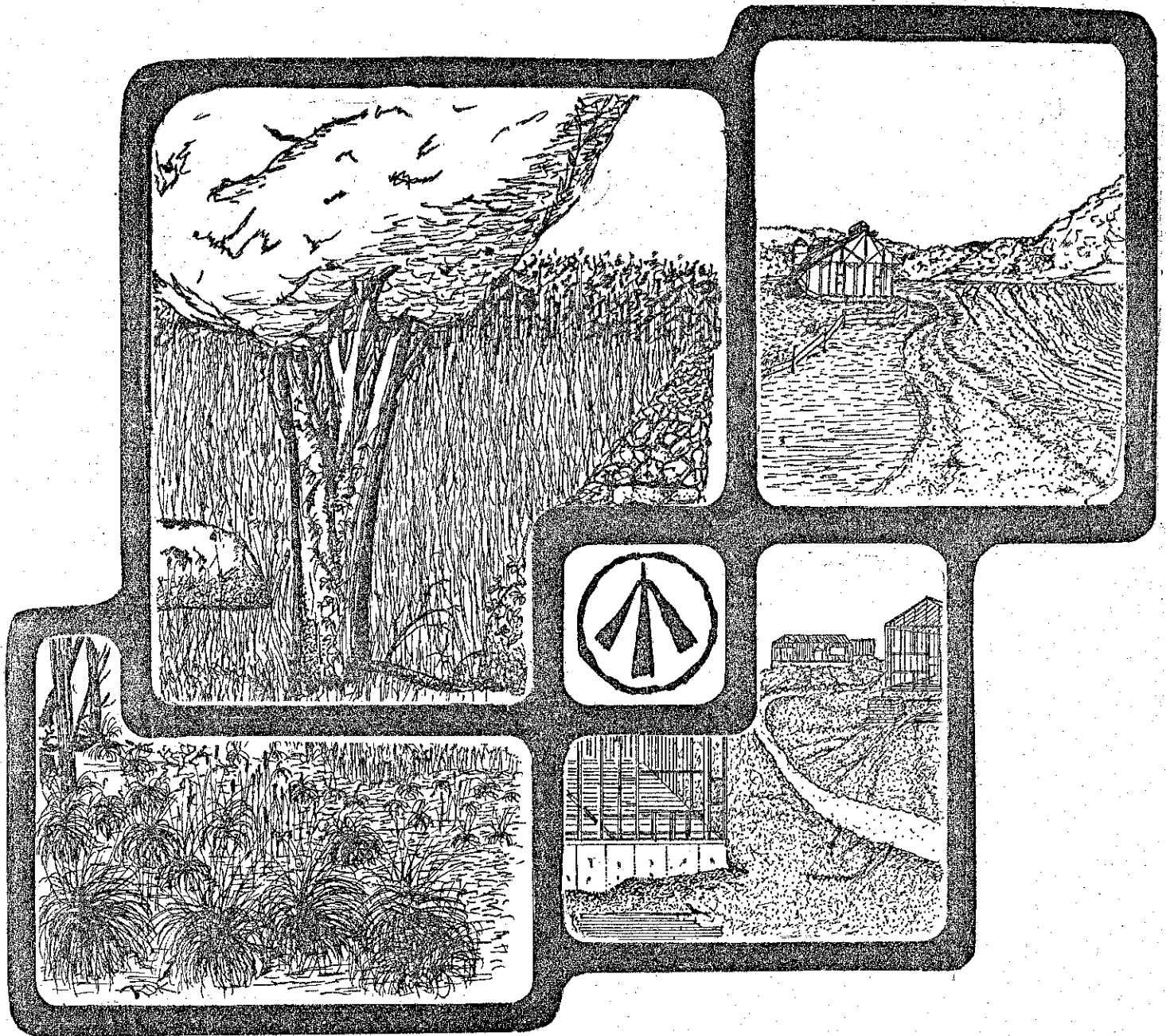
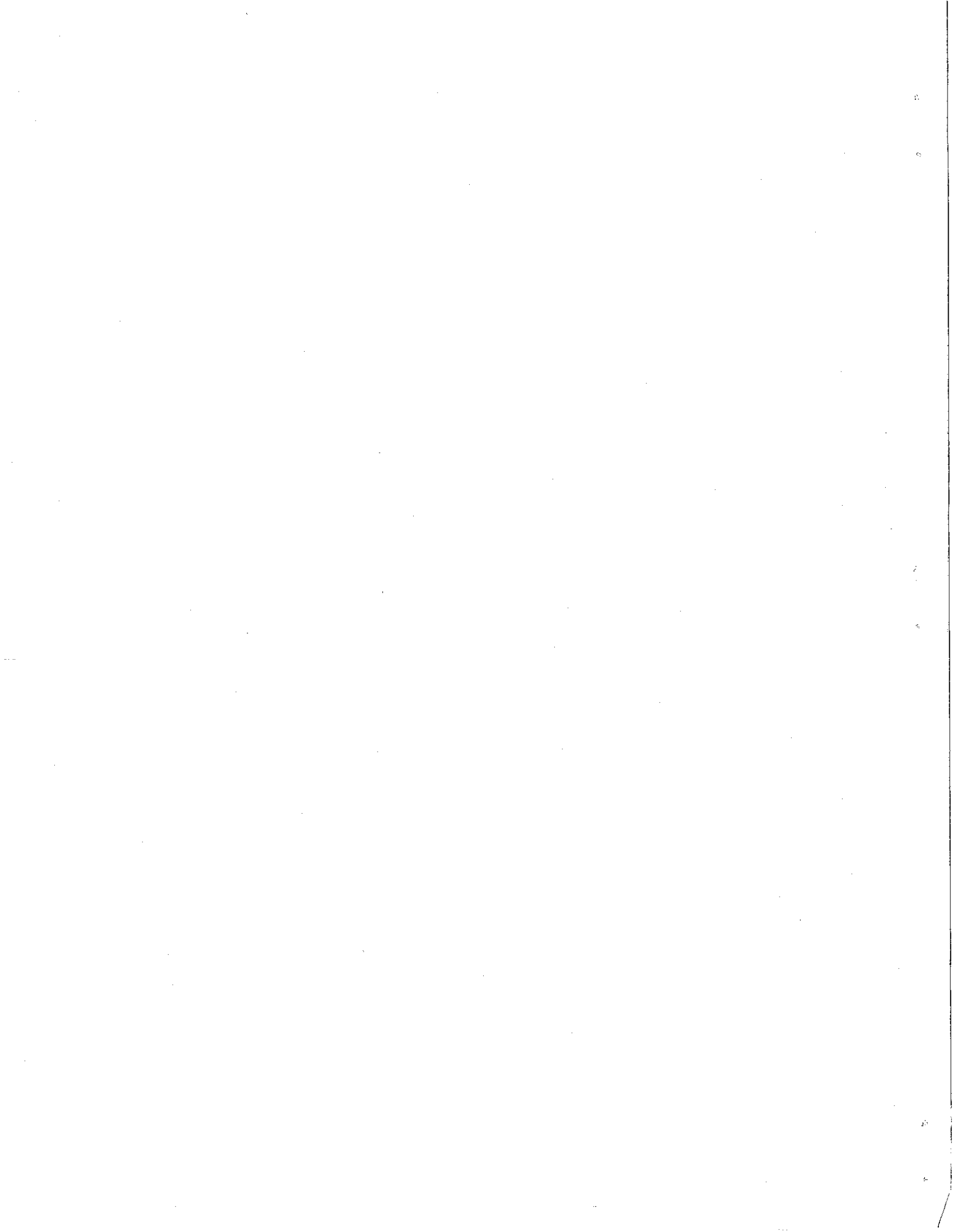


ENVIRONMENTAL REVIEW TEAM REPORT



**WOODFORD FARMS
AVON, CONNECTICUT**

**KING'S MARK
RESOURCE CONSERVATION & DEVELOPMENT AREA**



KING'S MARK ENVIRONMENTAL REVIEW TEAM REPORT

ON

WOODFORD FARMS AVON, CONNECTICUT



JULY 1980

King's Mark Resource Conservation and 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

HOUSATONIC VALLEY COUNCIL OF ELECTED OFFICIALS

AMERICAN INDIAN ARCHAEOLOGICAL INSTITUTE

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KING'S MARK RESOURCE CONSERVATION AND DEVELOPMENT AREA

Victor Allan, Chairman, Executive Committee
Stephen Driver, ERT Committee Chairman
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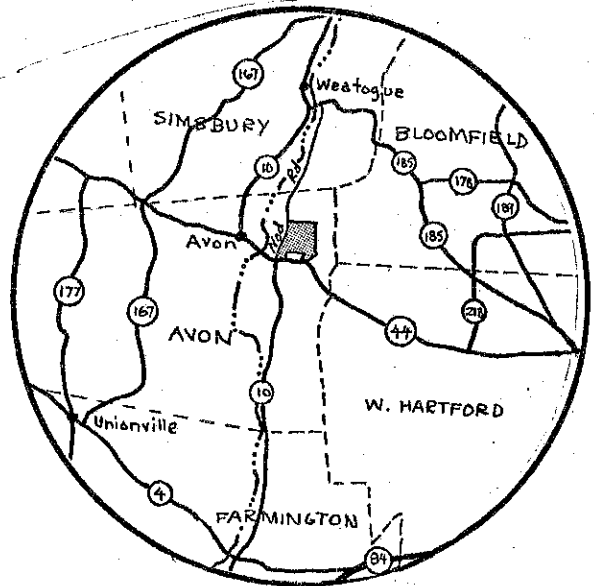
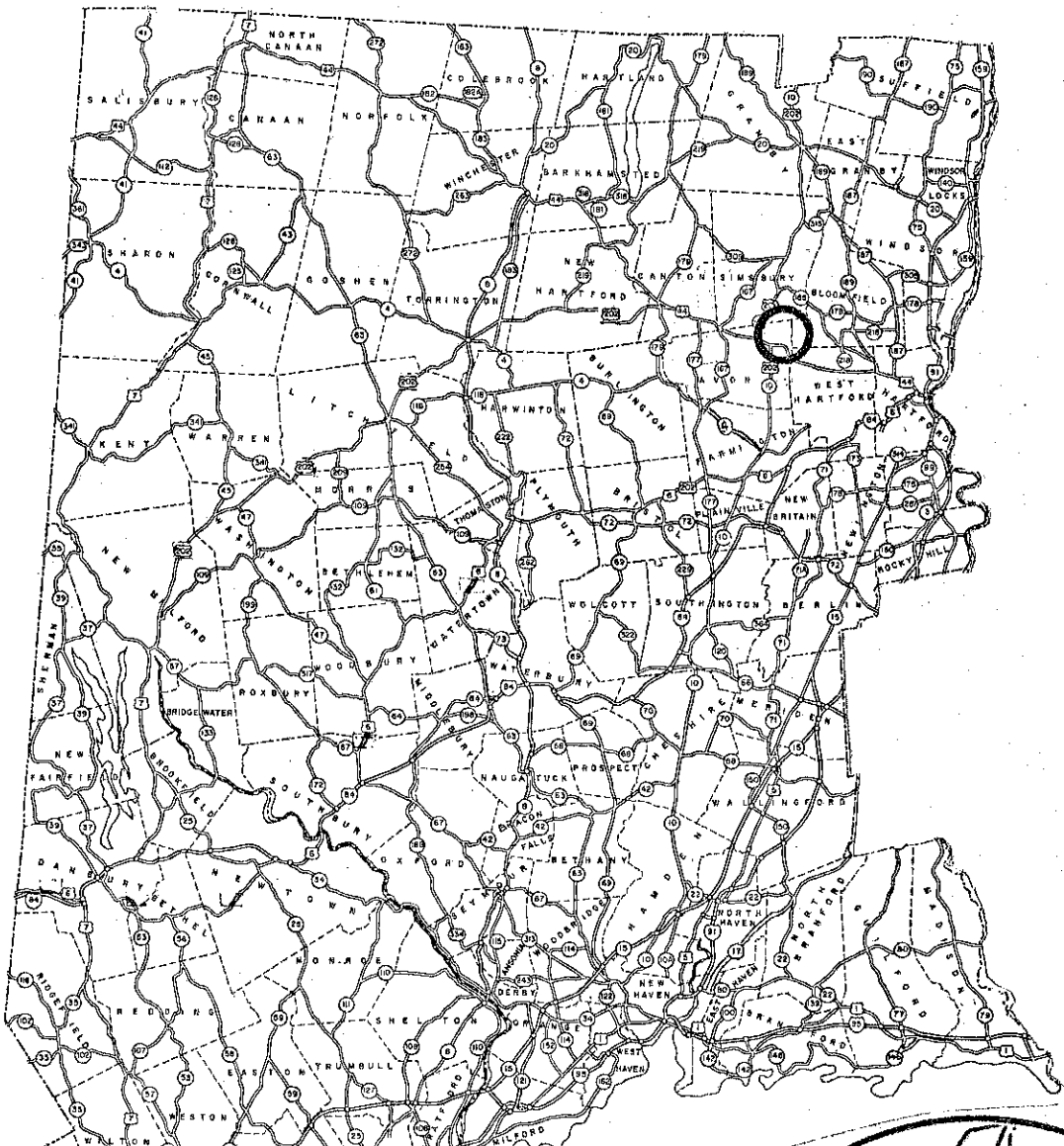
Staff Administration Provided By

