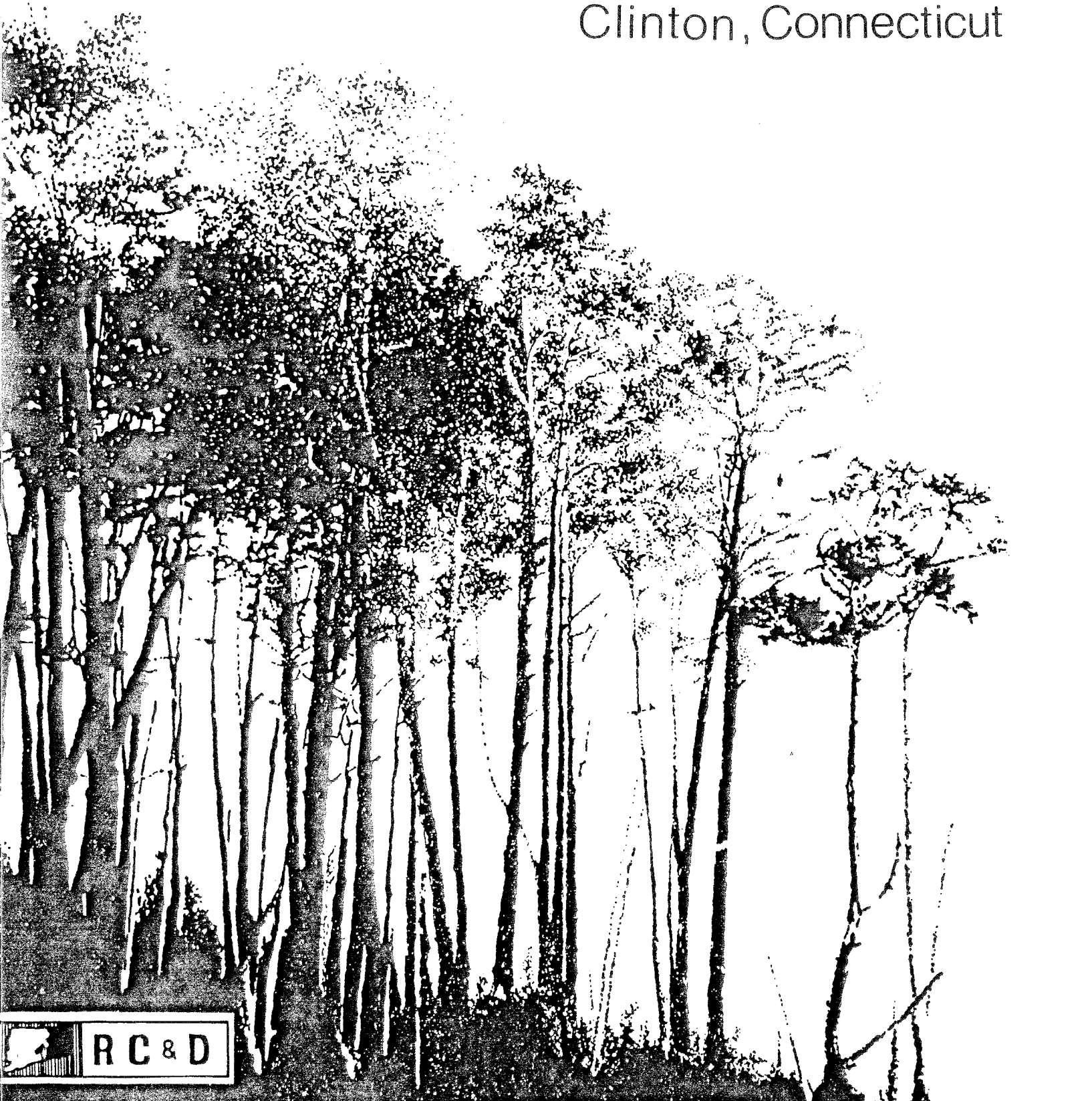


Environmental Review Team Report

Chittenden Hill Estates

Clinton, Connecticut

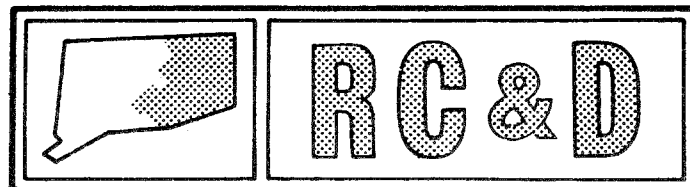


EASTERN CONNECTICUT RESOURCE CONSERVATION AND DEVELOPMENT AREA, INC.

Environmental Review Team
Report

Chittenden Hill Estates
Clinton, Connecticut

January 1984

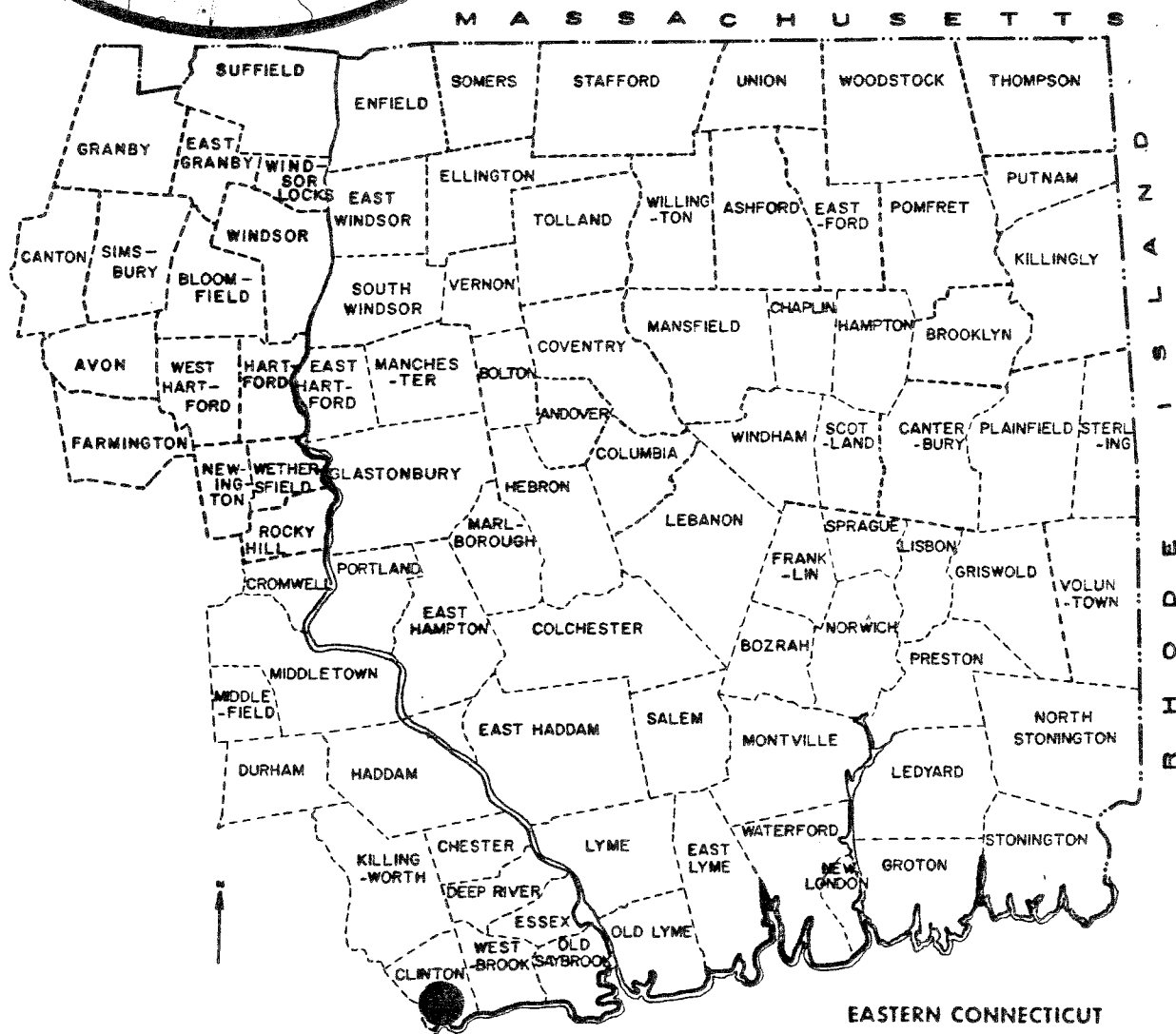
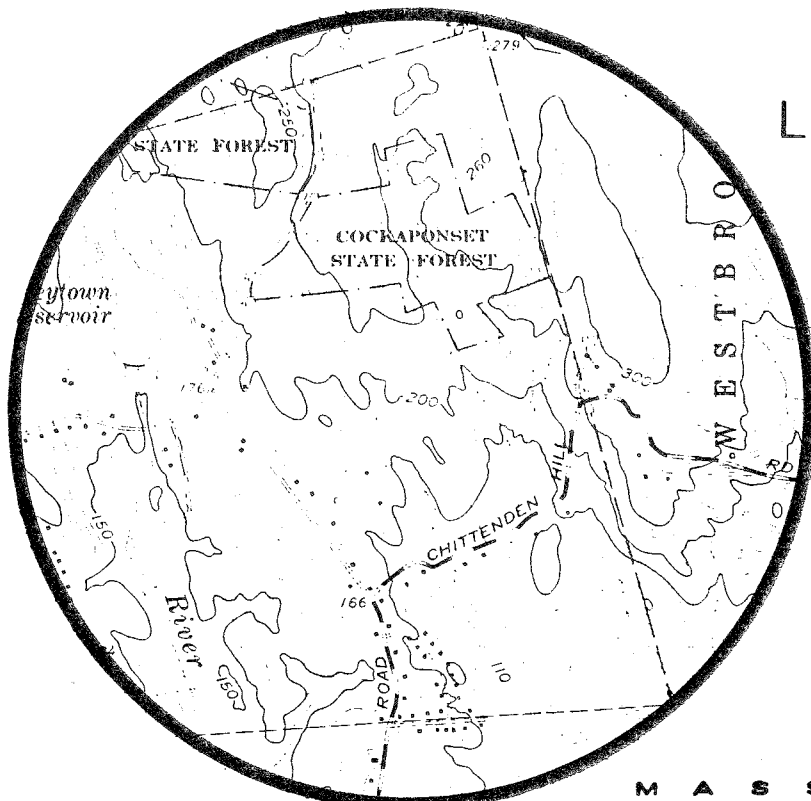


