

Within less than a mile from the project site are two elementary schools. Bean Path School is north of Four Rod Road and is one-half mile from the site. Shepard Glen School is three-quarters of a mile to the east with easy access via Howard Drive.

Sleeping Giant Junior High is about two and one-half miles to the east and the Senior High School is less than two miles on Dixwell Avenue.

Pupil enrollment in Hamden has been declining in the past few years. This has resulted in some school closings and changes in the district. It is anticipated that the existing schools can adequately handle the increased number of students generated by the proposed development.

. Commercial

Hamden Plaza--Hamden Mart contains a wide variety of retail services and is less than a mile from the site.

. Employment

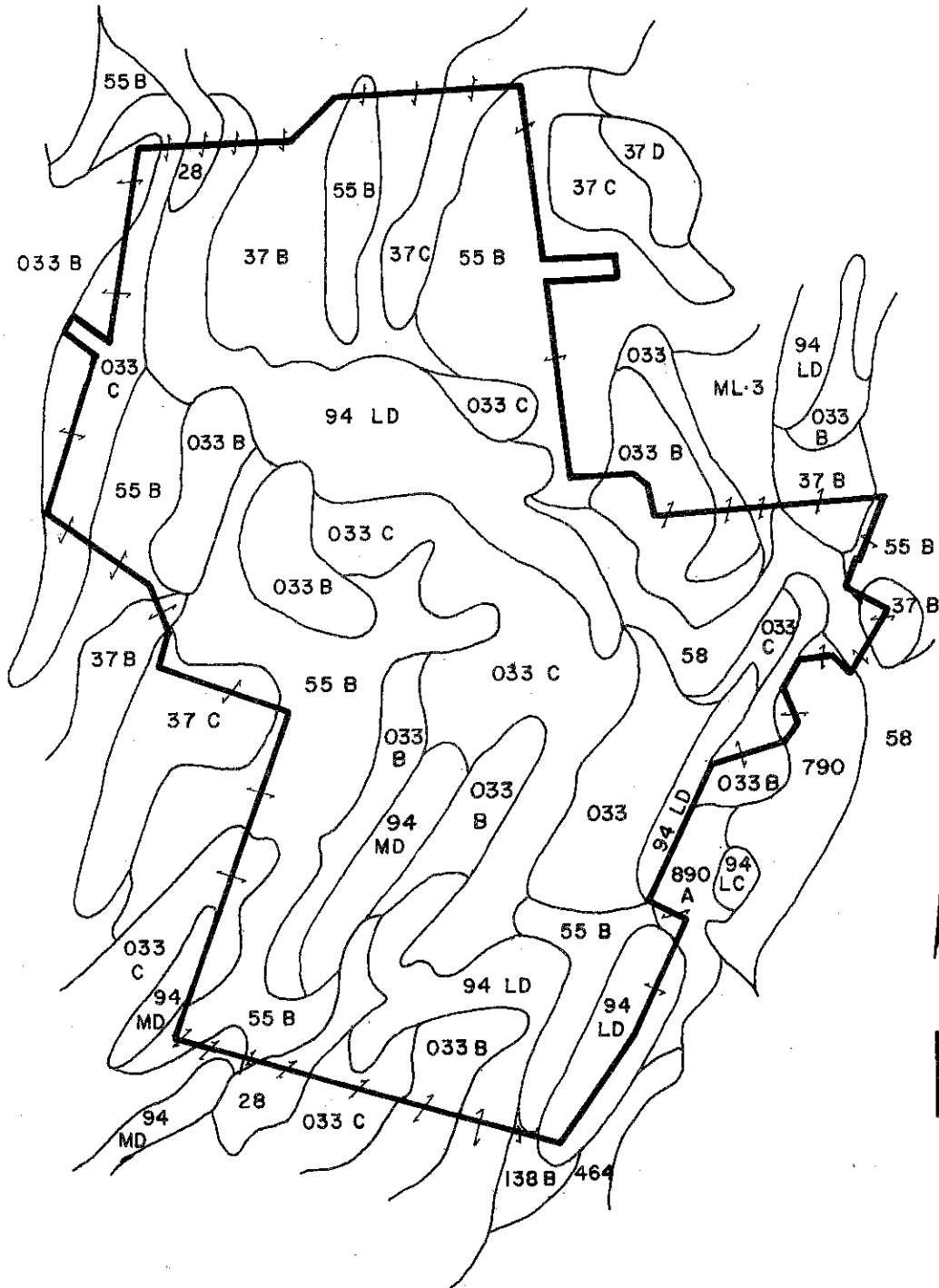
The Sherman Avenue Industrial Park is one and one-half miles to the northeast. This is Hamden's largest comprehensive industrial area and is gradually increasing employment opportunities. Additional manufacturing is located on Dixwell Avenue, Skiff Street, and further east in the Quinnipiac Valley where Pratt-Whitney, Marlin Firearms, City Printing, Circuitwise and other major industries are located.