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Rebecca West, ERT Draftsman
Irene Nadig, Secretary
Patricia Dyer, Secretary

LOCATION OF STUDY SITE

WOODFORD FARMS AVON, CONNECTICUT



SCALE: 1" = 10 miles

10 0 5 10 miles

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ENVIRONMENTAL REVIEW TEAM REPORT
ON
WOODFORD FARMS
AVON, CT.

I. INTRODUCTION

The Avon Inland-Wetlands Commission is presently reviewing an application for cluster subdivision of + 274 acres of land. The land is located in the northeastern quarter of town and is bordered on the west by Nod Road and on the south by Route 44. The Farmington River is located about $\frac{1}{4}$ - $\frac{1}{2}$ mile west of the property. The site is characterized by open fields in its southwestern quarter and wooded land elsewhere. Slopes are generally slight to moderate (3-15%) in the western half of the property and steep in the eastern half. The topography of the site is shown in Figure 1.

The site plan for "Woodford Farms" calls for a total of 264 units (90 villas, 36 uphill townhouses, 135 downhill townhouses, and 3 existing residential buildings). Under the plan, the buildings and ancillary facilities will be clustered in the southwestern portion of the site allowing 68.5% (187.6 acres) of the site to remain as open space. Recreational facilities to be provided include a clubhouse, parking lot, tennis courts, and swimming pool.

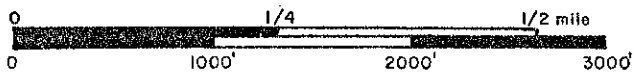
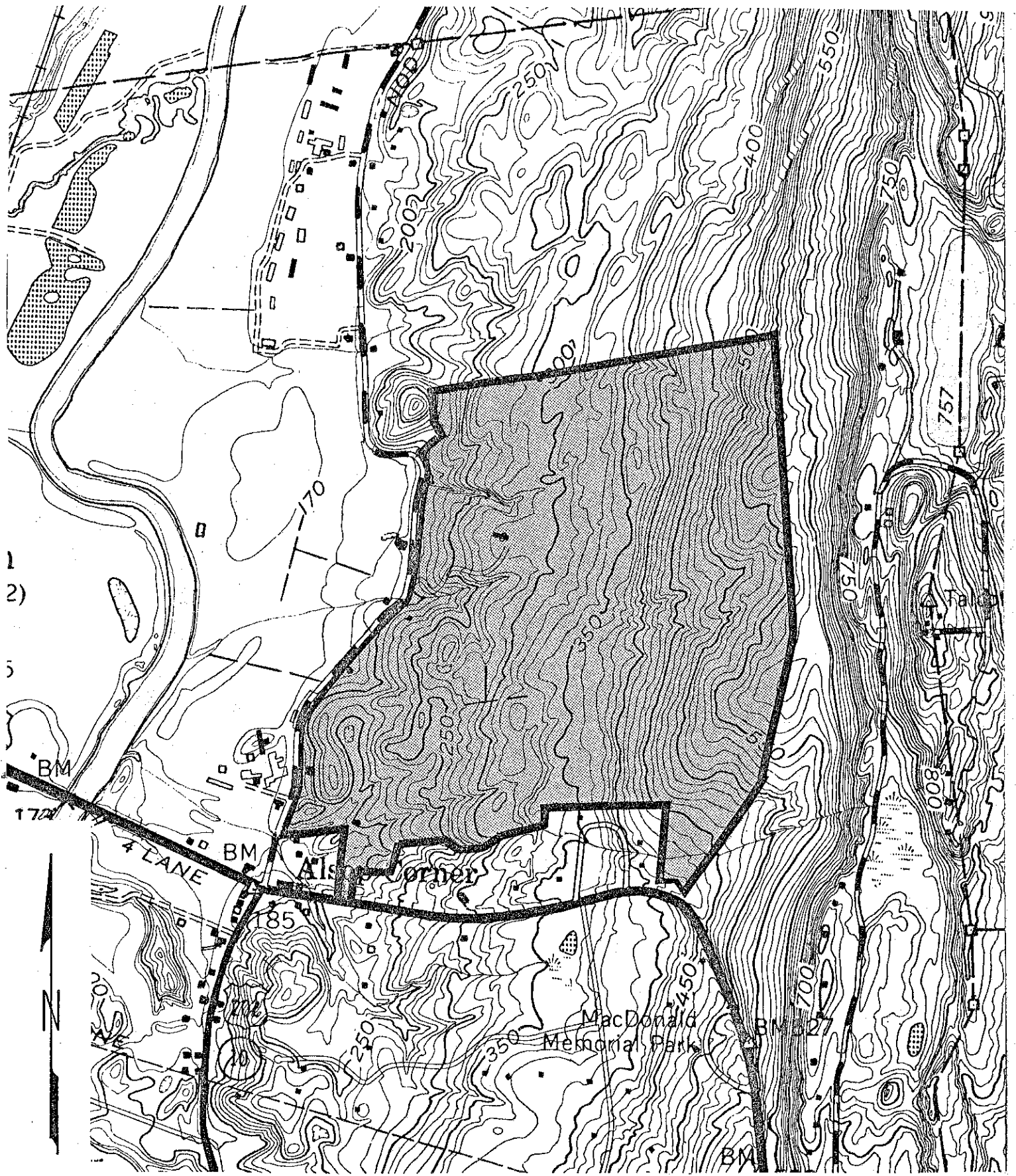
Access to the project will be provided by constructing a loop road network off Nod Road. The project is to be served by town sewers and water. Figure 2 of this report presents a simplified site plan of the development proposal.

The Inland-Wetlands Commission from the Town of Avon requested the assistance of the King's Mark ERT to help them in analyzing the proposed project. Specifically the Team was asked to comment on the suitability of the natural resource base to support the project, to provide an objective evaluation of the potential development impact, and to recommend appropriate mitigating measures to lessen the effect of the project on the natural environment.

The ERT met and field reviewed the site on June 4, 1980. Team members for this review included:

John Alexopoulos.....	Landscape Architect.....	U Conn Cooperative Extension Service
Alan Horwath.....	Soil Conservationist.....	U.S.D.A. Soil Conservation Service
Steve Jackson.....	Wildlife Biologist.....	Ct. Dept. of Environmental Protection
Bob Orciari.....	Fishery Biologist.....	Ct. Dept. of Environmental Protection
Rob Rocks.....	Forester.....	Ct. Dept. of Environmental Protection
Dwight Southwick.....	Civil Engineer.....	U.S.D.A. Soil Conservation Service
A. Carl Stamm.....	Recreation Specialist.....	Ct. Dept. of Environmental Protection
Mike Zizka.....	Geohydrologist.....	Ct. Dept. of Environmental Protection

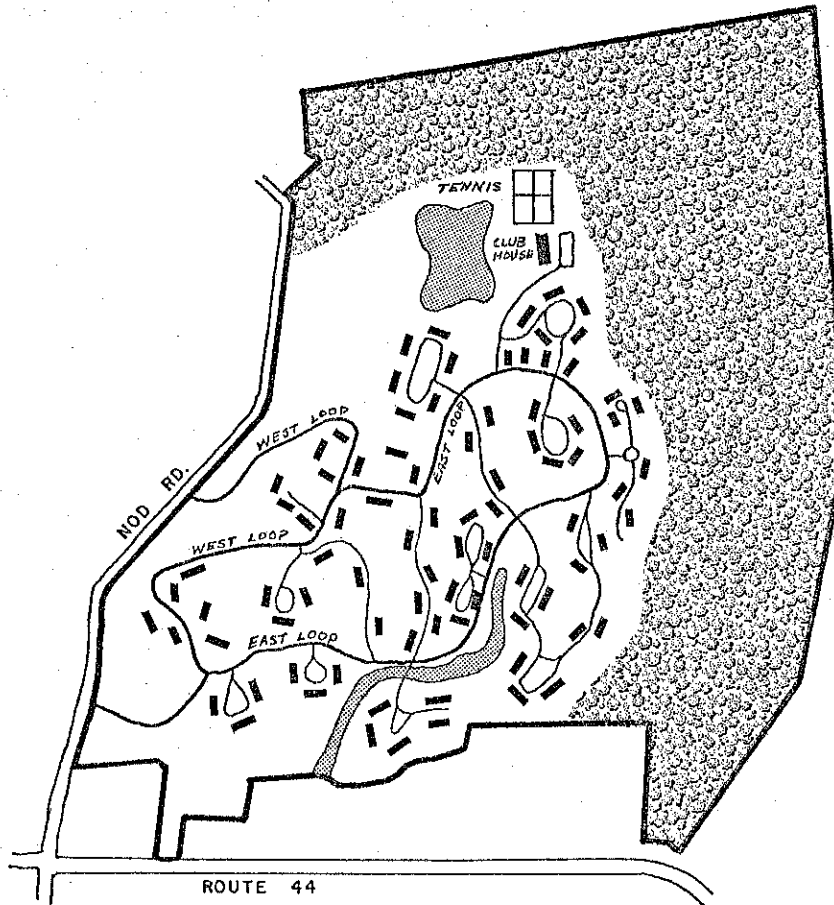
FIGURE 1.
TOPOGRAPHIC MAP



SCALE: 1" = 1000'


FIGURE 2.
SIMPLIFIED SITE PLAN

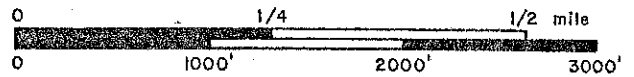
ADAPTED FROM DEVELOPERS SITE PLAN
4-1-80



 VILLAS & TOWNHOUSES

 INLAND WETLANDS

 OPEN SPACE



SCALE: 1" = 1000'

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 Avon 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. GEOLOGY

The Woodford Farms site is located within the Avon topographic quadrangle. A bedrock geologic map (Map GQ-134) and a surficial geologic map (Map GQ-147) of the quadrangle have been prepared by R. W. Schnabel and published by the U. S. Geological Survey.