Eastern Connecticut Resource Conservation & Development Area

Environmental Review Team
PO Box 198
Brooklyn, Connecticut 06234

Location of Study Site

CHITTENDEN HILL ESTATES
CLINTON, CONNECTICUT



EASTERN CONNECTICUT
RESOURCE CONSERVATION AND DEVELOPMENT PROJECT

ENVIRONMENTAL REVIEW TEAM REPORT
ON
CHITTENDEN HILL ESTATES II
CLINTON, CONNECTICUT

This report is an outgrowth of a request from the Clinton Inland Wetlands Commission, to the Middlesex County Soil and Water Conservation District (S&WCD). The S&WCD referred this request to the Eastern Connecticut Resource, Conservation and Development (RC&D) Area Executive Committee for their consideration and approval as a project measure. The request was approved and the measure reviewed by the Eastern Connecticut Environmental Review Team (ERT).

The soils of the site were mapped by a soil scientist of the United States Department of Agriculture (USDA), Soil Conservation Service (SCS). Reproductions of the soil survey map as well as topographic map of the site were distributed to all ERT participants prior to their field review of the site.

The ERT that field-checked the site consisted of the following personnel: Pat Scanlon, District Conservationist, SCS; Bill Warzecha, Geologist, Connecticut Department of Environmental Protection (DEP); Richard Joly, Regional Planner, Connecticut River Estuary Regional Planning Agency (CRERPA); Don Capellaro, Sanitarian, State Department of Health, and Jeanne Shelburn, ERT Coordinator, Eastern Connecticut RC&D Area.

The Team met and field-checked the site on Tuesday, October 25, 1983. Reports from each Team member were sent to the ERT Coordinator for review and summarization for the final report.

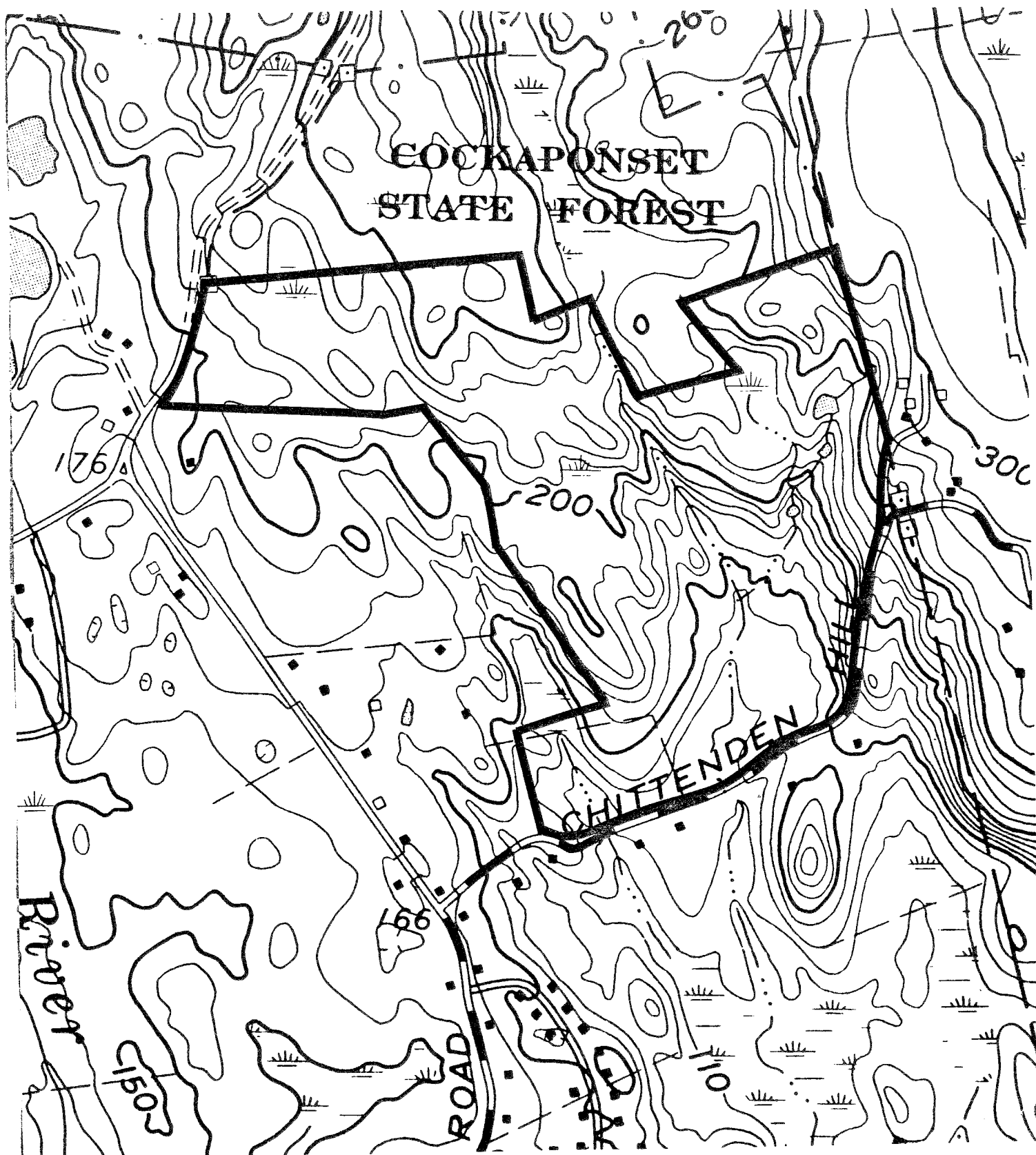
This report is not meant to compete with private consultants by supplying site designs or detailed solutions to development problems. This report identifies the existing resource base and evaluates its significance to the proposed development and also suggests considerations that should be of concern to the developer and the Town of Clinton. The results of this Team action are oriented toward the development of a better environmental quality and the long-term economics of the land use.

