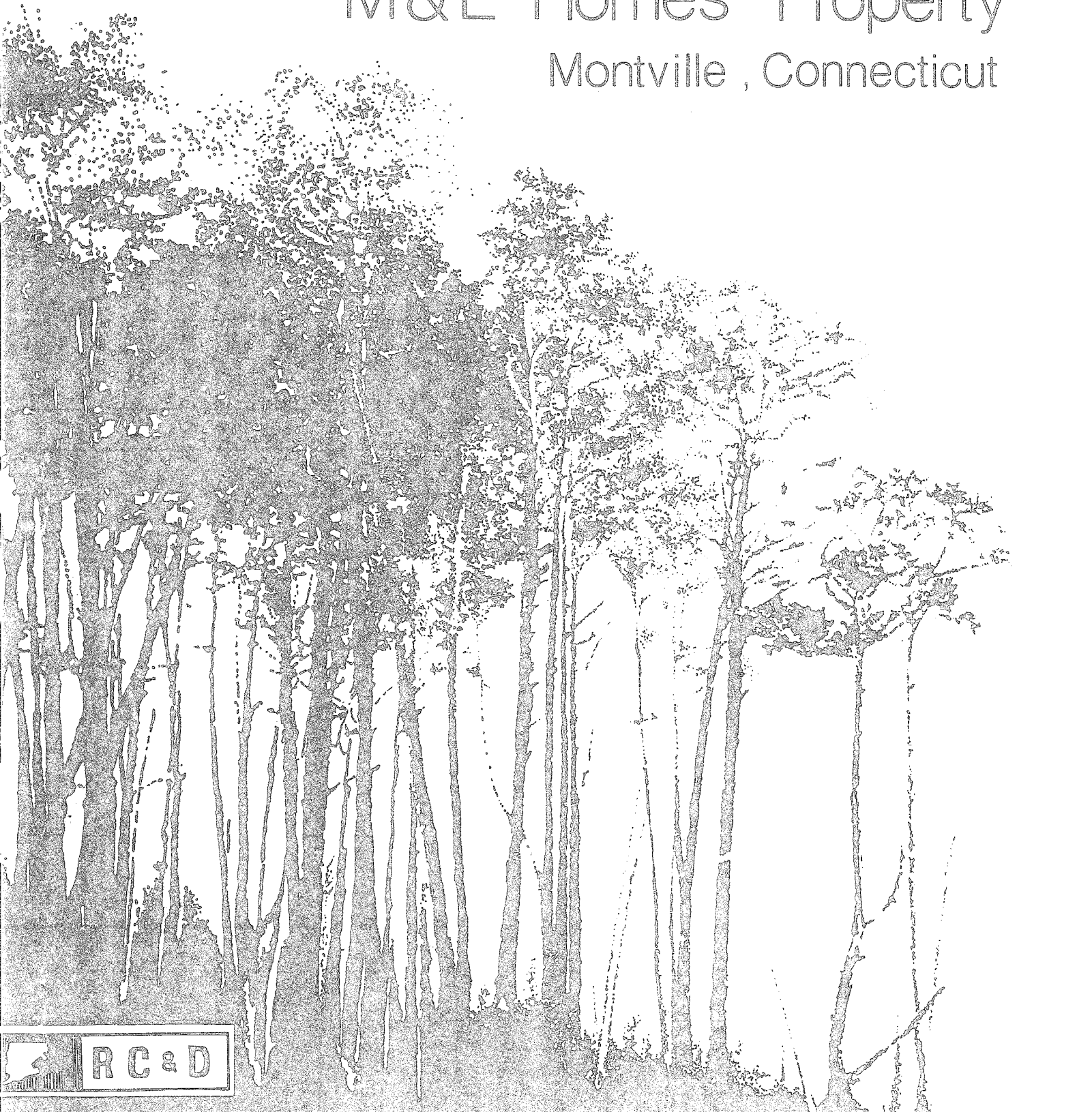


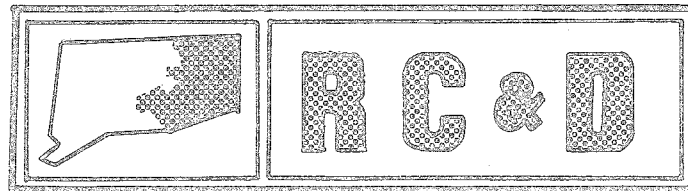
Environmental Review Team Report

M&L Homes Property Montville, Connecticut



Environmental Review Team
Report
on
M&L Homes Property
Montville, Connecticut

January 1982

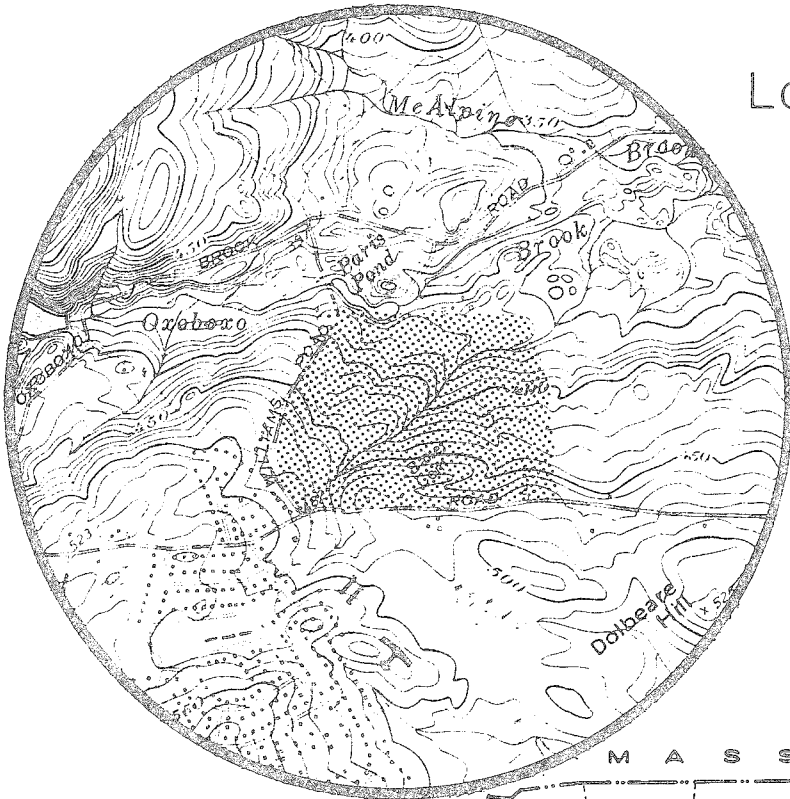


eastern connecticut resource conservation & development area

environmental review team
139 boswell avenue
norwich, connecticut 06360

Location of Study Site

M & L HOMES PROPERTY
MONTVILLE, CONNECTICUT



EASTERN CONNECTICUT
RESOURCE CONSERVATION AND DEVELOPMENT PROJECT

ENVIRONMENTAL REVIEW TEAM REPORT
ON
M & L HOMES PROPERTY
MONTVILLE, CONNECTICUT

This report is an outgrowth of a request from the Montville Planning and Zoning Commission to the New London 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 a 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: Gary Domian, District Conservationist, Soil Conservation Service (SCS); Mike Zizka, Geologist, Department of Environmental Protection (DEP); Rob Rocks, Forester, (DEP); Tom Seidel, Planner, Southeastern Connecticut Regional Planning Agency (SCRPA); 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 Thursday, November 12, 1981. Reports from each Team member were sent to the ERT Coordinator for review and summarization for the final report.