Bedrock is generally poorly exposed on the site. The only significant outcrops observed were in the beds of two streams in the northwestern section of the property. The rock consists of light-to dark-reddish brown arkosic siltstone, arkose, and arkosic conglomerate. The terms "arkose" and "arkosic" refer to the sedimentary mineralogy of the rocks: they contain high percentages of feldspar and quartz. The rocks were formed by the cementation of sand, silt, and pebbles, which were deposited in streams and lakes approximately 200 million years ago. The site rises steeply eastward toward a ridge of basalt (Talcott Mountain), which was formed by cooling volcanic liquids. The basalt ridge is located east and entirely outside of the property.

On much of the site, the bedrock is overlain by till, a nonsorted glacial sediment. The rock materials which make up the till were accumulated by an ice sheet as it expanded southward through New England, scraping, chipping, and gouging the former soil and bedrock surfaces. The sediment was then re-deposited on the freshly scoured landscape, either by being plastered against the surface from underneath the ice or by being let down gently from within the ice as it stagnated and wasted during a stage of glacial retreat. The till contains particles ranging in size from clay to boulders and ranging in shape from rounded to angular to flat. Although the thickness of the till is variable, it probably is generally greater than 10 feet in the areas proposed for development.

The southwestern section of the site consists of sand and gravel deposits over bedrock. The surficial materials are part of a kame terrace, a glacial sediment that was deposited by meltwater streams adjacent to a stagnant tongue of ice occupying the Farmington River valley. The sand and gravel is very thick; wells drilled for commercial buildings at Alsop Corner showed 95 feet of sand and gravel overlying bedrock.

The surficial geology of the Woodford Farms site, adapted from U.S.G.S. Map GQ-147, is shown in Figure 3.

III. SOILS

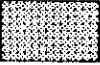

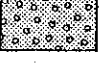


A Soils Map of the Woodford Farms site is presented in the Appendix of this report. The Appendix also contains a Soils Limitation Chart which identifies limiting factors for various land uses on individual soil types. By comparing the Soils Map with the Soils Limitation Chart, one can gain an appreciation of the suitability of the soils for the proposed land use.

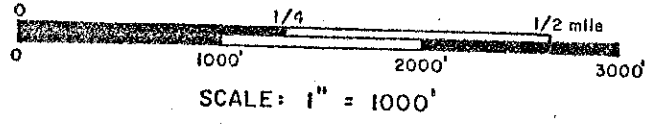
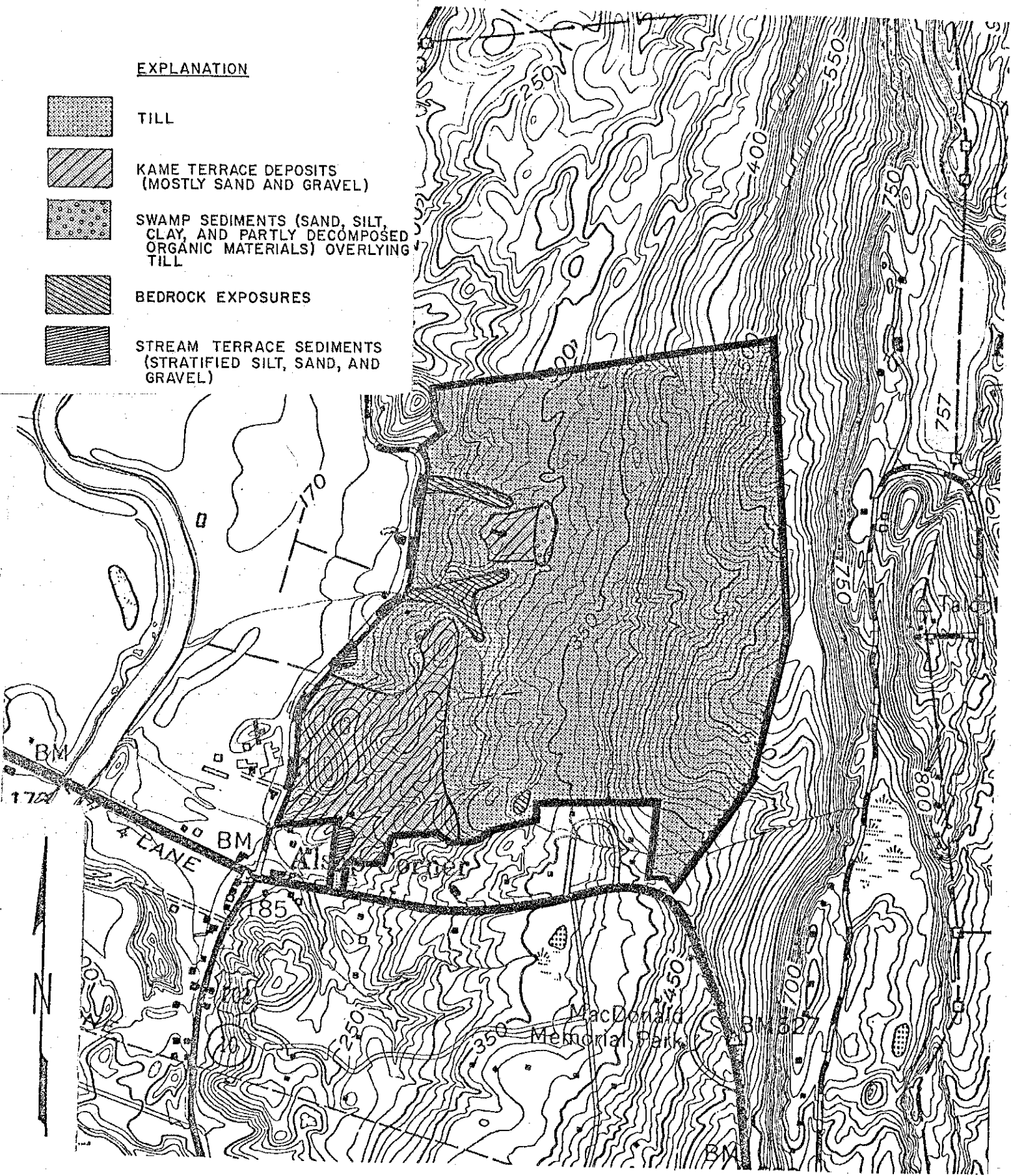
The soils map indicates the general separations between the different soil groups present (e.g. gravel, hardpan, soils with a high seasonal water-table, etc.). Specific studies at each building site should be made by the project engineer however to identify the exact soil problems needing remedies on each site.

FIGURE 3.

SURFICIAL GEOLOGY

EXPLANATION

-  TILL
-  KAME TERRACE DEPOSITS (MOSTLY SAND AND GRAVEL)
-  SWAMP SEDIMENTS (SAND, SILT, CLAY, AND PARTLY DECOMPOSED ORGANIC MATERIALS) OVERLYING TILL
-  BEDROCK EXPOSURES
-  STREAM TERRACE SEDIMENTS (STRATIFIED SILT, SAND, AND GRAVEL)



In general the area to be built upon is divided into two sections. The lower 2/3rds is on soils developed over deep sands and gravels. The upper one third of the area to be disturbed is on glacial till with a hardpan layer (the hardpan is located approximately 2 feet below the soil surface). The majority of the hardpan soils are steep and well drained. There does exist, however, a seepage area where a high seasonal watertable is found. This seepage of water over the impermeable hardpan layer is identified by the Ludlow soil and the Wilbraham soil (see Soils Map). These seepage soils will provide the major soil problems for construction on this parcel. Figure 4 of this report indicates the seepage line for subsurface water flowing off of Avon Mountain. This approximate location was determined from field review. This seepage line is continuous between the two areas of Ludlow soil (see Soils Map).

Figure 4 also shows a "very wet seep" area. In this area, the seepage of subsurface water seems to flow onto a level and slightly impounded area. The soil surface is very wet here. The water leaves this area via 3 or more outlets (see Figure 4). Buildings 84 - 88 and the clubhouse and associated facilities will be affected by this very wet seepage area.

The following recommendations are offered for consideration:

- . The area north of stream B, between the "very wet seep" and the Wilbraham (wetland) soil should be studied further by a soil scientist. This is necessary to identify the true boundary of the wetland in this area and to provide detailed information for overcoming the soil's drainage and high watertable limitations.
- . The buildings, parking lots and roads in the hardpan areas should include curtain and footing drains after cuts are made in the hillside.

The area to be built upon is transected by three important stream courses (see Figure 4). The lower section of each stream is presently eroded down to bedrock. The upper sections have not eroded down to bedrock and future stream-bank erosion is possible. Figure 4 indicates the critical or potentially erodible sections of the three streams.

It is recommended that:

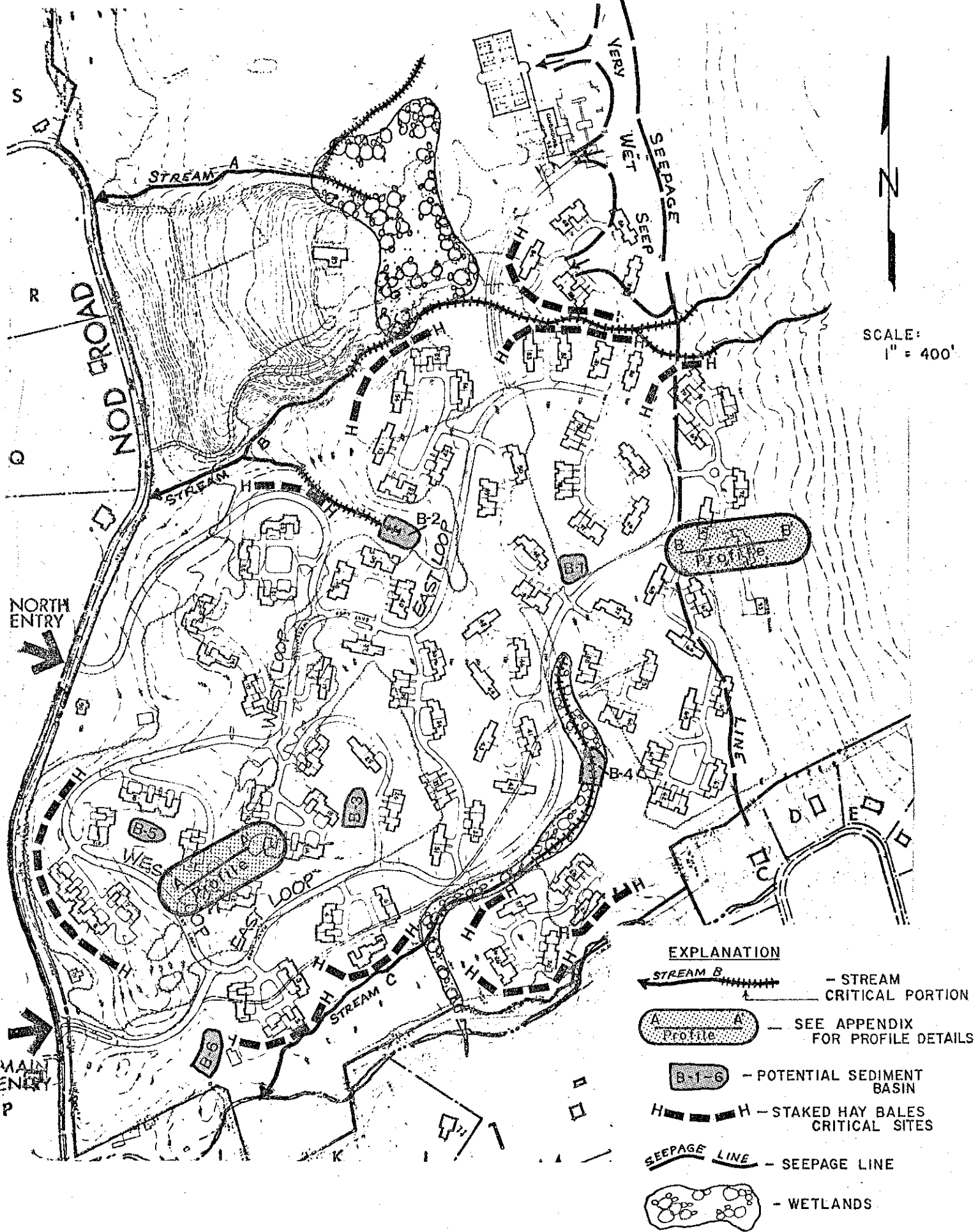
- . every effort be made to keep soil and vegetation disturbance as far back from the streams as possible, especially near the critical sections. A setback should be specified (75 - 100 feet minimum recommended). This buffer zone could be marked with staked hay bales or temporary diversion berms.
- . Any discharge of stormwater into the streams along the critical sections should be indicated on the subdivision plans. Methods to protect the stream channel and its banks should also be specified.