The Eastern Connecticut RC&D Area Committee hopes you will find this report of value and assistance in making your decisions on this particular site.

If you require any additional information, please contact: Ms. Jeanne Shelburn, Environmental Review Team Coordinator, Eastern Connecticut RC&D Area, Rte. 205, Brooklyn, CT 774-1253.

Topography

— Site Boundary



INTRODUCTION

The Eastern Connecticut Environmental Review Team was asked to prepare an environmental assessment for a proposed fourteen lot subdivision in the Town of Clinton. The project site is approximately 99 acres in size and is located between Tower Hill Road and Chittenden Hill Road on the Westbrook Town boundary. This site is a portion of a larger parcel which was reviewed by the Team in 1978, at that time 66 lots were proposed for the area. Russell Waldo and Associates had prepared preliminary subdivision plans for both proposals.

Current plans show 14 lots of 1.8 acres to 7.9 acres each. The site is zoned R.80 (approximately 2 acres per residential unit). The developers intend to follow the "mini-estate" provisions of the Clinton subdivision regulations. All lots will be served by on-site septic systems and on-site wells. Each lot will have access to either Tower Hill Road or Chittenden Hill Road. A small private lane will serve lots 11, 12, 13 and 14.

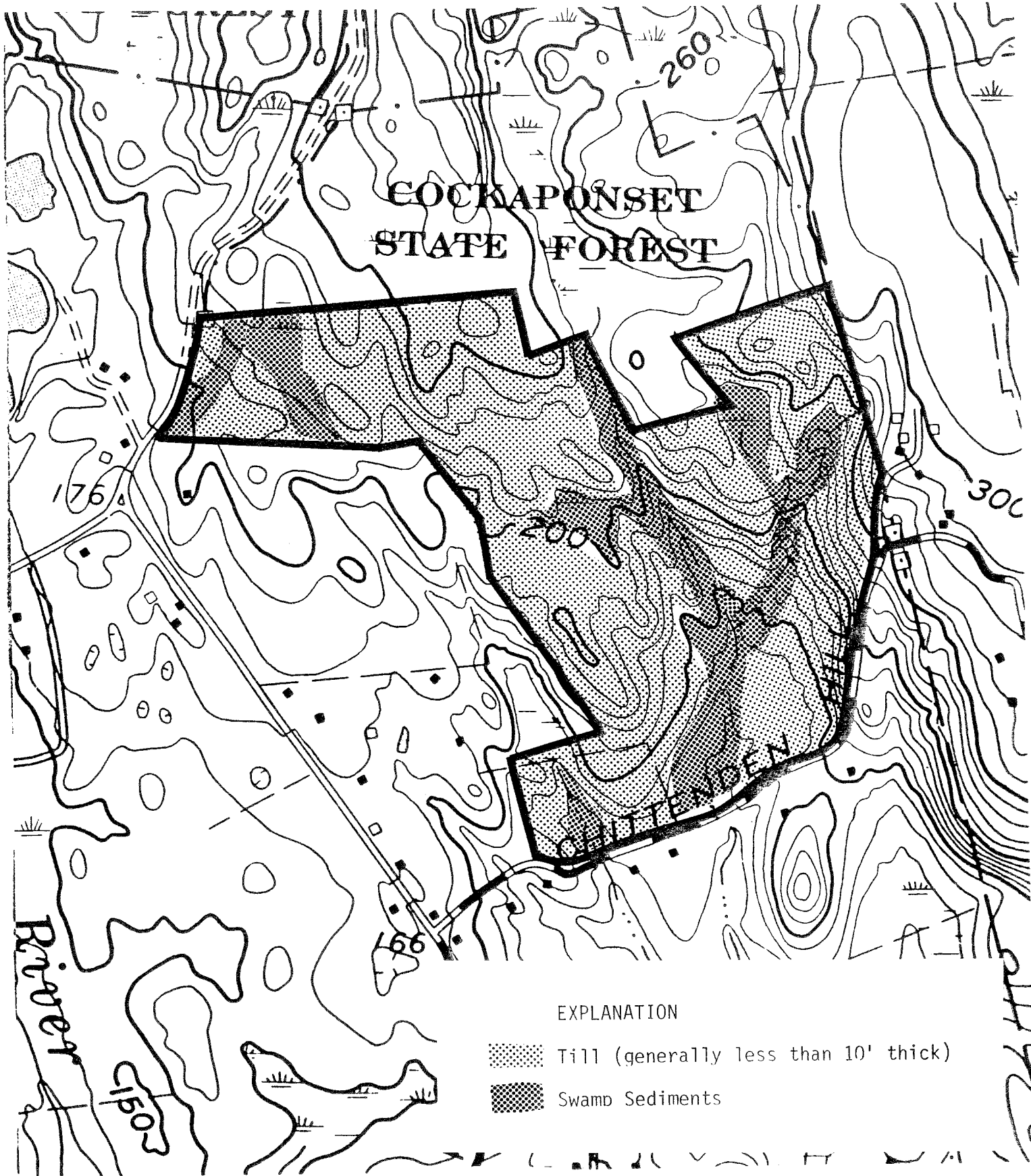
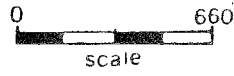
The site has a varied terrain, ranging from fairly flat to steeply sloping. A large wetland area and associated watercourse is found in the central section of the site. The property is entirely forested at present.

The Team is concerned with the effect of this proposal on the natural resource base of the site. Although severe limitations to development can often be overcome with appropriate engineering techniques, these measures can become costly, making a project financially unfeasible for a developer. Limitations to development of this site include steep slopes, shallow depth of soil to bedrock, rock outcrops, perched water table and wetland soils. The developers engineer appears to have addressed many of these problems in the current subdivision plan. The density of development has been greatly decreased (since 1978) to allow for a more environmentally sensitive siting of proposed homes on the property. It would appear from review of the site, that certain areas of the property may be able to accommodate a larger number of lots than that proposed.

Increase in storm water runoff from this site due to the current development proposal will be minimal. Flooding of Chittenden Hill Road which takes place now, should be addressed by the Town. Culverts which serve this area appear to be undersized and plugged with debris. One area which should be further considered by the developers are the locations of driveways on lots 1, 2, 9 and 10 as Chittenden Hill Road is sharply curved in this area and access from these lots may be dangerous due to inadequate sight lines.

A more detailed discussion of Team member concerns can be found in the following sections of this report.

Surficial Geology



ENVIRONMENTAL ASSESSMENT

TOPOGRAPHY

The proposed fourteen lot subdivision consists of an irregularly shaped parcel of land, which is approximately 99 acres in size. It is located in northern Clinton, near the Westbrook Town line. The property is bordered by the Cockaponset State Forest to the north, Chittenden Hill Road to the east and south and Kelseytown Road to the west.

The site is characterized by a diverse terrain, which varies from nearly flat areas to some steep areas. Steepest slopes, which range from 15-30% occur along the eastern limits of the parcel. They are also present throughout the central portions, predominantly where bedrock is exposed. Elevations on the site range from 120 feet above mean sea level along Chittenden Hill Road to approximately 210 feet above mean sea level at the northern limits of the site.

GEOLOGY

The project site is located entirely within the Clinton topographic quadrangle. A bedrock geologic map (QR-29) by Lawrence Lundgren, Jr. and Robert F. Thurrell and a surficial geologic map (QR-28) by Richard Foster Flint of that quadrangle have been published by the Connecticut Geological and Natural History Survey.