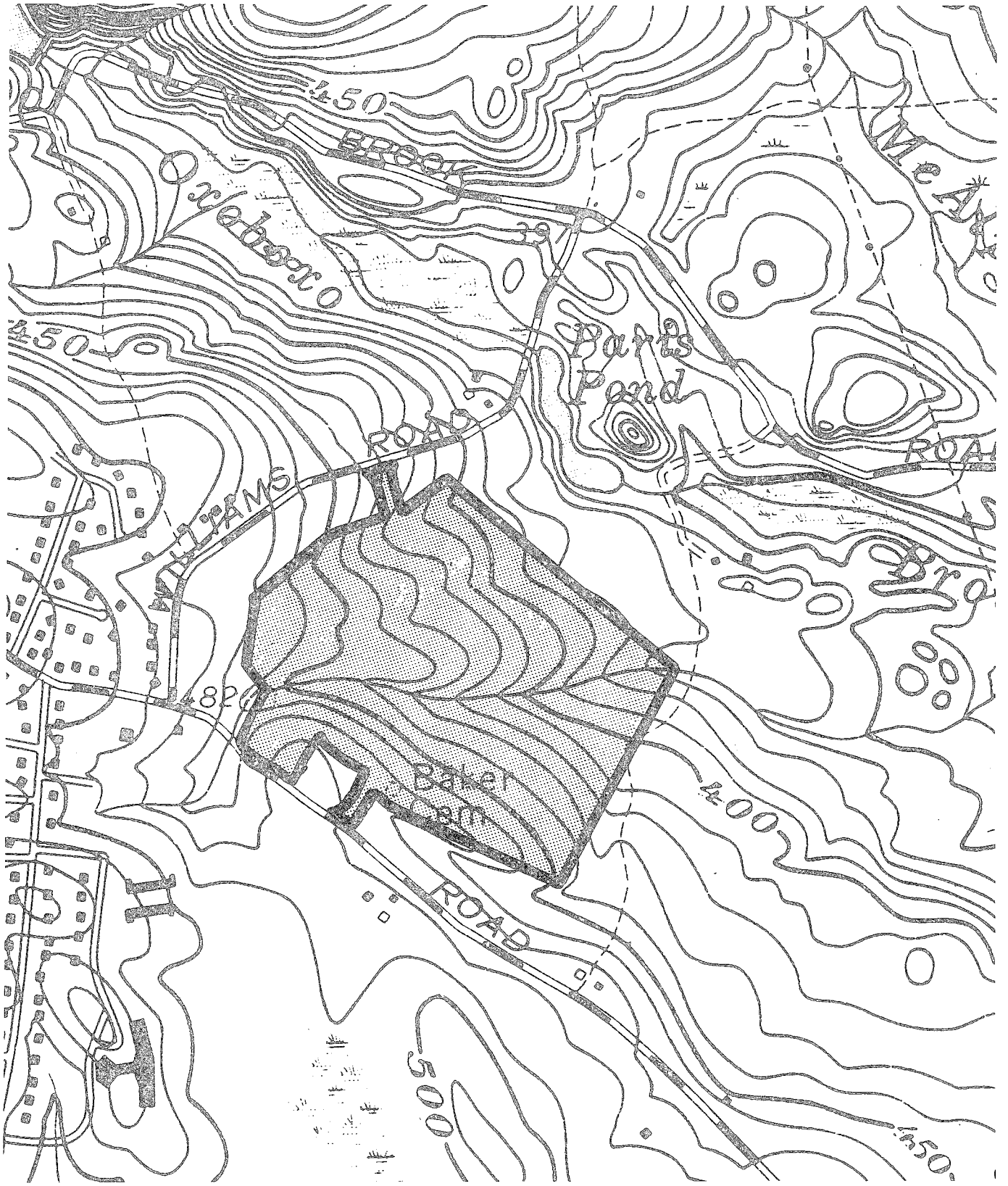
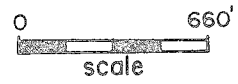
This report is not meant to compete with private consultants by supplying site designs or detailed solutions to development problems. This report identifies the existing resource base and evaluates its significance to the proposed development and also suggests considerations that should be of concern to the developer and the Town of Montville. 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 Project 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, 139 Boswell Avenue, Norwich, Connecticut 06360, 889-2324.

Topography

— Site Boundary



INTRODUCTION

The Eastern Connecticut Environmental Review Team was asked to evaluate a proposed condominium development and zone change in the town of Montville. The site is approximately 50 acres in size and is located on the eastern side of the intersection of Williams Road and Old Colchester Road. Developers for the proposal are M & L Homes, Inc., of Middletown. Preliminary plans have been prepared by J. Robert Pfanner Engineering.

The site is currently located in an RA-40 zone; in order to construct condominiums on this site, a zone change to R-40 will be necessary. Condominium development is an allowed use in the R-40 zone, where one unit is allowed per 10,000 square feet of land. The current zone, RA-40, allows one residential unit per 40,000 square feet of land and does not allow condominiums. If the zone change is granted, the developers plan to establish between 120 and 150 condominium units on the site. These units will be served by public sewer and on-site community wells. Two wetland areas exist on the property, however, the developers do not intend to disturb them. All construction will take place in the area between the wetlands. Access to the site will be provided by a road extending into the property from Old Colchester Road. A portion of the site will be reserved for recreational-open space use.