IV. EROSION AND SEDIMENTATION CONCERNS

A. Potential for Soil Erosion and Sedimentation

A CRITICAL AREA is defined as a "severely eroded sediment producing area that requires special management to establish and maintain vegetation in order to stabilize soil conditions".

FIGURE 4.
EROSION AND SEDIMENT MAP



Construction of the proposed buildings and road network will require extensive cuts and fills in the hillside. These disturbed sites will become critical areas if the control of soil erosion is not given detailed attention during construction.

The discussion below lists each potential critical area at Woodford Farms.

CUTS IN HARDPAN SOILS:

Deep cuts in hardpan are extremely difficult to stabilize due to seepage of water over the hardpan layer. This water creates an unstable condition just below the seepage line. The weight of the unstable soil causes the soil to flow down the slope. Once this begins, the slope is very difficult to stabilize. The establishment of a good vegetative cover is practically impossible on these eroding slopes. Besides the unsightly condition, the eroded soil must be removed from the base of the slope. Examples of this condition are evident on road cuts along many of the interstate highways in Connecticut.

CUTS IN SANDY AND GRAVELLY SOILS:

Deep cuts in droughty soils expose the layers of sand and gravel. In most cases the already droughty condition becomes much drier. This offers problems in stabilizing the slope with vegetation. The chance of soil erosion on these dry slopes is greatest when fine sand is exposed. Fill slopes composed of sandy and gravelly material provide similar problems.

DIVERSION DITCHES AND GRASSED WATERWAYS:

Several diversion ditches are proposed to be used at Woodford Farms to intercept surface water. Although no detail was available on these ditches for the Team to review, grassed waterways are usually used with a waterway serving as an outlet. It should be noted that the slopes of the centerlines of diversion ditches are usually 2 percent or less. The slopes of the centerlines for the proposed ditches at Woodford Farms are between 4 and 18 percent. The planned diversion ditches are at the top of long slopes and these ditches could result in critical areas if the design allows velocities too fast for soil conditions. These areas will be most sensitive to deterioration prior to the establishment of vegetation.

STEEP ROAD SURFACES:

Sections of the main roads of Woodford Farms will be constructed on 8 - 12 percent slopes. If the roads remain unpaved for extended periods of time, gullies could be caused by flowing stormwater. These steep road surfaces may become critical areas if exposed during the wet seasons of the year, particularly over winter months and the spring "thaw" season.

STREAMBANK EROSION:

The area to be developed is transected by three major streams. In general the low sections of these streams are eroded down to bedrock. Vegetation is well established on the streambanks and further streambank erosion probably will not occur here. The upper sections of the streams are running on soil, not bedrock. The potential for streambank erosion here is high if increased

flows occur because of development or if streambanks are disturbed. The erosion and sediment map (Figure 4) indicates the three streams as A, B, C. The erodible sections are also indicated on the map.

B. Erosion and Sediment Control Plan

The major recommendations for erosion and sediment control in this report will be grouped by potential critical area. Site specific measures should be designed by the project engineer, based on a detailed inventory of slope and soil conditions at each site.

The Woodford Farms development is extensive in size; therefore, plans for the control of erosion and sedimentation should be equally extensive or detailed.

The plan should consist of:

- Measures drawn on the 1"=40' scale maps including a key to the practices.
- Written descriptions of how and when practices will be installed. This should include a detailed description of vegetative measures (see Appendix for suggested plant materials for Woodford Farms).
- Detailed designs of all erosion and sediment control measures (see Appendix for suggested control measures).

Sheets E1, E2, E3 of a previous application for development at the Woodford Farms site were available for review. These sheets contained erosion and sediment control measures to be implemented for a portion of the project. The following comments are offered based upon a review of these sheets:

- Vegetative measures should be more detailed to reflect the various site uses and conditions at Woodford Farms.
- Diversion ditches and waterways should be specified as well as protective channel methods (e.g. during establishment and during storm flows).
- Phasing (construction sequence) should be specified for stream disturbance.
- Maintenance of Erosion and Sediment control measures should be specified.
- Planned hay bales were located for most efficient use. "General Measures" on plans were adequate.

A well described plan will not only be useful to contractors working at the site, but also to town inspectors. The Town of Avon will be inspecting the site to insure that roads, buildings, etc., meet town specifications. It is recommended that erosion and sediment control measures be given equal status in the site inspection process. A special inspection of vegetation should be made September 1 - 15. At this time, only 15 days are left to establish permanent vegetation. The inspector should then designate all areas that must be immediately seeded to Permanent or Temporary vegetation.

The Hartford County Soil and Water Conservation District is available to instruct town inspector(s) on "what to look for" during soil disturbance. This

type of instruction has been approved for a development in the Town of Bloomfield. A written request for this assistance should be submitted to the District.

SEDIMENT BASINS:

The main purpose of the Erosion and Sediment Control Plan is to keep sediment uphill. There is, however, a chance that the general measures (hay bales, permanent and temporary vegetation, etc.,) will not be adequate during large storms. Also, a storm during the critical establishment period for vegetation could cause soil erosion. As a precaution, the use of sediment basins is recommended for this extensive development.

Four sediment basins could be located to receive sediment from quite a few housing units. In addition, the two planned retention basins could be modified to catch sediment during construction. The locations of these potential basins are identified below and shown in Figure 4.

<u>No.</u>	<u>Location</u>
1	Between units 48 and 77
2	Between units 39 and 52
3	Between units 15 and 24
4	"Optional retention basin" below unit 60
5	Planned retention basin below unit 10
6	Planned retention basin below unit 1

The locations of the basins are spread over the entire development area so that sediment from many units can be controlled. Temporary and/or permanent diversion ditches could be installed to direct sediment to the basins. It is recommended that each basin be installed prior to uphill disturbance (housing unit or stream). It would be desirable to construct the basins as soon as road access is provided. The basins should be left in place until all uphill soil is stabilized by permanent vegetation. Town officials should check basins frequently to determine cleanout needs (cleanout when 2/3 full of sediment).

C. Plant Materials for Soil Stabilization at Woodford Farms

A review of sheet E1 of the previous application for this property indicated a "meadow seed mix" and a "Woodland Seed Mix". The wildflower seeds are a good idea where it is desired that natural plant succession take place (i.e. grass/wildflower mix to shrubs and invader species of trees to woodland). These wildflower species could be an attractive natural element in the Woodford Farms landscape. Below are listed some additional comments:

- If it is desired that shrubs and trees eventually cover the long, 2:1 slopes above the buildings, it is recommended that the succession process be assisted through the planting of desirable shrub species and evergreen tree seedlings. If this is not done, the wind and songbirds will bring in undesirable species (e.g. barberry, Multiflora Rose, etc.).
- The droughty soils here will require grasses, wildflowers, shrubs and trees adapted to the dry conditions. The "Additional Plant Materials"

table in the Appendix lists some plant materials that could be used on Woodford Farm's different site and use conditions.

- Recent studies have indicated that Crownvetch, if established properly, has the ability to suppress woody vegetation. The use of Crownvetch and even Flatpea should be considered if the invasion of slopes by shrub and tree species is not desired.

V. HYDROLOGY

The Woodford Farms site is within the Farmington River drainage basin. The Nod Road boundary of the property approaches to within 1000 feet of the river. All drainage from the site moves westward, crossing over Nod Road by sheet flow or passing under the road in channels. One perennial stream and at least two intermittent streams flow out of the site at or near Nod Road. The drainage areas of these three streams upgradient from the road are shown in Figure 5. A fourth stream merges with the watercourse in Drainage Area No. 3 just east of Nod Road (Point C on Figure 5). Although this fourth stream drains approximately 195 acres and therefore has a considerable influence on the overall flow rate at Point C, the watershed of the stream has not been included in the map of Drainage Area No. 3 because the proposed development would not involve any land within that watershed.

The storm drainage proposal for the subdivision calls for hydrologic separation of the intensively developed areas from the remaining areas. Run-off flowing from the easternmost (highest) section of the property would be diverted either around the developed areas or through undeveloped "islands" within those areas, or it would be piped underneath the developed portions. The total developed area, not including the "islands", would amount to 11 to 13 percent of each mapped drainage area. Most runoff from the developed sections would be piped into two retention basins, which would allow peak flow increases in the outlet stream to be mitigated. Flow from the basins would be piped back into the natural drainage channels below Point C in Figure 5. This system would permit some water from Drainage Areas 1 and 2 to be transmitted to the stream underpass at Point C, alleviating in part the flooding problems which the Team was told exist at Points A and B. However, the retention basins would not prevent road salts and most other extraneous materials from being carried into the streamcourse at Point C. In order to prevent deterioration of water quality in that streamcourse, other controls in the subdivision would be required. It should be noted that while a retention basin may be designed to serve a dual function as a sediment trap, fine suspended particles (clay and silt), dissolved contaminants (salts, etc.), and fluid contaminants (spilled hydrocarbon fuels, etc.) will not be effectively retained by most structures.

The following comments address some specific aspects of site drainage and the proposed plans for stormwater control.