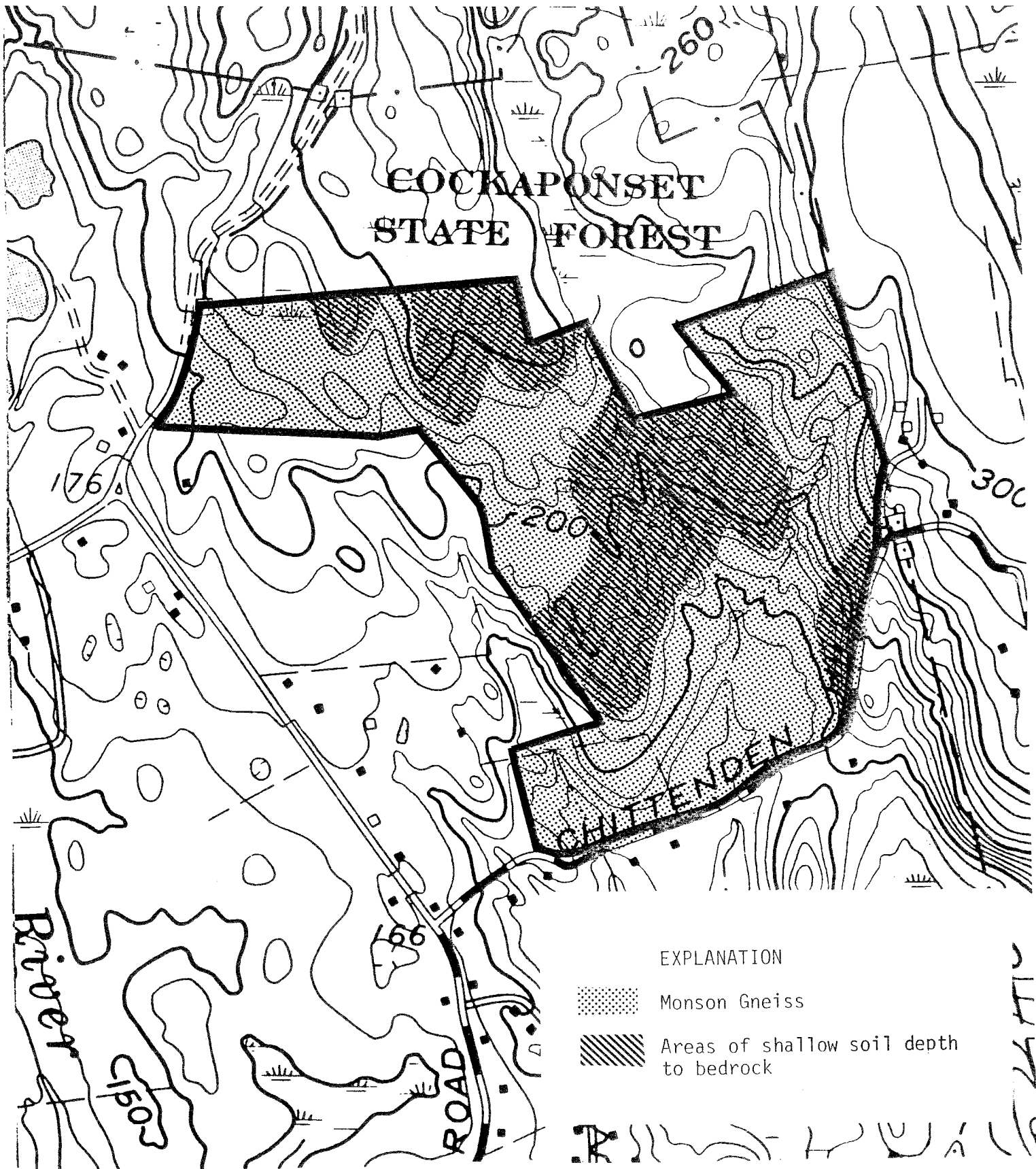
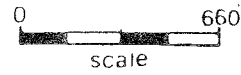
Scattered bedrock outcrops are found throughout the central portions of the site, particularly on Lots 13 and 14. Bedrock is probably within 10 feet of the surface of the ground throughout the property.

The bedrock underlying or cropping out on the site consists of Monson gneiss. This formation consists of a light and dark, banded rock composed primarily of the minerals andesine and quartz with scattered flakes of the mineral biotite. The rock may also contain some small grains of the mineral garnet.

Gneisses are crystalline, metamorphic (altered by great heat and pressure) rocks, characterized by banding. The banding is produced primarily by alternating layers of dark colored minerals, i.e., biotite, garnet, etc., and light colored minerals, i.e., quartz, andesine.

Overlying bedrock on the site is a glacial sediment referred to as till. Till consists of rock particles ranging in size from clay to large boulders. The shapes of these particles are also quite varied, ranging from flat to angular to round. Most of this sediment was plastered onto the bedrock surface and/or preglacial sediments by the former ice sheet. In addition, some of the material may have been let down from within or from the surface of the ice as it retreated during deglaciation periods. As a result of these two processes, the upper few

Bedrock Geology



feet is commonly sandy and loose, while at depth it becomes silty and clayey, as well as increasingly compact. Based on deep test hole data compiled by the project engineer, it appears that the till covering most of the site is of the sandy and gravelly type. The thickness of the till deposits ranges from zero, where bedrock outcrops occur, to probably less than 10 feet below ground surface.

Another type of deposit found on the site, which overlies till and/or bedrock, are swamp deposits. Swamp deposits consists of silt, sand, and clay mixed with organic materials. These deposits formed in well vegetated, poorly drained areas after the ice sheet melted away.

Wetland soil types within the site are delineated as Leicester, Ridgebury and Whitman (LG) soils as shown on the accompanying soils map. (Source: U.S. Department of Agriculture, Soil Conservation Service, Soil Survey of Middlesex County, CT). Approximately 20 percent of the property comprises wetland areas. These areas are mainly along intermittent streams in the central, southern and northwest sections of the property.

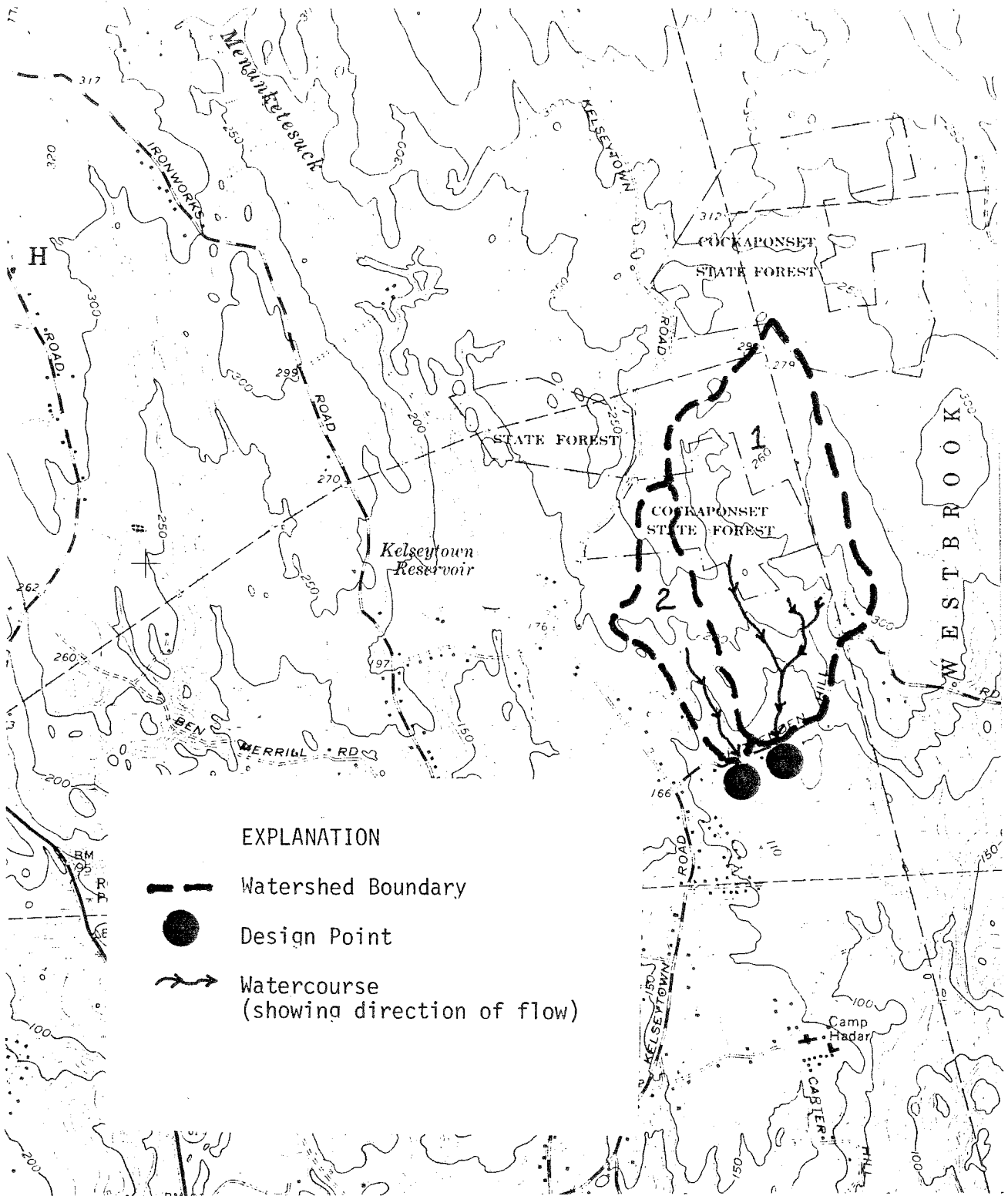
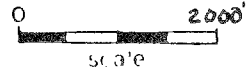
Limiting factors within the parcel, from a geological standpoint include (1) shallow soil depth to bedrock and rock outcrop areas, (2) areas of steep slopes, (3) high water table, a result of the compact nature of till soils, and (4) wetland areas. These limiting factors would weigh most heavily on the successful functioning of sub-surface sewage disposal systems. However, with proper engineering practices and good planning it seems likely that these limitations could be overcome.