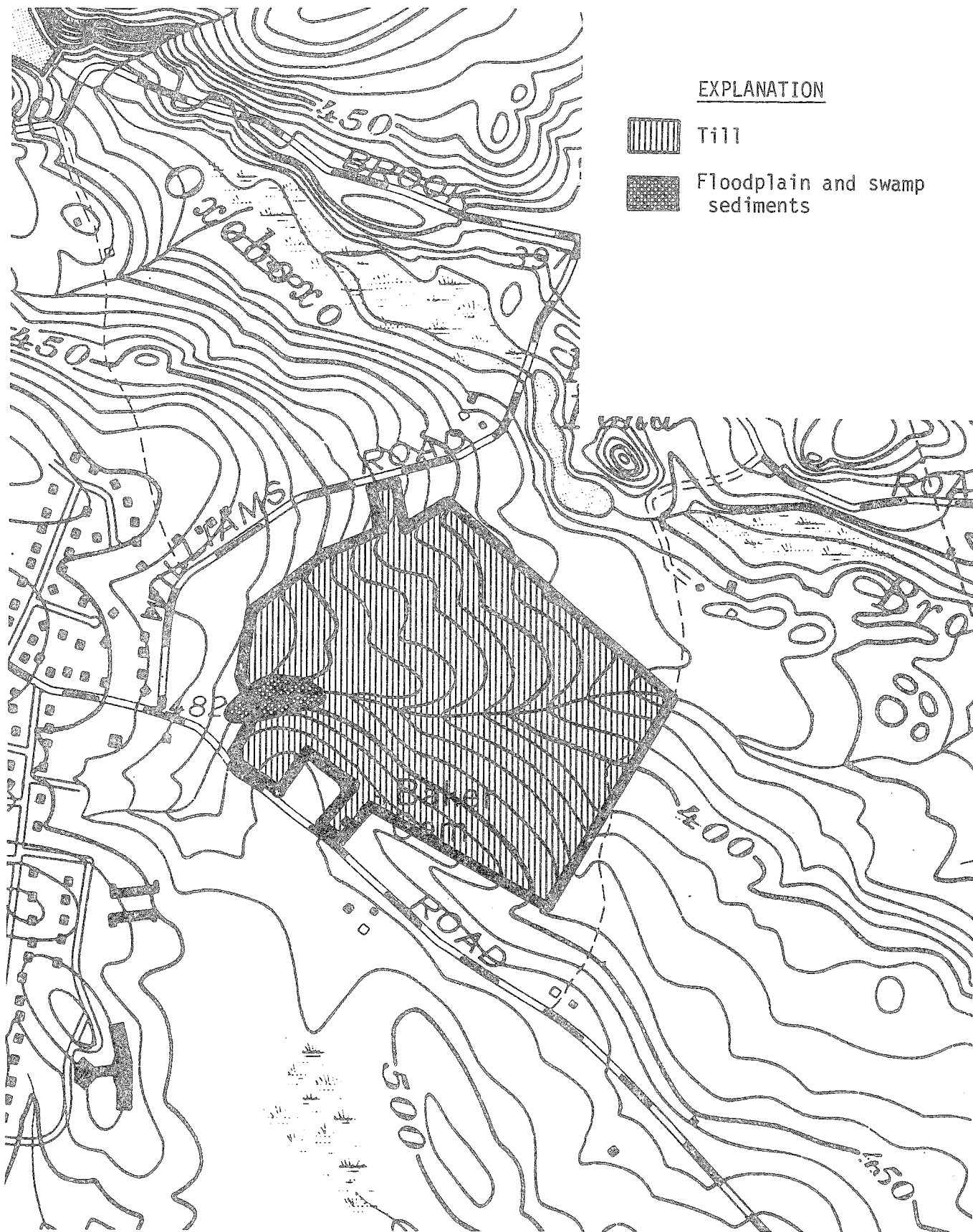
The Team is concerned with the impact of the proposed development on the resource base of this site. Although severe limitations to development may be overcome with proper engineering techniques, these measures can become costly, making a project financially unfeasible for a developer. Major limitations to development of this site are caused by the large percentage of wetland soils found on the property, however, the development as proposed in the preliminary plans follows several good environmental practices. It utilizes the best land on the site for a more intensive development and leaves the less desirable land, which represents a significant percentage of the total acreage, for open space or recreation purposes. The total amount of development proposed is relatively small for a site that has access to public sewers. The plan also indicates that a 200-foot buffer strip would be preserved around most of the parcel. This would improve the aesthetic appeal.

If properly planned and constructed, the wetland crossings should not have a noticeably adverse impact on the wetland areas. An erosion-and-sediment-control plan should be designed with particular emphasis on these crossings.

Consideration of the zone change in light of adjacent properties and potential neighborhood density and capacity of the sewer system should be undertaken by the Planning and Zoning Commission before final action is taken on this proposal.