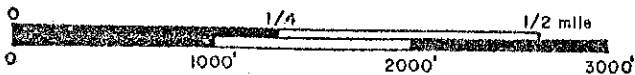
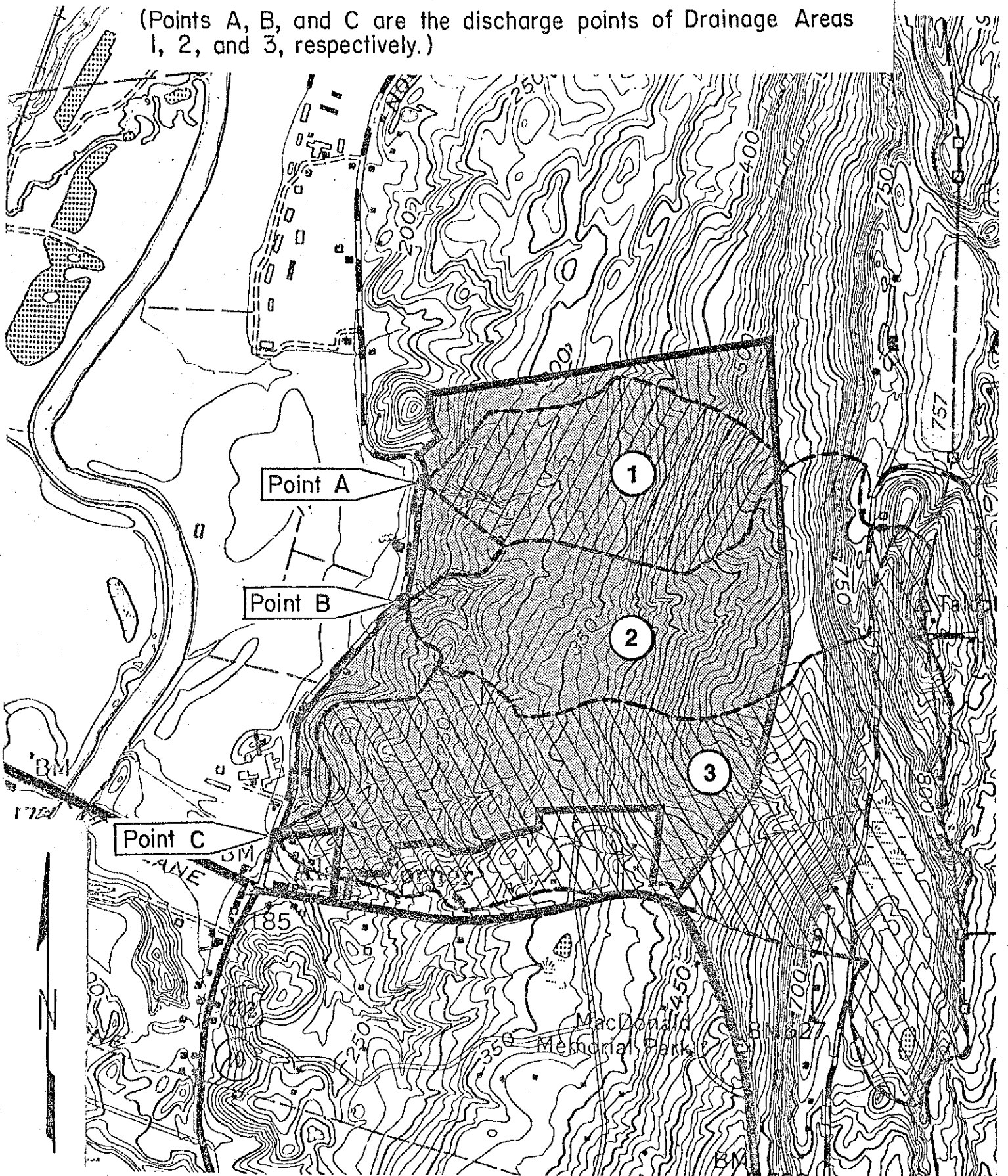
THE IMPACT OF PROPOSED ROAD NETWORK ON DRAINAGE :

The system of roads seems to follow the ridges quite well which eliminates the need for some culverts. However, a road does cross the major drainage channel on the south for only five units. This crossing is at a steep section of the

FIGURE 5.

SIGNIFICANT DRAINAGE AREAS THAT WOULD BE AFFECTED BY THE PROPOSED DEVELOPMENT

(Points A, B, and C are the discharge points of Drainage Areas 1, 2, and 3, respectively.)



SCALE: 1" = 1000'

stream and is an area of concern. A bridge span for a low head pre-cast concrete culvert would cause less serious impact on the stream than a circular culvert. The stream bottom and sides at the culvert ends would need to be riprapped to prevent erosion.

The east loop of the road system crosses a drainage channel twice in the northern portion of the property. The drainage area of this stream, at the lower crossing, is about 80 acres and has the potential for high peak discharges which would require large culvert sizes. The project engineer has suggested the use of pre-cast rectangular culvert sections. If properly sized, these culverts should not cause serious adverse impact on the stream. Nevertheless, the stream bottom and sides should be riprapped at the culvert ends. To maintain roads at acceptable grades, it will be necessary to do some cutting and filling. Measures for effective erosion and sediment control have been discussed in the preceding section of this report.

COMMENTS ON THE PROPOSED PLAN FOR STORM WATER CONTROL.

The proposed concept of keeping the clean uphill water from flowing into the construction site is ideal. A close look at the final drawings and plans and an inspection in the field during construction will be necessary to insure that this is accomplished. The plans that the ERT reviewed had diversions planned uphill from the housing units. These are proposed to keep the storm water from flowing through the site during construction. The project engineer stated that these diversions would be put in above each construction phase before any construction started. This is advisable. The outlets of these diversions need to be carefully planned, however, so that no erosion is started as a result of concentrating runoff.

Many of the housing units are located on slopes such that the runoff from these areas will flow into the clean water area. Hence, efforts should be taken to keep as much silt on the site as possible. Proper location of baled hay checks would aid in keeping silt on site. The housing units, even after completion with proper roof drains, will allow much storm water to pass into the clean watercourses. Although some areas of road and parking are being eliminated from the drainage to help offset the increased runoff from the housing units, it is difficult to say for sure if it will be an even tradeoff.

COMMENTS ON SEWERING AND WATERLINE PLACEMENT.

A critical concern for the installation of the sewers, waterlines, and electrical lines is the possibility of "cutback caveins" in the Tg, MgC, and EsB soils. The trenches in these sandy and gravelly soils should have the pipes and conduits placed and backfilled as soon as possible after excavation. Proper shorings of sides should be accomplished in trenches over 5 feet deep. Running sewers across drainage ways is another area of special concern; disturbed areas should receive protection from any running water.

RETENTION PONDS.

The southernmost proposed retention pond has a Q (peak rate of runoff) of 65 cubic feet per second (cfs) and has been sized to handle runoff from 20 acres. There are 32 housing units in the areas shown as contributing runoff to this retention pond. However, depending upon grading, it appears that

15 of these units will not drain into the drainage system, but will contribute runoff directly into the stream. The project engineer stated that all buildings would have gutters, and all parking lots and roads would be curbed, so the most frequent storms would probably get into the retention pond. Again, however, depending on the grading around the units, much of the runoff will not get into the drainage system but will go directly into the stream. The planned outlet structure on the retention pond as described by the project engineer will allow flow from a six inch pipe to be discharged directly. The inflow greater than the six inch pipe can handle will be stored in the pond until the storage reaches an orifice in the side of the riser. This orifice, if properly sized, will further meter out the flow. This type of discharge structure gives some downstream protection from the low frequency storms as well as the high frequency storms.

The above remarks can be said of the other retention basin also, except that the number of units will be different. These basins will afford some protection from silt moving through the outlet pipes.

DIVERSIONS AND PIPES:

Three diversions to be constructed uphill from the construction sites could intercept water from quite large drainage areas and confine it to the discharge point and cause erosion. Therefore, a close look at the amount of water and the discharge point would indicate the need for some special protection. The culvert outlets and inlets should be protected with stone or other means to eliminate erosion. Pipe sizes of the culverts under the roads should be determined from the total area contributing water to the clean water-courses. Storm water will also be flowing from some of the building units and needs to be accounted for.

MULTI-PURPOSE POND SITE:

The wetland below the road to the clubhouse is a good site for a pond. This is suggested mainly for the variety of benefits that a 1/4 - 1/3 acre pond could provide here. The benefits are listed below:

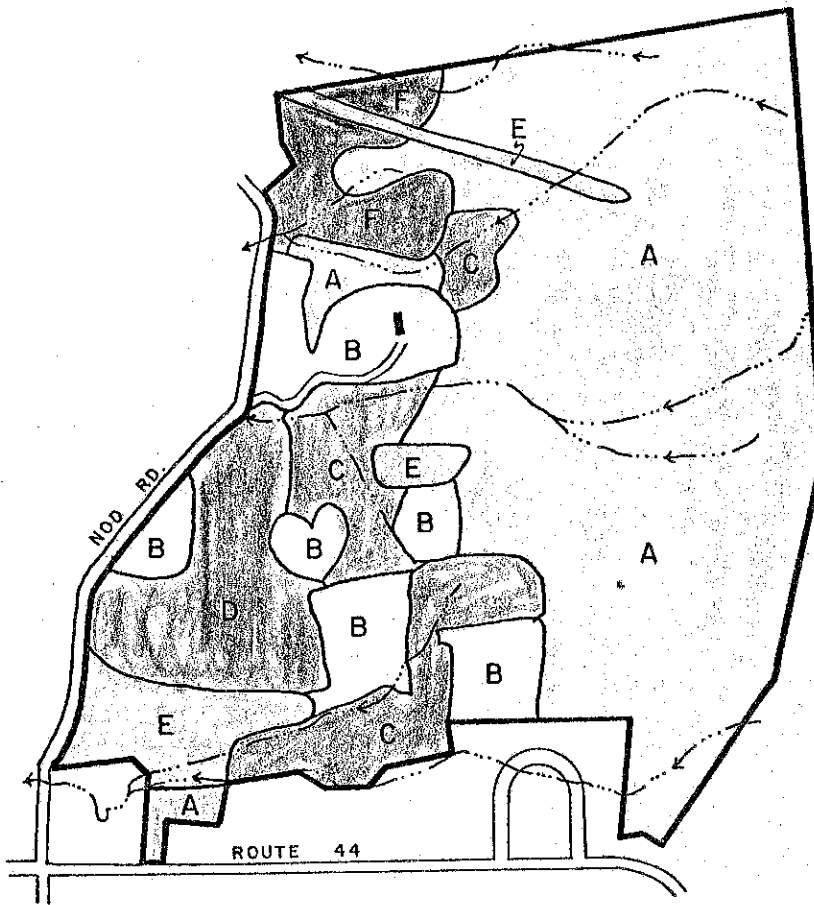
- A FIRE POND can be constructed with a dry fire hydrant to provide supplemental fire protection (even in the winter when there is a thick ice cover).
- A RECREATION-WILDLIFE-FISH POND can be used for skating. Hiking trails around the pond could be used for wildlife viewing and the pond could be stocked with warmwater fish so that fishing is possible.

The Hartford County Soil and Water Conservation District has much information available on Ponds, Dry Fire Hydrants, Wildlife Improvements and Recreation Trails.

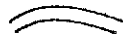


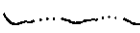

VI. VEGETATION

The Woodford Farms site consists of six vegetation types. These include softwoods-hardwoods, 158 acres; open fields, 35-acres; mixed hardwoods, 24-acres; old field, 16-acres and two pine stands totaling 36-acres (see Vegetation Type Map and Vegetation Type Descriptions).







FIGURE 6.
VEGETATION TYPE MAP



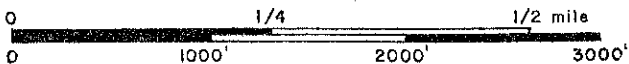
LEGEND

-  ROAD
-  PROPERTY BOUNDARY
-  VEGETATION TYPE BOUNDARY
-  STREAM
-  BUILDING

VEGETATION TYPE DESCRIPTIONS*

-  TYPE A Softwood-Hardwood, 158-acres, fully-stocked, pole to small sawtimber
-  TYPE B Open Field, 35-acres
-  TYPE C Mixed Hardwoods, 29-acres, fully-stocked to over-stocked, sapling to pole size
-  TYPE D Pine, 24-acres, under-stocked to fully-stocked, pole to small sawtimber
-  TYPE E Old Field, 16-acres, under-stocked, seedling to sapling size
-  TYPE F Pine, 12-acres, over-stocked, pole to small sawtimber size

SCALE: 1" = 1000'



* Seedling size - trees less than 1 inch in diameter at 4½ feet above the ground (d.b.h.)
 Sapling size - trees 1 to 5 inches in d.b.h.
 Pole size - trees 5 to 11 inches in d.b.h.
 Sawtimber size - trees 11 inches and greater in d.b.h.

The majority of this tract has recently received a timber harvest which has removed the largest trees. Retention of the remaining large healthy trees and flowering shrubs for their aesthetic value would be desirable.