HYDROLOGY




The drainage pattern of the Chittenden Hill Estates site was described in the initial ERT report (October, 1978). It does not appear as though the watershed has been altered since the initial review. An accompanying illustration delineates the approximate drainage area for the watersheds draining the two intermittent streams on the site. According to town officials, flooding problems have been reported at the culvert under Chittenden Hill Road, which drains watershed I (see Drainage Area Map), particularly during the springtime. As a result, they are concerned about the potential aggravation of the flooding problem by the proposed development in this area. It should be noted that Town officials did not indicate to Team members whether or not flooding occurs at the culvert draining watershed II.

Development of the site as presently proposed will slightly increase the percentage of direct runoff to the streams for a given rainfall. This increase would arise mostly from the creation of impermeable surfaces, i.e., rooftops, paved driveways, etc., over formerly permeable areas, and from the removal of natural vegetation. Several methods exist for estimating the amount of increased runoff. The Team Geologist used the Soil Conservation Service method, which is explained in detail in that agency's Technical Release Bulletin #55. This method involves the determination of runoff curve numbers for a given watershed. These numbers relate runoff to rainfall in the watershed on the basis of soil types and current proposed land average. Applying the numbers to rainfall data for a given storm event, average slopes of the watershed and several other factors,

Drainage Areas



EXPLANATION

-  Watershed Boundary
-  Design Point
-  Watercourse (showing direction of flow)

an estimate of peak flow in a stream(s) can be made. It should be noted when computing the curve number, one generally rounds the curve number off to the nearest whole number. For example, if the curve number is computed to be 60.8, a curve number of 61 would be used.

Based on the above mentioned method, no appreciable difference in the curve number would occur for the presently proposed subdivision. As a result, the increase should not have a significant affect on flows to nearby streams. The slight increase is mainly due to the few lots proposed, (14), the size of the parcel and storage areas available for runoff, such as swamps and/or small ponds on the site.

Because surface runoff from the site drains into the two intermittent watercourses by sheetflow, natural swales and small rills, and because some areas are subject to seasonally high groundwater levels, the potential for erosion should be of more concern. For this reason, it is recommended that a sediment and erosion control plan be formulated and implemented prior to construction. Areas of special concern include those where construction is near watercourses, wetlands and/or in areas of steep slopes. The Sediment Control Handbook--Connecticut, published by the U.S. Department of Agriculture, Soil Conservation Service will aid both the developer(s) and Town in preparing such a plan. Also, technical assistance by the District Conservationist from the Middlesex County Office of the Soil Conservation Service would be available in regard to such a plan.

The project calls for two wetland road crossings of 100 feet (Lot 11) and 80 feet (Lot 12). If properly engineered, the wetlands crossings as proposed are feasible. Provisions should be made for removing unstable material beneath the roadbed, if necessary, backfilling with a permeable road base fill material, and installing equalizer pipes as necessary. Wetland crossing construction should preferably be done during the dry time of the year. The project engineer has proposed temporary stacked hay bales during the construction phase as an effective erosion and sediment control measure.

As mentioned earlier, the town is concerned that an existing flooding problem at the culvert draining watershed I under Chittenden Hill Road would be further aggravated by the proposed subdivision. Based on the runoff calculations computed by the Team Geologist, it appears the existing 12 inch corrugated metal pipe is probably too small to handle the flow from a 10 year storm under present conditions. (A 10 year storm is a storm that would be expected to occur once every ten years. In any given year, a 10 year storm would have a 10 percent chance of occurring.) This may be a main reason for the flooding problems mentioned by town officials that occur at the culvert under Chittenden Hill Road, which drains watershed I. Since the increase in post development runoff from the site will be slight, it appears that the proposed subdivision should not significantly aggravate the flooding problem at the culvert under Chittenden Hill Road. However, it is recommended that the Town Engineer direct attention to these problems so that the necessary corrective measures can be implemented.

SOILS

A detailed soils map of this site is included in the Appendix to this report, accompanied by a chart which indicates soil limitations for various urban uses.

The soil boundary lines should not be viewed as absolute boundaries, but as guidelines to the distribution of soil types on the site. The soil limitation chart indicates the probable limitations for each of the soils for on-site sewerage, buildings with basements, buildings without basements, streets and parking, and landscaping. However, limitations even though severe, do not preclude the use of the land for development. If economics permit large expenditures for land development and the intended objective is consistent with the objectives of local and regional development, many soils and sites with difficult problems can be used. The soils map, with the publication Soil Survey, Middlesex County--Connecticut, can aid in the identification and interpretation of soils and their uses on this site. Know Your Land: Natural Soil Groups for Connecticut can also give insight to the development potentials of the soils and their relationship to the surficial geology of the site.

Soils on the site as mapped by the USDA Soil Conservation Service are all fine sandy loams derived from glacial till. Wetland soils are Leicester, Ridgebury and Whitman extremely stony fine sandy loams. These poorly and very poorly drained soils occur in drainageways and depressions of glacial till uplands and are regulated under P.A. 155. Since the Leicester, Ridgebury and Whitman soils occur in an intricate and complex pattern, separation of each individual soil was not practical on the scale used in the soil survey. Each mapping unit may contain an individual soil or a percentage of each of the two soils. More than three percent of the surface is covered with stones and boulders.

The Canton and Charlton fine sandy loams are gently sloping, well drained soils occurring on upland hills, ridges, and glacial till plains. Areas of this unit consist of Canton soils or Charlton soils or both. The soils were mapped together because they have no significant differences that affect their use and management. These soils have good potential for community development. Onsite septic systems need careful design and installation.

Canton and Charlton very stony fine sandy loams have the same management limitations as the non-stony phase described above with the addition of stoniness as a limitation to development of these areas.