The site is five miles from the New Haven Capitol Business District, accessible by bus on Dixwell and Mix Avenues.

* * * * *

APPENDIX

SOILS MAP



ADVANCE COPY - SUBJECT TO CHANGE
PREPARED BY U.S.D.A. - S.C.S. 1979

SCALE: 1" = 660'



PARADISE GAME PRESERVE PROPERTY

DETAILED SOILS

Map symbol	Field Name	Natural Soils Group
033B	Yalesville fine sandy loam; 3-8% slopes	D-1
033C	Yalesville fine sandy loam; 8-15% slopes	D-1
28	Wilbraham silt loam;	C-3a
37B	Cheshire fine sandy loam; 3-8% slopes	B-1a
37C	Cheshire fine sandy loam; 8-15% slopes	B-1b
55B	Watchaug fine sandy loam; 3-8% slopes	B-2a
58	Alluvial Land	E-3a
94LD	Holyoke Cheshire complex; 15-35% slopes	D-2
94MD	Holyoke Rock outcrop complex; 15-35% slopes	D-2
138B	Branford silt loam; 3-8% slopes	A-1d
790	Raynham silt loam;	G-3a
890	Belgrade silt loam; 0-3% slopes	A-2
ML-3	Cut and Fill Land	Other Land

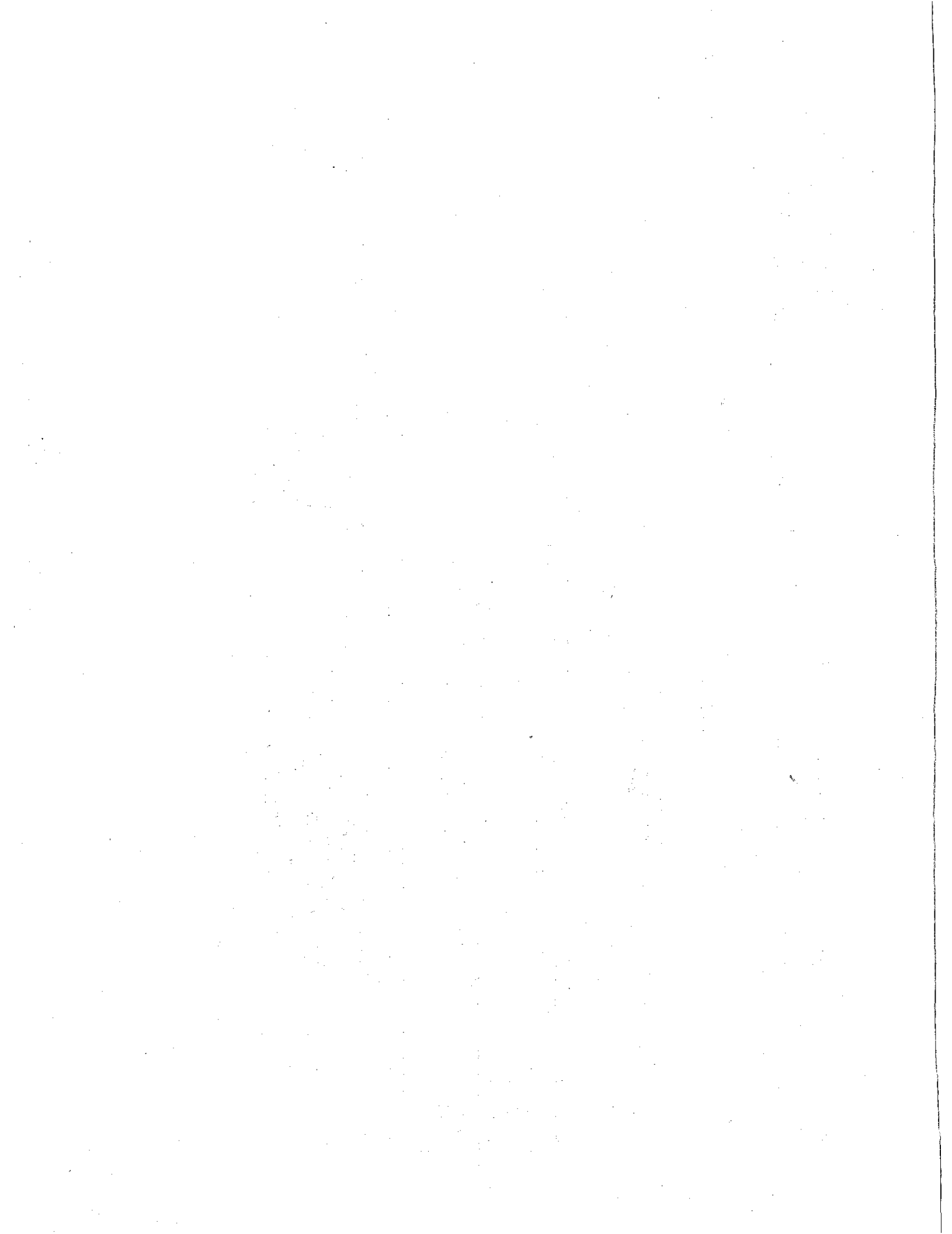
SUITABILITY & LIMITATIONS OF THE SOILS FOR URBAN USES

Map symbols and Soil series name	Suitability as a source of:		Limitations for:	
	sands & gravel	Road fill	Septic tank filter field basement lots	Homesite Streets & parking lots
033B 033C Yalesville	unsuited	fair	severe; depth to rock	severe; moderate; depth to rock
28 Wilbraham	unsuited	poor; poorly drained	severe; percs slowly, wetness	severe; wetness frost action
37B 37C Cheshire	unsuited	good frost action	slight to moderate; slope	slight to moderate; slope
55B Watchaug	unsuited	good fair to moderate; seasonal water table	severe; wetness	moderate; frost action slope
58 Alluvial Land	good to poor fair	poor; subject to flooding	severe; variable drainage and texture	severe; variable drainage and texture
94 LD 94MD Holyoke-Chehire Holyoke-Rock outcrops	poor; thin layer	unsuited poor depth to rock, slope	severe; depth to rock, slope	severe; depth to rock, slope

Map symbols and soil series name	Suitability as a source of:		Suitability for winter grading	Susceptibility to frost action	Limitations for:			
	sands & gravel	Road fill			Septic tank filter field	Homesite with basement	Streets & parking lots	Landscaping
138B Branford	fair	good	fair; low stability when wet	moderate	slight	slight	moderate; frost action	slight
790 Raynham	poor; wetness	unsuited	poor; frost action, wetness	high	severe; percs slowly, wetness	severe; frost action, wetness	severe; frost action, wetness	moderate; slight
890 Belgrade	good	unsuited	poor; low stability when wet	moderate	moderate; seasonal water table	moderate; seasonal water table	moderate; seasonal water table	slight
ML-3 Cut & Fill Land	variable	variable	variable	variable	variable	variable	variable	variable

1. SLIGHT LIMITATION: indicates that any property of the soil affecting use of the soil is relatively unimportant and can be overcome at little expense.