Windthrow and storm damage are potential hazards in vegetation types C and D. The widespread poison ivy present in all areas except vegetation type A may be a hazard in high use areas and should be eradicated. Trees cleared for construction of roadways and buildings should be utilized for fuelwood.

Vegetation Type Descriptions

TYPE A. Softwoods-Hardwoods. This 158-acre stand was recently harvested of almost all the larger sawtimber size trees. The remaining stand is presently at the low end of fully stocked and consists of healthy pole to small sawtimber size eastern hemlock, eastern white pine, red oak, black oak, pignut hickory, red maple, tulip tree, black birch and well scattered groves of American beech and big tooth aspen. The understory within this stand is made up of maple-leaved viburnum, blue beech, flowering dogwood, mountain laurel, witch hazel, hemlock seedlings, white pine seedlings and occasional gray birch. Canada mayflower, lowbush blueberry and three species of club moss are the most abundant ground cover forms in this stand.

TYPE B. Open Fields. The open fields present on this property total approximately 35 acres. Grasses dominate the area with an abundance of wild flowers and weed species, including wild pea, wild strawberry, fleabane, clover, aster, treefoil, hawkweed, everlasting, thistle, hairy vetch, field pepper grass, blackeyed susan, goldenrod, milkweed and poison ivy. Staghorn sumac, raspberry, fox grape and summer grape are present around the perimeter of these fields.

TYPE C. Mixed Hardwoods. This 29 acre stand varies from fully stocked in the drier areas to over stocked in the wetter areas. It is made up of healthy sapling to pole size red maple, sugar maple, white ash, red oak, black birch, gray birch and flowering dogwood with scattered sawtimber size remnant red oak, white oak and shagbark hickory, some of which have large dead branches. The understory is composed of hardwood tree seedlings, mapleleaved viburnum, barberry and localized patches of spice bush and highbush blueberry in the wetter areas. Ground cover is made up of poison ivy, virginia creeper, partridge berry, jack-in-the-pulpit, wild geranium, maidenhair fern, Christmas fern, evergreen wood fern, royal fern and sensitive fern.

TYPE D. Pine. This 24 acre stand has also recently received a heavy thinning, which has removed a majority of the sawtimber size trees. The residual stand varies from understocked to fully stocked with pole to small sawtimber size eastern white pine. For their size, these trees have small crowns. White pine seedlings, blackcherry seedlings, red maple seedlings, sugar maple seedlings, barberry, and mapleleaved viburnum are present in the understory. Ground cover in this stand is dominated by poison ivy, hayscented fern, virginia creeper, Canada mayflower and raspberry, with occasional patches of pink lady slippers, solomon's seal and spotted wintergreen.

TYPE E. Old Field. Approximately 16 acres of old fields are present within this tract. They are at present understocked with seedling to sapling size black oak, red oak, blackcherry, big tooth aspen and eastern red cedar. Gray

stemmed dogwood, multiflora rose, barberry and high bush blueberry are also present. Herbaceous vegetation is identical to that of the open field (vegetation type B).

TYPE F. Pine. This 12 acre overstocked stand is made up of pole to small sawtimber size eastern white pine and scattered pitch pine with small crowns. The understory where present is made up of mapleleaved viburnum, blackcherry seedlings and barberry. Canada mayflower, poison ivy and club moss form the ground cover in this area.

Aesthetics and Preservation

Although the majority of this tract has recently had the larger trees removed through timber harvesting operations, there are still many large healthy trees that have high aesthetic and shade value. These trees should be retained to the greatest extent possible.

Care should be taken during the construction period not to disturb the trees that are to be retained. Special care should be taken near hemlock trees, because of their shallow root systems. In general, healthy and high vigor trees should be favored over unhealthy trees because they are usually more resistant to the environmental stresses brought about by construction.

Where feasible, trees should be saved in small groups or "islands". This practice lowers the possibility of soil disturbance and mechanical injury. Individual trees and "islands" of trees should be temporarily, but clearly, marked so they may be avoided during construction.

Trees are very sensitive to the condition of the soil within the entire area under their crowns. Development practices near trees such as excavating, filling and grading for construction of roadways and buildings may disturb the balance between soil aeration, soil moisture level and soil composition. These disturbances may cause a decline in tree health and vigor, potentially resulting in tree mortality within three to five years. Mechanical injury to trees may cause the same results. Dead trees reduce the aesthetic quality of an area and may become hazardous and expensive to remove if near roadways, buildings or utility lines.

The flowering shrubs which are present in vegetation type A, including flowering dogwood and mountain laurel, have high aesthetic value and should be retained if possible. The flowering of these shrubs may be stimulated by allowing direct sunlight to reach them. This may be accomplished by complete or partial removal of the overstory trees over these shrubs.

Potential Hazards and Mitigating Practices

Windthrow is a potential hazard in the wetter sections of vegetation type C (Mixed Hardwoods). These areas correspond to the inland wetland areas. The soils present are saturated and as a result tree root systems are shallow and unable to become securely anchored. Clearings in or alongside these areas will increase the windthrow hazard by allowing wind to pass through rather than over these stands. If possible, clearing of the vegetation in these areas should be avoided.

The potential for windthrow and storm damage of the trees remaining in vegetation type D (Pine) will remain high for the next several years. This is primarily a result of the heavy thinning which parts of this stand have received. Many of the residual trees are tall and small crowned. Prior to the thinning, these trees could rely on each other for stability. It may now take many years of growth before these trees become stable.

Poison ivy is relatively wide spread in vegetation types B, C, D, E and F. Its presence in heavy use areas may become a hazard if it is not controlled. Effective eradication may be accomplished through careful application of a federal and state approved herbicide, by a licensed applicator. When using any herbicides it is imperative to follow label directions and cautions. This treatment should take place prior to construction completion.

If any of the large remnant trees are retained in vegetation type C, the large dead branches should be removed to reduce the potential hazard of these branches breaking off and injuring people or damaging property.

Suggested Management and Utilization

No forest mgmt necessary at this time

If the proposed development of this complex takes place, the trees which are cleared to construct the 15 acres of roads and 11 acres of buildings should be utilized for fuelwood.

The residual trees in the open space areas should improve in health and vigor over time as a result of the recent harvesting operation. Re-evaluation of the health of these trees should take place in approximately ten years by a public service forester or a consultant forester.

VII. WILDLIFE

Three major wildlife habitats are present on this property. The location of these habitats can be inferred from Figure 5 and they consist of the following:

FIELDS AND OLD FIELDS. This area has excellent wildlife habitat for this section of the state. Good varieties of grasses and annuals are interspersed with a good variety of wildlife food producing shrubs. It would be difficult for a wildlife manager to improve on what agriculture and natural succession have done in this area. A great variety of mammals and birds use this area. Exceptional, in terms of rare or endangered species, this area is not. However, availability of wildlife habitat of this quality in Avon is currently rare.

FOREST AREAS. The forest land on this property offers good habitat for wildlife. The forest contains a good variety of flora which provide both food and cover. The interspersed fields and forest cut openings is a definite asset of the area from a wildlife point of view. The association of field and forest has only recently been inhabited by the recently reintroduced Eastern Wild Turkey and a turkey sighting has recently been reported from the Woodford Farms site. Turkeys require relatively low human population levels and the Talcott Mountain ridge is probably the only area in Avon particularly suitable to turkeys. The interspersed fields and wooded lands on the Woodford Farms site is judged to be perfect for turkeys.

WETLAND. Wetlands are limited on this site and there is but one perennial stream, which is quite small. As a result, wetland wildlife of any significance are not expected to make use of this property.

Effect of Proposal

Wildlife utilization by current species will be greatly reduced by the proposed development. Most wildlife populations, with a few exceptions, will change disproportionately with the human population level. As the density of development increases, wildlife populations will decrease. The proposed density of housing units is considerably higher than if single family units were used. Cluster housing is preferred for open space, however the benefits are much reduced when additional units are added.

With the proposed development, some songbirds will probably increase in number due to lawns and bird feeders. A few mammals like grey squirrels, cottontail rabbits, and raccoons may not be greatly affected until they cause problems and residents retaliate. Deer, woodchucks, rabbits, and a few species of birds could cause garden problems. From a long range planning standpoint, it should be recognized that the Talcott Mountain ridge is about the only wild area left of any real size in Avon. From a wildlife standpoint, it would be desirable to preserve this area or zone it for very limited development.

Alternative Management

Assuming the proposed development is approved as planned, a few things can be done to reduce impact on wildlife and/or encourage desirable species.

1 Wildlife shrubs such as japanese barberry, dogwood, cedar and honeysuckle, commonly found in the area, should be disturbed as little as possible. Lawns should be kept small, and²tall grass areas should be kept free of tree growth. Efforts should be taken to preserve those open field areas not built upon. Recreation activities which encourage excessive use of the woodlands should be avoided.³ Good forest management practices should be encouraged for all woodlands - open space areas should not be held in a "no-cut" status. With these steps, wildlife impact may be reduced some; however, the impact of the volume of people resulting from this project is enough to discourage many species.

VIII. FISHERIES

Two intermittent streams and one small permanent stream flow through the bounds of the proposed Woodford Farms Development. Only blacknose dace were observed in the permanent stream and no fish species would likely inhabit the intermittent streams. Because of their small size, the streams have no direct sport fisheries value. However, they do have importance in providing cool, clean water to the lower Farmington River. Fishing is presently rather limited in the lower Farmington, but this section of river should increase in importance for anadromous fish in the future. It is anticipated that American shad, passed over the Rainbow Dam Fishery, Windsor, will spawn in this section and that this section will subsequently become a rearing area for their young. When Atlantic salmon return in sufficient numbers to be released above the Rainbow Fishery, they will pass by this area, while on their upstream migration. Because of the importance of the lower Farmington River, the small feeder streams

located within the proposed development, should be protected from environmental disturbances.

In the opinion of this author, the proposed Woodford Farms Development, with its proposed water and silt retention facilities, should not be significantly detrimental to the three small streams on-site or to the lower Farmington River.

IX. RECREATION CONSIDERATIONS

Recreational facilities for the proposed project are in the preliminary planning stages, but so far the following has been proposed: a four court tennis complex, an indoor or outdoor swimming pool complex, a clubhouse, and a parking lot with 75 parking spaces.

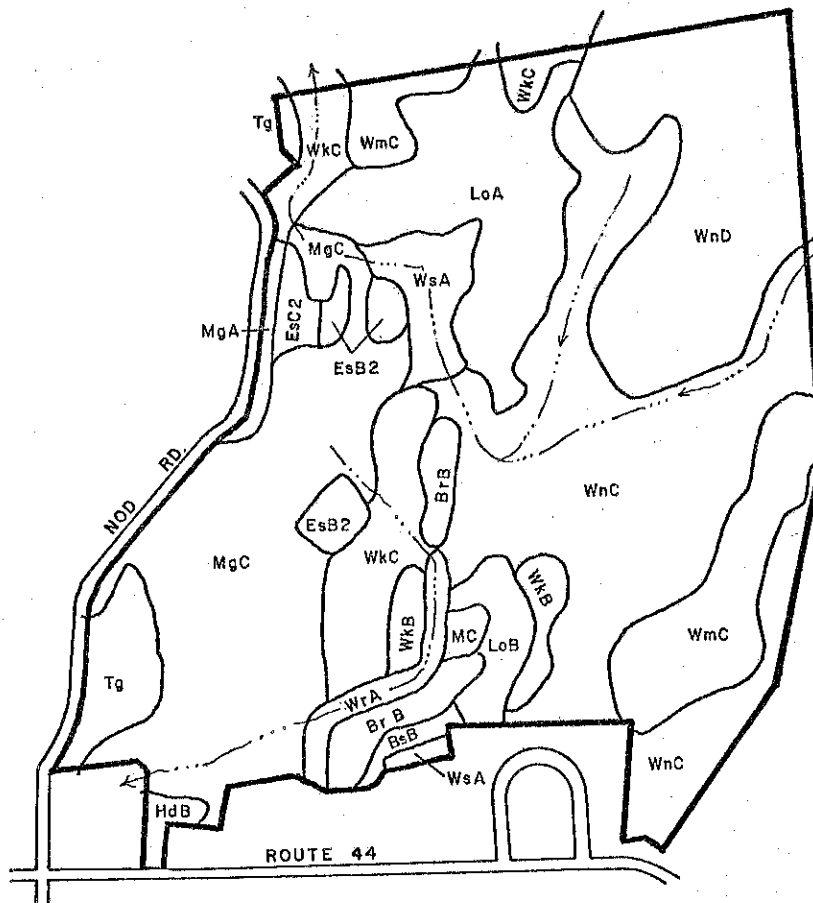
The proposed location for these facilities is just east of the wetland area in the central portion of the property. According to existing soils mapping, this area is underlain by Ludlow loam soils of slight slope. This soil has a seasonal high water table at a depth of about 20 inches from late in fall until mid-spring. As a result, frost action is a potential problem in the construction of the clubhouse, parking lot, tennis courts, and swimming pool. Costly drainage measures will no doubt be needed in this area.