Charlton-Hollis very stony fine sandy loams consist of gently sloping and sloping, well drained and somewhat excessively drained soils on bedrock ridges and on upland glacial till plains. The soils in this complex occur in such an intricate pattern that it was not practical to map them separately. This complex has fair potential for community development where the Hollis series predominates. The shallow depth to bedrock in the Hollis soils and the bedrock outcrops make excavation difficult. Onsite septic systems require very careful design and installation, and an area of more than two acres is sometimes needed as a suitable site for an onsite septic system.

The Hollis-Charlton complex consists of moderately steep to very steep, somewhat excessively drained and well drained soils on bedrock ridges and upland glacial till plains. Again, the soils in this complex are in such an intricate pattern that it was not practical to map them separately. They have poor potential for community development due to steep slopes, shallowness to bedrock, rock outcrops and stoniness. Excavation is difficult because of the shallow depth to bedrock in many places. Onsite septic systems require very careful and often special design and installation.

Paxton and Montauk very stony and extremely stony fine sandy loams are well drained soils which occur on sloping to steep drumlins and glacial till plains of glaciated uplands. The very stony phase has 0.1 to 3 percent and the extremely stony phase 3 to 15 percent of the surface covered with stones and boulders. These soils have fair potential for community development due to slopes, a slowly permeable or very slowly permeable substratum and stoniness. Onsite septic systems require careful design and installation, as steep slopes of excavations slump when saturated, and foundation drains may be needed in some areas to help prevent wet basements.

A sediment and erosion control plan should be included in the final plans for this development, and implemented during construction. Connecticut's Erosion and Sediment Control Handbook, published by the Soil Conservation Service, provides standards and specifications for both structural and vegetative practices and is available at the Middlesex County Soil & Water Conservation District in Haddam.

VEGETATION/WILDLIFE RESOURCES

The Clinton section of the subdivision is presently vegetated with a fairly young stand of mixed hardwoods. Hornbeam, red oak and white oak, gray birch, dogwood, red maple and Norway maple, hickory, tulip poplar, ash, and beech species were observed. Recent selective logging has occurred on the site, but a thick canopy still exists, thus the understory is thin. Spicebush, honeysuckle, wild grape, brambles, laurel, maple leaf viburnum, and chestnut sprouts were present. In the limited areas that have been cleared, native grasses, elderberry, sumac, sassafras and brambles exist.

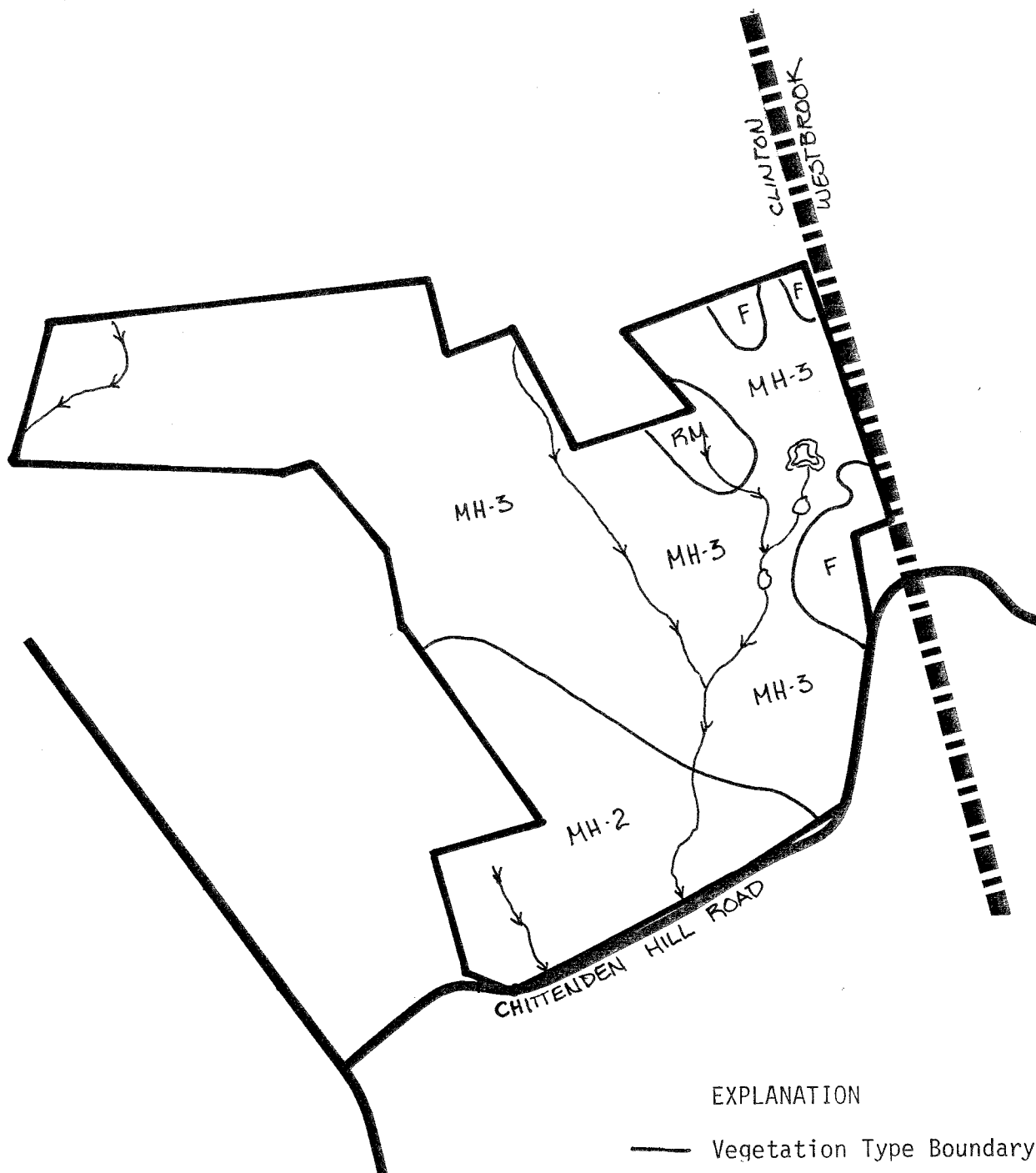
The value of the area as food supply for native deer is fair, and most likely utilization is for cover or water. The adjoining abandoned farm land and State Forest land provide excellent food supplies for deer, as well as other mammals and songbirds. Gray squirrel and raccoon are most likely present in significant numbers. Numerous shell casings on the roadways and paths are evidence of use of the area for hunting purposes.

The area slated for open space will help lessen the environmental impact of residential construction on this parcel. The upland areas can be enhanced for wildlife by creating several small clearings 1/2-1 acre in size, piling brush and either planting wildlife shrubs or allowing native vegetation to reestablish itself.

Underplanting of remaining upland areas with hemlock or creating clearings and planting with pine or spruce will also be beneficial. Pond or marsh construction are also possibilities within wetland areas. On the residential lots landscaping with wildlife shrubs, underplanting and allowing strips of native grass to grow will also improve the value of the area for wildlife.

Ponds on the western portion of the area provide limited open water and marsh habitat, and are water supplies for wildlife during dry periods. These should remain undisturbed, with the exception of clearing around the edges to promote bushy growth or grass establishment.

Vegetation



EXPLANATION

— Vegetation Type Boundary

~ Stream

MH-2 Mixed Hardwoods, sapling size

MH-3 Mixed Hardwoods, pole size

F Hayfields

RM Red Maple Swamps

Wetlands and open space areas on the parcel should be protected from degradation as much as possible. A sediment and erosion control plan should be developed and implemented for the site. In addition, an undisturbed buffer zone of 50-100 feet should be left around wetland areas, where feasible, to protect against encroachment and disturbance.

FOREST RESOURCES

Forested areas cover 95% of the 99 acre property. Five percent remains in open fields. Wetland vegetation (type RM) is limited to two small areas totaling approximately 6 acres.

Approximately 80 acres of the forest were logged about 15 years ago and now contain a mixture of pole-sized hardwoods. Black birch and red maple are the most common species. The understory consists primarily of hardwood tree seedlings and shrubs.