2. MODERATE LIMITATION: indicates that any property of the soil affecting use can be overcome at a somewhat higher expense.
3. SEVERE LIMITATION: indicates that the use of the soil is seriously limited by hazards or restrictions that require extensive and costly measures to overcome.

NOTE: Limitation Ratings Based Upon U.S.D.A. Soil Conservation Service Criteria.



ABOUT THE TEAM

The King's Mark Environmental Review Team (ERT) is a group of environmental professionals drawn together from a variety of federal, state, and regional agencies. Specialists on the team include geologists, biologists, foresters, climatologists, soil scientists, landscape architects, recreation specialists, engineers, and planners. The ERT operates with state funding under the aegis of the King's Mark Resource Conservation and Development (RC&D) Area - a 47 town area in western Connecticut.

As a public service activity, the team is available to serve towns and developers within the King's Mark Area --- free of charge.

PURPOSE OF THE TEAM

The Environmental Review Team is available to help towns and developers in the review of sites proposed for major land use activities. To date, the ERT has been involved in the review of a wide range of significant activities including subdivisions, sanitary landfills, commercial and industrial developments, and recreation/open space projects.

Reviews are conducted in the interest of providing information and analysis that will assist towns and developers in environmentally sound decision-making. This is done through identifying the natural resource base of the project site and highlighting opportunities and limitations for the proposed land use.

REQUESTING A REVIEW

Environmental Reviews may be requested by the chief elected official of a municipality or the chairman of an administration agency such as planning and zoning, conservation, or inland wetlands. Requests for reviews should be directed to the Chairman of your local Soil and Water Conservation District. This request letter must include a summary of the proposed project, a location map of the project site, written permission from the landowner/developer allowing the team to enter the property for purposes of review, and a statement identifying the specific areas of concern the team should address. When this request is approved by the local Soil and Water Conservation District and the King's Mark RC&D Executive Committee, the team will undertake the review. At present, the ERT can undertake two reviews per month.

For additional information regarding the Environmental Review Team, please contact your local Soil Conservation District Office or Richard Lynn (868-7342), Environmental Review Team Coordinator, King's Mark RC&D Area, P.O. Box 30, Warren, Connecticut 06754.