The layout of the proposed facilities appears satisfactory; although no detailed plans were available for review. If a seasonal pool is contemplated, proper provisions should be made for the drawdown of chlorinated pool water, if and when necessary. In this regard, it should be noted that the flushing of chlorinated water into the town sewer system is not recommended nor is direct discharge to nearby streams as this could lead to a fish kill.

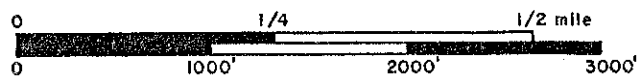
* * * * *

X. APPENDIX

SOILS MAP



ADAPTED FROM HARTFORD COUNTY
SOIL SURVEY, U.S.D.A. - S.C.S.



SCALE: 1" = 1000'

SOILS LIMITATION CHART - WOODFORD FARMS

MAP SYMBOL	SOIL NAME	BUILDINGS W/ BASEMENTS	ROADS & DRIVEWAYS	SHALLOW EXCAVATION	LAWNS/ LANDSCAPING
BrB	Broadbrook silt loam, 3 to 8% slopes	Slight	Moderate; Frost action	Slight	Slight
BSB	Broadbrook stony silt loam, 3 to 8% slopes	Moderate; Large stones	Moderate; Frost action	Moderate; Large stones	Moderate Large stones
ESB2	Enfield silt loam, 3 to 8% slope, eroded	Slight	Moderate; Frost action	Severe; Small stones, Cutbacks cave	Slight
ESC2	Enfield silt loam, 8 to 15% slopes, eroded	Moderate; Slope	Moderate; Frost action, Slope	Severe; Small stones, Cutbacks cave	Moderate; Slope
HdB	Hartford fine sandy loam, 3 to 8% slopes	Slight	Slight	Severe; Small stones, Cutbacks cave	Moderate; Droughty
LoA	Ludlow loam, 0 to 3% slopes	Severe; Wet	Severe; Frost action	Severe; Wet	Slight
LoB	Ludlow loam, 3 to 8% slopes	Severe; Wet	Severe; Frost action	Severe; Wet	Slight
MCC	Manchester gravelly loam, 3 to 15% slopes	Slight - Moderate; Slope	Slight - Moderate; Slope	Severe; Small stones, Cutbacks cave	Severe; Small stones, Droughty
MgA	Manchester gravelly sandy loam, 0 to 3% slopes	Slight	Slight	Severe; Small stones, Cutbacks cave	Severe; Small stones, Droughty
MgC	Manchester gravelly sandy loam, 3 to 15% slopes	Slight - Moderate; Slope	Slight - Moderate; Slope	Severe; Small stones, Cutbacks cave	Severe; Small stones, Droughty
WkB	Wethersfield loam, 3 to 8% slopes	Slight	Moderate; Frost action	Slight	Moderate; Small stones

MAP SYMBOL	SOIL NAME	BUILDINGS W/ BASEMENTS	ROADS & DRIVEWAYS	SHALLOW EXCAVATION	LAWNS/ LANDSCAPING
WkC	Wethersfield loam, 8 to 15% slopes	Moderate; Slope	Moderate; Frost action, Slope	Moderate; Slope	Moderate; Small stones
WmC	Wethersfield stony loam, 8 to 15% slopes	Moderate; Slopes, Large stones	Moderate; Slope, Frost action	Moderate; Slope, Large stones	Moderate; Slope, Large stones
WnC	Wethersfield very stony loam, 3 to 15% slope	Severe; Large stones	Moderate; Frost action, Slope, Large stones	Severe; Large stones	Severe; Large stones
WnD	Wethersfield very stony loam, 15 to 35% slopes	Severe; Large stones, Slope	Severe; Slope	Severe; Slope, Large stones	Severe; Large stones, Slope
WrA	Wilbraham silt loam, 0 to 3% slopes	Severe; Wetness	Severe; Wetness, Frost action	Severe; Wetness	Severe; Wetness
WSA	Wilbraham stony silt loam, 0 - 3% slopes	Severe; Wetness, Frost action	Severe; Wetness, Frost action	Severe; Wetness	Severe; Wetness
Tg	Terrace escarpments, sand and gravel	Severe; Slope	Severe; Slope	Severe; Cutsbacks cave	Severe; Droughty

EXPLANATION OF SLIGHT LIMITATION: indicates that any property of the soil affecting use of the soil is relatively unimportant and can be overcome at little expense.

MODERATE LIMITATION: indicates that any property of the soil affecting use can be overcome at a somewhat higher expense.

SEVERE LIMITATION: indicates that the use of the soil is seriously limited by hazards or restrictions that require extensive and costly measures to overcome.

Erosion & Sediment Control Plan CHECKLIST

Prepared by:
USDA Soil Conservation Service
June 1980

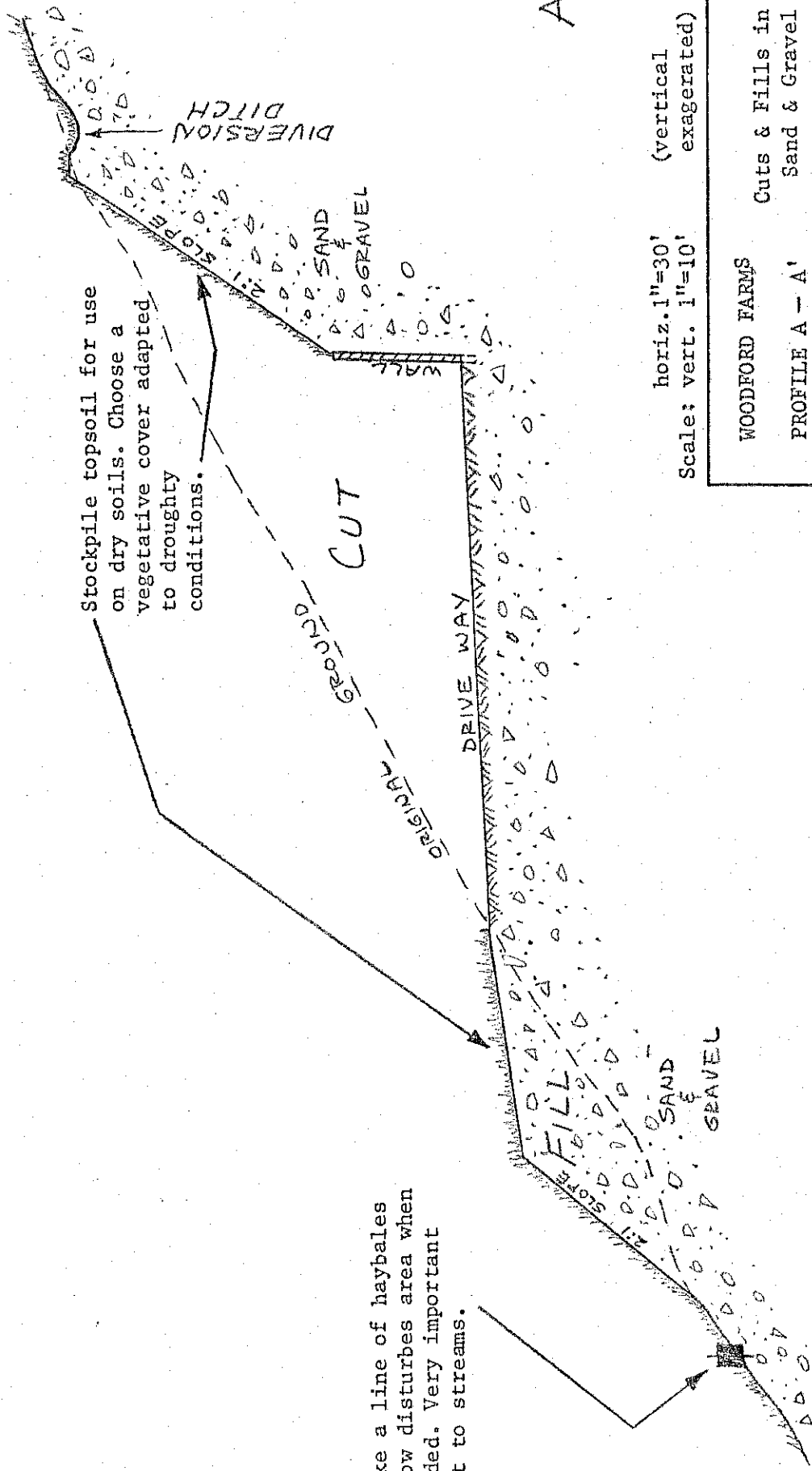
The ideas listed on this sheet will assist the consulting engineer in preparing a conservation plan for:

WOODFORD FARMS, AVON, CONNECTICUT

A plan that can be used by contractors and town inspectors should consist of (a) Practices drawn on a copy of the subdivision map. (b) Written descriptions of how and when practices will be installed (including vegetation). (c) Detailed designs of the erosion and sediment control practices.