A fragipan exists within 24 inches of the surface in most of the soils on the property. Therefore, trees are probably shallow-rooted and predisposed to blow down. The high density of trees on parts of the site aggravates this condition. In order to reduce this hazard, a thinning of stand density by one-third, to provide more growing space for the largest crowned trees should be conducted several years before house lots are cleared. This would give trees time to extend their root systems and strengthen their trunks before wind corridors are created. A private forester should be retained to mark trees to be cut and supervise the harvest.

Trees whose roots would be disturbed by construction activities should be removed when house lots are cleared. Although symptoms might not appear for several years, trees which have had large roots broken, exposed, or buried seldom survive.

WATER SUPPLY

On-site water supply wells have been proposed to serve each lot in the subdivision. Due to the relatively thin blanket of till covering the site and no apparent thick, coarse grained stratified drift deposits on the site, which are commonly capable of supplying large quantities of groundwater to wells, it seems likely that the underlying bedrock is the only suitable aquifer for such wells in the area. Water is supplied to bedrock based wells mainly through fractures, joints and/or seams in the rocks. Because of the uneven distribution of these openings, it is very difficult to predict the potential yield from any new well. A yield of at least 3 gpm (gallon per minute) is desirable and would probably be adequate for most household use.

A survey of well completion reports for wells tapping bedrock for homes along Kelseytown Road which is generally south to southwest of the site, showed yield ranging from 3 gallons per minute to 11 gallons per minute.

On the other hand, in a survey of wells in the lower Connecticut River basin, it was found that about 90 percent of wells tapping the type of bedrock underlying the site would provide about 2 gallons per minute, while only 10 percent would yield 18 gallons per minute or more. (Source: Connecticut Resources Bulletin No. 31--Lower Connecticut River Basin.)

The quality of the groundwater is likely to be good. The site does not lie in an area where groundwater has an elevated iron or manganese level. Nevertheless, if the concentrations of iron or manganese reached undesirable levels, there are filter systems available for corrective treatment.

Well water supplies should be placed uphill from leaching fields and located as far from any septic systems as possible. Present plans are to maintain a 100 foot separating distance from the proposed well water supplies and sewage disposal systems. Also, water supply wells are presently proposed to be separated anywhere from \pm 260 feet to over 300 feet apart, which should effectively prevent interference of one well with another during pumping.

SEWAGE DISPOSAL

Since the 1978 review of the Chittenden Hill Estates Property by the Environmental Review Team, the number of proposed building lots have been reduced from approximately 66 to 14. Each lot will be serviced by an on-site sewage disposal system and water supply. A \pm 32 acre section of the property, throughout the central portion has been designated as open space. Access to this area is available between lots 8 and 9 off Chittenden Hill Road.

A copy of the proposed subdivision plan was made available to Team members during the review. Included on this plan are deep test hole information, as well as the proposed house, water supply well, and septic system locations. In addition to the test holes dug on lots 2-5, 9 and 10 during May 1978, approximately 16 more holes were dug on the remaining lots in June 1983.

Based on the findings of the deep test hole information by the property owner(s) consulting engineer, visual observations and soils map, it appears that the proposed leaching areas for each lot would be generally acceptable for on-site sewage disposal. In order to conclusively determine the suitability of this land for subsurface sewage disposal, it will be necessary to conduct percolation tests in the primary sewage disposal area on each lot in accordance with the State Public Health Code.

Some areas may be limited by wetlands, and as mentioned earlier, by slope. However, a major limitation to development is where shallow, underlying bedrock is encountered. According to deep test hole data supplied by the project engineer on the subdivision plan, bedrock and/or possibly a large boulder was encountered at about 5 feet in the two test holes dug on Lot 1 and in at least one of the test holes dug on Lots 9 and 12.

Also, as indicated by deep test hole information, a seasonally high ground water table is present on Lots 4, 5, 8, 11, 12 and 14. Mottling, which is an indication of prolonged water saturation was observed by the project engineer in several test pits, ranging from 18 inches to 44 inches below grade. Such

a condition probably results to the combination of the till soils, which are compact by nature and impedes the downward movement of water, and the upper hillside terrain which is characteristic of the site. A properly engineered septic system can overcome elevated groundwater limitations, but extreme caution is required.

The State Public Health Code requires the bottom of any leaching system to be a minimum of 4 feet above bedrock and at least 18 inches above the maximum groundwater level. These separating distances are needed for the proper operation of septic systems and to provide an adequate soil depth for treatment and renovation of the sewage effluent. Also, by having suitable soil depth and distance to treat the sewage, the possibility of groundwater pollution problems will be significantly reduced. This is particularly important if well water supplies, streams, or bodies of water are located downgrade from leaching systems.

For the reasons mentioned above, it is recommended that additional deep test holes, perhaps one in each corner of the proposed leaching system be dug so that the depth to bedrock can be determined on lots where bedrock and/or large boulders were encountered at shallow depths (Lots 1, 9 and 11).

It should be noted that a large portion of Lot 2 contains wetlands and areas of moderate slopes. As a result of these conditions, there appears to be limited area available for both the primary and reserve leaching systems. For this reason, it is recommended that the project engineer direct special attention to this lot with regard to separating distances from wetlands, watercourses, building footing drains, and well water supplies.

PLANNING CONCERNS

This proposed subdivision is located between Tower Hill Road and Chittenden Hill Road on the Westbrook Town boundary and is approximately 99 acres in size. The site is zoned for two acres per residential unit but this proposal would only create 14 building lots on the 99 acre site.

Traffic

There would probably be minor impact from the increased traffic that this development would cause. A single family residence in a low density development such as this would typically cause an increase of nine¹ trips per day. For the 10 houses on Chittenden Hill Road this would mean an increase of about 90 trips per day. For the four houses on Tower Hill Road this would mean an increase of about 36 trips per day.

There are no traffic counts available for Chittenden Hill Road or Tower Hill Road. There are average daily traffic (ADT) counts available for two other roads in the area however. In Clinton there is a 1980 ADT of 1200 vehicles per day on Kelseytown Road in the vicinity of Brookside Drive. In Westbrook there is a 1979 ADT of 2300 vehicles per day on Horse Hill Road. Chittenden Hill and Tower Hill Roads are more remote parts of the road system than the roads the traffic

¹Harold Marks, "Traffic Circulation Planning for Communities," (Los Angeles: Gruen Associates, 1974).

counts above were taken on. It can, therefore, be assumed that the existing traffic counts near this proposed development would be even lower than those mentioned above. This is further confirmed by the light traffic that was observed by the ERT participants during the site inspection.

The expected increase in traffic of 36 and 90 trips per day, as noted above, should be unlikely to cause any traffic problems on the already lightly traveled roads providing access to the site of this proposed development.