POTENTIAL CRITICAL AREA	SUGGESTIONS	SOURCE OF INFORMATION
CUTS IN HARDPAN SOIL	<ol style="list-style-type: none"> 1. A perforated drain at the top of cuts could be used to intercept seepage water. On long slopes an additional drain across the slope may be necessary. This will have to be designed after the cut is made. Unstable soil conditions will need immediate attention after the cut is made. See profile B-B' 2. Vegetate cut and fill slopes immediately after mechanical stabilization measures are installed. DO NOT leave the slopes bare for extended periods of time. If there is a reason not to seed permanent vegetation, take other precautions such as temporary vegetation, hay bale erosion checks, etc. 3. If site must be left unfinished over the winter months, plan ahead and plant temporary vegetation 	<p>Erosion & Sediment Control Handbook of C suggested "Vegetation Format" See profile B-B'</p>
CUTS AND FILLS IN SANDY AND GRAVELLY SOILS	<ol style="list-style-type: none"> 1. Due to the droughty conditions here, topsoil will be necessary over the exposed sand and gravel. 2. All slopes should be seeded immediately. If site must be left unfinished over the winter months, plan ahead and plant temporary vegetation. 3. Hay bale erosion checks will be necessary below fill slopes that are near streams or that are difficult to establish vegetation on. The map included in the appendix shows some areas where these checks are critical. 	<p>Erosion & Sediment Control Handbook of C Suggested "Vegetation Format" See Profile A-A'</p>

POTENTIAL CRITICAL AREA	SUGGESTIONS	SOURCE OF INFORMATION				
DIVERSION DITCHES AND GRASSED WATERWAYS	<p>1. Design diversions and waterways for permissible Velocities</p> <table border="0" data-bbox="243 672 324 1354"> <tr> <td style="padding-right: 20px;"><u>Bare Channel</u></td> <td><u>Vegetated Channel</u></td> </tr> <tr> <td style="padding-right: 20px;">1.5 fps</td> <td>3.0 fps</td> </tr> </table> <p>2. Vegetate diversions and waterways immediately after construction. Do not construct unless moisture conditions allow for good vegetation establishment.</p> <p>3. Grassed waterways, especially on the hardpan soils, should be constructed using jute matting on the centerline. This should help to eliminate washouts during vegetation establishment.</p> <p>4. Design stone centers for the waterways where velocities will exceed those given in table above. Waterways draining large areas may require special protective measures such as drop structures or rip rap. This is due to concentrated flows.</p>	<u>Bare Channel</u>	<u>Vegetated Channel</u>	1.5 fps	3.0 fps	<p>Erosion and Sediment Control Handbook for CT</p> <p>suggested "Vegetation Format"</p>
<u>Bare Channel</u>	<u>Vegetated Channel</u>					
1.5 fps	3.0 fps					
STEEP ROAD SURFACE	<p>1. The steeper road surfaces should be paved as soon as utilities are installed. Don't leave road surface exposed over winter and spring "thaw" months.</p> <p>2. If there is sediment in the runoff from these roads during construction, water should be diverted off of the road by using small water breaks. These must be designed onsite during soil disturbance.</p>	<p>Erosion and Sediment Control Handbook of CT</p> <p>Woodlands of Northeast. Pages 17 &</p>				
CROSSING (1) Roads (2) Utilities	<p>1. Stream crossings by roads or utilities should be done in a systematically planned manner. A sequence should be written down on the plans as a guide to contractors. This sequence should be designed so that:</p> <ul style="list-style-type: none"> (a) heavy equipment does not work directly in flowing water. (b) Fill slopes next to the stream should be protected. So that sediment can't reach the stream (c) Slopes or stream banks are stabilized immediately. <p>2. Rip rap should be used with all culverts to protect downstream, and where applicable, upstream channels.</p>					



Stockpile topsoil for use on dry soils. Choose a vegetative cover adapted to droughty conditions.

Stake a line of haybales below disturber area when needed. Very important next to streams.

Scale: horiz. 1"=30'
vert. 1"=10' (vertical exaggerated)

WOODFORD FARMS
Cuts & Fills in Sand & Gravel soil
PROFILE A - A'

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Approved by	Date
Title	
Designed	
Drawn <u>Alvin Horwath</u>	Date <u>6/80</u>
Traced	
Checked	
Sheet No.	Drawing No.

Friable soil is crumbly, not compact.
 Hardpan is compact.

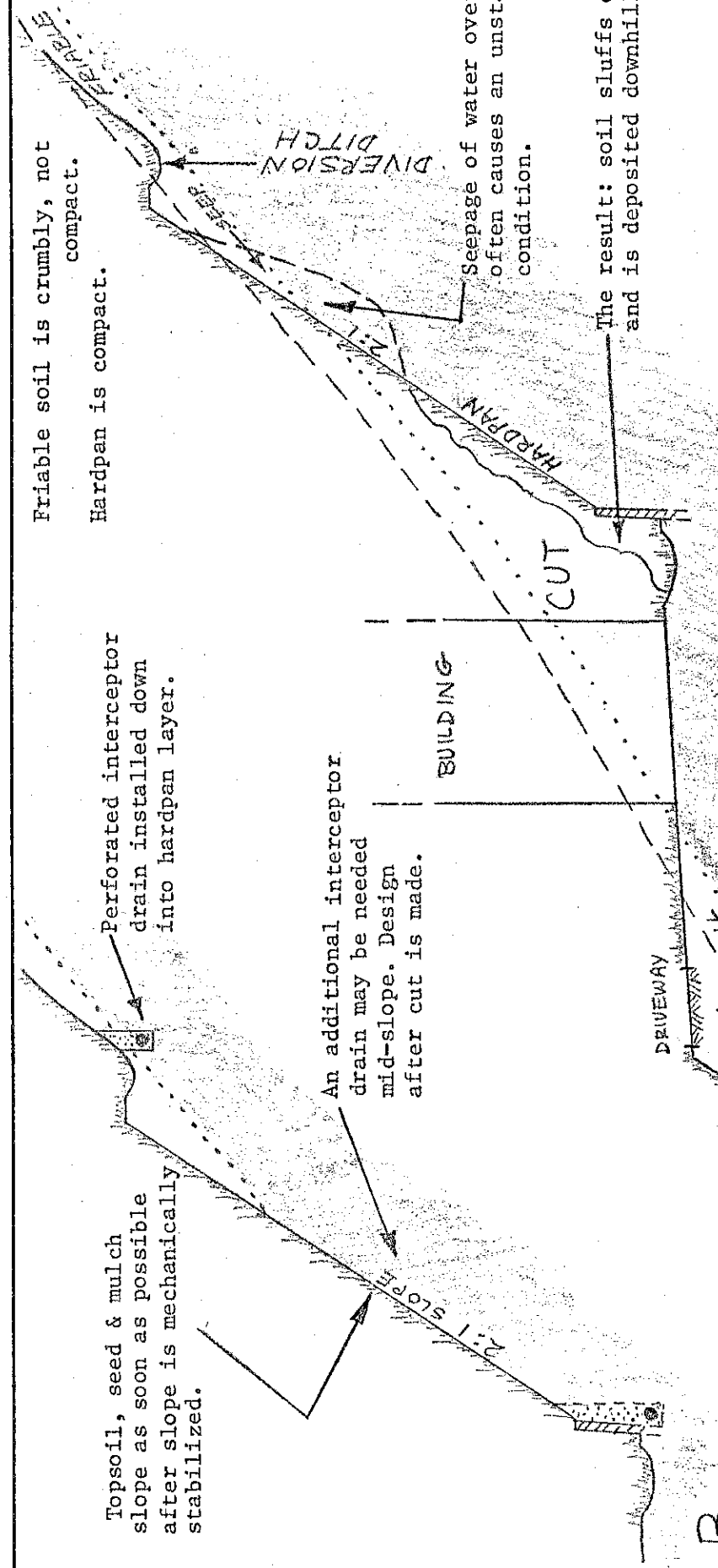
Perforated interceptor drain installed down into hardpan layer.

An additional interceptor drain may be needed mid-slope. Design after cut is made.

Topsoil, seed & mulch slope as soon as possible after slope is mechanically stabilized.

Seepage of water over hardpan often causes an unstable soil condition.

The result: soil sluffs off and is deposited downhill.



Horiz. 1"=30' (vertical exaggerated)
 Scale: vert. 1"=10'

WOODFORD FARMS
 Cuts in Hardpan soil
 PROFILE B - B'

U. S. DEPARTMENT OF AGRICULTURE
 SOIL CONSERVATION SERVICE

Designed	Date	Approved by
Drawn <i>Alan Heyworth</i>	6/30	Title
Traced	Sheet	Title
Checked	No.	Drawing No.
	of	

Haybales when constructed slope is near a watercourse.

Vegetative Cover For Disturbed Areas

ESTABLISHMENT PROCEDURES:

- AT LEAST _____" OF TOPSOIL WILL BE REPLACED ON ALL AREAS TO BE SEEDED. SURFACES COMPACTED BY CONSTRUCTION EQUIPMENT SHOULD BE SCARIFIED BEFORE PLACING TOPSOIL:
- APPLY LIME AND FERTILIZER ACCORDING TO A SOIL TEST (OR SPECIFY RATE)
- SMOOTH AND FIRM SEEDBED, APPLY SEED UNIFORMLY AND COVER SEED WITH NOT MORE THAN 1/4" OF SOIL.
- MULCH IMMEDIATELY

MATERIALS:

MULCH: HAY (FREE FROM WEED SEEDS) WILL BE SPREAD AT A RATE OF 3 BALES PER 1000 SQ FT. MULCH WILL BE ANCHORED BY AN ASPHALT EMULSION.

PERMANENT SEEDINGS: - Where an area will be exposed for more than one year or where final grading is completed.

AREA WHERE SEED MIX APPLIES	SEEDING MIXTURE % BY WEIGHT	RATE PER 1000 SQ FT	SEEDING DATES
All lawn areas	Red Fescue 70	2 lbs	April 1-June 15
	Kentucky Blue Grass 20		Aug 14- Oct 15
	Perennial Ryegrass 10		
Road Cuts & Fills, Diversion Ditches, Waterways	Kentucky 31 Tall Fescue 80	1-1/2 lbs	April 1-June 15
	Annual Ryegrass 20		Aug 14-Sept 30
Very steep slopes (no maintenance areas)	Crownvetch* 60	1/2 lbs	April 1-June 15
	Perennial Ryegrass 40		

*innoculate seed

THIS SECTION COULD REFLECT SITE CONDITIONS AT WOODFORD FARMS

TEMPORARY SEEDINGS: Where final grading is not completed by Sept 30, a temporary cover will protect the soil over the winter months.

SEEDING MIXTURE	RATE PER 1000 SQ FT	SEEDING DATES
Winter Rye	3 lbs	Aug 15-Oct 15

SUGGESTED VEGETATION FORMAT: This type of table is suggested for the Woodford Farms Erosion & Sediment Control Plan. The procedures and mixes on this sheet are given as examples only. The consulting engineer and landscape architect can design seed mixes that are practical and available for Woodford Farms. This format is a compact way to list vegetative measures on the plans.

PLANT MATERIALS FOR WOODFORD FARMS

SITE CONDITIONS → ↓ USE CONDITIONS	SANDY & GRAVELLY SOILS (DROUGHTY)	HARDPAN SOILS (WELL DRAINED & MOD. WELL DRAINED)
LONG, 2:1 SLOPES, SHORT SLOPES ALONG ROADS, MAINTENANCE FREE AREAS.	Red Fescue Ky 31 Tall Fescue Perennial Ryegrass Redtop Little Bluestem Wildflowers such as: Hypericum Sp. Aquilegia canadensis Groutweed Common mulley = <u>Many species from Daisey Family</u> Flat pea or) Red Fescue) Ky 31 Tall Fescue) - Mix Perennial Ryegrass)	Ky 31 Tall Fescue Red Fescue Perennial Ryegrass Wildflowers - any. or Crownvetch) Red Fescue) Ky 31 Tall Fescue) - mix Perennial Ryegrass)
WATERWAYS & DIVERSIONS	Red Fescue Redtop Perennial Ryegrass Ky 31 TALL Fescue	Same as for dry conditions -
LAWN AREAS	Red Fescue Kentucky Bluegrass Perennial Ryegrass	Kentucky Gluegrass Red Fescue
DESIRED TREES & SHRUBS FOR THE "NATURAL SUCCESSION" AREAS	Sweet fern Bayberry Gray Dogwood Vacciniums Dwarf Sumac Eastern White Pine	Variety of shrubs are adapted here suggestion: Rhododendrons Azaelas Mountain Laurel Canadian Hemlock Eastern White Pine Norway and White Spruce

References, SCS-USDA - Conservation Plants for the Northeast
 - Erosion and Sediment Control Handbook of Connecticut

- Soil Conservation Society of America
- Source of seed for Conservation Plants
 - Source of native seeds and plants.
 - Ability of Crownvetch to Suppress Woody Plant Veg. (Article)
- University of Connecticut Extension Service
- Trees and shrubs for Connecticut
 - Contemporary Groundcovers
 - Lawn seed and seed mixes

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.