Lots 9 and 10

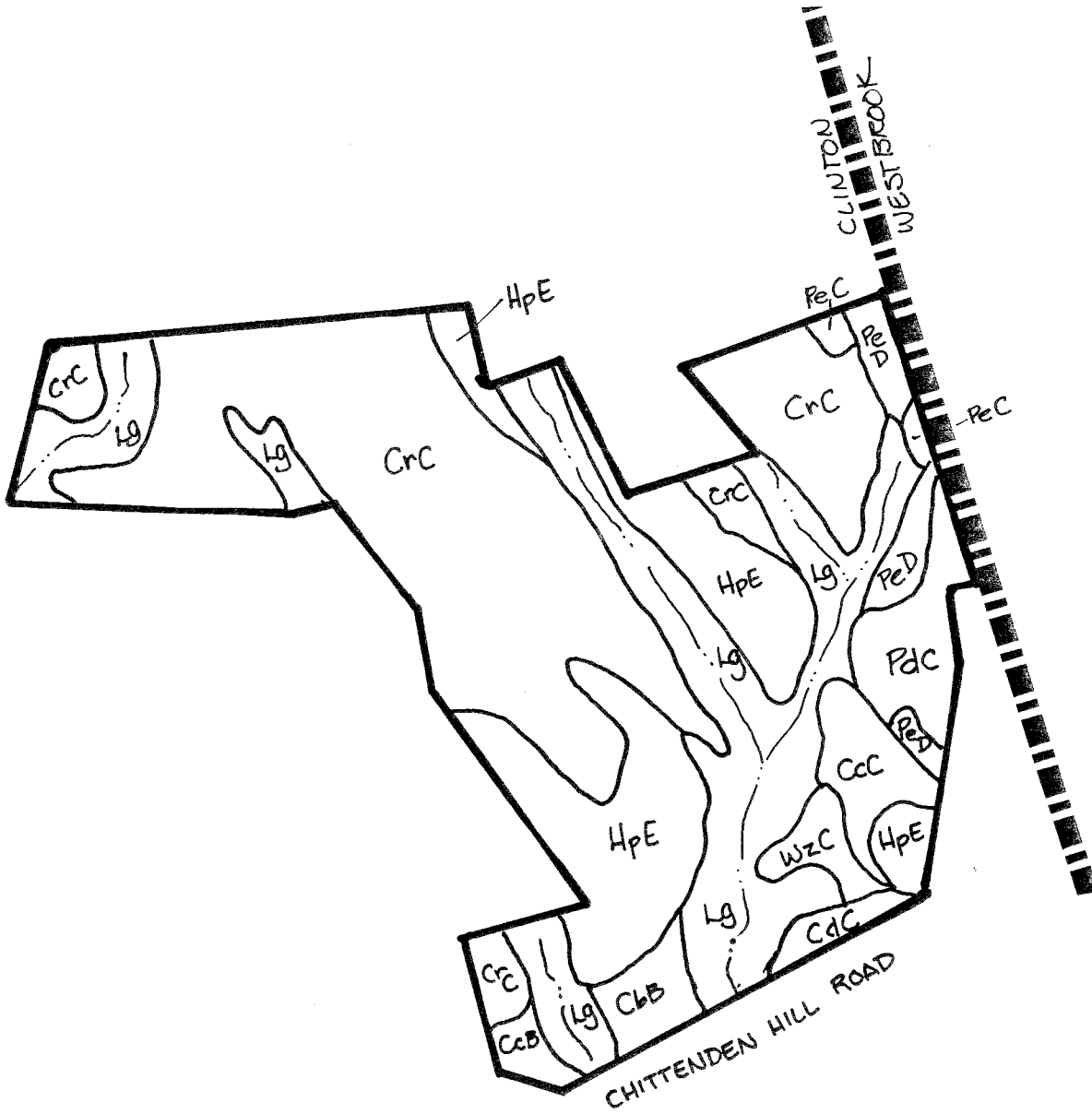
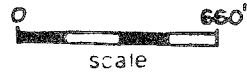
The curving nature of the road in front of lots 9 and 10 will make it difficult to locate driveways that will have safe sight lines. The road in front of these two lots also has very poor storm drainage giving rise to the possibility of road icing in the winter and wet slippery roads during warmer weather. The combination of poor sight lines and slippery road conditions in front of these two lots could cause dangerous driveway access to Chittenden Hill Road. The Town should assure that these two lots are developed in a manner that minimizes this danger. It might help to put a notation of this on the subdivision plan as a reminder of these problems.

Access Roadways

It is proposed that two roads or driveways be built to provide access to interior lots on this site. One of them would be built under the mini-estate provisions of the subdivision regulations. The other would be a private lane to be built under the rear lots provisions of the Town. If it is proposed that these roads be built as part of this subdivision application, then the Town should require a bond or other form of security in order to insure that these roadways are built. If these roads are not built as part of this proposal, then notations should be made on the subdivision plan that they are needed. It should be noted that in one case the roadway should satisfy the mini-estate provisions of the Clinton Subdivision Regulations. In the second case, it should be specified that the roadway needs to be built to provide access to lots whose frontage is wetlands.

Appendix

Soils



CHITTENDEN HILL ESTATES
CLINTON, CONNECTICUT

SOILS AND THEIR LIMITATIONS FOR CERTAIN LAND USES

Soil Series	Soil Symbol	Slope	Principal Limiting Factor	Urban Use Limitations		
				Buildings	Streets &	Land-
			Depth to rock, slope, large stones	On-site Sewage Basements	Parking	scaping
Charlton-Hollis very stony fine sandy loam	CrC	3-15%	Depth to rock, slope, large stones	3	3	3 (houses)
Hollis-Charlton extremely stony fine sandy loam	HpE	14-40%	Slope, large stones, depth to bedrock	2	2	2 (Charlton)
Leicester, Ridgebury & Whitman	LG		Wetness, frost action	3	3	3
Canton-Charlton fine sandy loam	CbB	3-15%	Poor filter slope	3	2	2
Canton-Charlton very stony fine sandy loam	CcB	3-8%	Large stones	3	2	1
Canton-Charlton very stony fine sandy loam	CcC	8-15%	Slope, large stones	3	2	2
Woodbridge extremely stony fine sandy loam	WzC	8-15%	Wetness, large stones, percs slowly	3	3	3
Paxton & Montauk very stony fine sandy loam	PdC	8-15%	Percs slowly, frost action, large stones	3	2	2
Paxton & Montauk extremely stony fine sandy loam	PeC	3-15%	Percs slowly,	3	2	2
Paxton & Montauk extremely stony fine sandy loam	PeD	15-35%	Slope, percs slowly, large stones	3	3	3

Urban Use Limitations: 1 = slight, 2 = moderate, 3 = severe

* Prime farmland soils
* - Wetland soil regulated under P.A. 155

SOIL INTERPRETATIONS FOR URBAN USES

The ratings of the soils for elements of community and recreational development uses consist of three degrees of "limitations:" slight or no limitations; moderate limitations; and severe limitations. In the interpretive scheme various physical properties are weighed before judging their relative severity of limitations.

The user is cautioned that the suitability ratings, degree of limitations and other interpretations are based on the typical soil in each mapping unit. At any given point the actual conditions may differ from the information presented here because of the inclusion of other soils which were impractical to map separately at the scale of mapping used. On-site investigations are suggested where the proposed soil use involves heavy loads, deep excavations, or high cost. Limitations, even though severe, do not always preclude the use of land for development. If economics permit greater expenditures for land development and the intended land use is consistent with the objectives of local or regional development, many soils and sites with difficult problems can be used.

Slight Limitations

Areas rated as slight have relatively few limitations in terms of soil suitability for a particular use. The degree of suitability is such that a minimum of time or cost would be needed to overcome relatively minor soil limitations.

Moderate Limitations

In areas rated moderate, it is relatively more difficult and more costly to correct the natural limitations of the soil for certain uses than for soils rated as having slight limitations.

Severe Limitations

Areas designated as having severe limitations would require more extensive and more costly measures than soils rated with moderate limitations in order to overcome natural soil limitations. The soil may have more than one limiting characteristic causing it to be rated severe.

About the Team

The Eastern Connecticut Environmental Review Team (ERT) is a group of professionals in environmental fields drawn together from a variety of federal, state, and regional agencies. Specialists on the Team include geologists, biologists, foresters, climatologists, soil scientists, landscape architects, archeologists, recreation specialists, engineers and planners. The ERT operates with state funding under the supervision of the Eastern Connecticut Resource Conservation and Development (RC&D) Area.

The Team is available as a public service at no cost to Connecticut towns.

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 reviewing a wide range of projects including subdivisions, sanitary landfills, commercial and industrial developments, sand and gravel operations, elderly housing, recreation/open space projects, watershed studies and resource inventories.

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 officials of a municipality or the chairman of town commissions such as planning and zoning, conservation, inland wetlands, parks and recreation or economic development. Requests should be directed to the Chairman of your local Soil and Water Conservation District. This request letter should include a summary of the proposed project, a location map of the project site, written permission from the landowner 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 Eastern Connecticut RC&D Executive Council, the Team will undertake the review on a priority basis.

For additional information regarding the Environmental Review Team, please contact Jeanne Shelburn (774-1253), Environmental Review Team Coordinator, Eastern Connecticut RC&D Area, P.O. Box 198, Brooklyn, Connecticut 06234.