Surficial Geology

— Site Boundary



EXPLANATION



Till



Floodplain and swamp sediments

ENVIRONMENTAL ASSESSMENT

GEOLOGY

The site is located within an area encompassed by the Montville topographic quadrangle. A bedrock geologic map (Map GQ-609) and a surficial geologic map (Map GQ-148) of the quadrangle have been prepared by Richard Goldsmith and published by the U.S. Geological Survey.

Till is the surficial geologic material covering most of the property. Till is a glacial sediment composed of a nonsorted, nonstratified mixture of sand, silt, clay, gravel, and boulders. The texture of till may be sandy and loose, silty and compact, stony, nonstony, or otherwise. Typically, the upper three to five feet of a till deposit will be coarse-grained and loose, whereas the lower portion will be slightly finer-grained and tightly compact. A small excavation on the site and the general nature of the soils shown in the soils map suggest that a sandy, somewhat gravelly till is predominant, at least in the upper five feet of the deposit.

In the wet, flat area bordering the western portion of the site's central stream, a mixture of decayed plant material, sand, silt, and clay overlies the till. This deposit is a mixture of swamp and stream (flood plain) sediments. The total thickness of the deposit is probably less than three feet.

Two types of bedrock underlie the surficial geologic materials. One is a fine to medium-grained gneissic granite, composed of approximately equal amounts of quartz, microcline, and albite or sodic oligoclase, with about one percent magnetite or as much as two percent magnetite and biotite. The other type is an interlayered group of gneisses and schists composed largely of quartz and feldspar with variable amounts of hornblende and biotite, and with minor amounts of sillimanite and garnet. The term "gneiss" is used for metamorphic rocks in which distinct foliation (structural layering) has been formed by the alignment of numerous elongate or flaky minerals. A single rock may contain layers of schist and layers of gneiss that grade into one another.

No test hole information was available as of the date of the field review. Well data from a development near the site suggests that the average depth to bedrock on the parcel exceeds ten feet.

HYDROLOGY

The site lies within the watershed of Oxoboxo Brook. A stream flowing along a new sewer line through the center of the parcel drains all of the southern section and some of the northern section. This stream enters Oxoboxo Brook about 2,500 feet east of the northeastern corner of the site. A second, intermittent streamcourse flows along the western boundary of the property. This stream carries surface runoff from part of the northern section of the site. The stream enters Oxoboxo Brook just below Paris Pond, about 600 feet north of the parcel.

The quality of water in the two streams described above has probably been affected by the residential development west and southwest of the site. Some

discoloration and algae growth were noted in the central stream. No flow was observed in the western stream on the day of the field review. If an undisturbed vegetative buffer strip of 25 to 50 feet is left between the streams and buildings or parking areas on the parcel, it will help to protect the streams from further deterioration.

Development of the site as planned will lead to increases in the amount of surface runoff produced during periods of rainfall. The increases will arise from the conversion of permeable soils to impermeable surfaces (roofs, driveways, etc.), and from the removal of vegetation. The added runoff could cause increased overland and stream-channel erosion, and it could increase the peak flood flows of the streams on the site. These problems can be addressed by formulating and following an erosion-and-sediment-control plan, particularly during the construction phase, and by establishing some type of runoff-control device, such as a detention basin.

It is possible to estimate the magnitude of the runoff increases that would occur if the development proceeded as shown in the preliminary plans. The estimates below are based on the runoff curve-number method, as outlined in SCS Technical Release No. 55. Estimates are provided for 24-hour rainfall amounts that would be expected to occur, over a very long period of time, once every ten years, once every twenty-five years, once every fifty years, and once every 100 years. In any given year, these rainfall amounts have, respectively, a 10-percent, 4-percent, 2-percent, and 1-percent probability of occurring.

<u>Average Storm Frequency</u>	<u>10-year</u>	<u>25-year</u>	<u>50-year</u>	<u>100-year</u>
Runoff before development (inches)	1.67	2.41	2.96	3.62
Runoff after development (inches)	1.93	2.72	3.30	3.99
Percent Increase	16%	11%	10%	10%

The increases are significant, but they are not as large as they might be if the property were developed in other ways. A one-acre residential subdivision could cause runoff increases twice as large. The proposed development minimizes the increases by preserving a substantial percentage of the land in open space. Peak flows in the local streams would not be expected to increase by more than five percent for any of the storms listed above. This is also a relatively small increase in comparison to that which could occur under a different type of development.

The proposed condominium development would be served by public sewers. This should effectively eliminate any foreseeable risk of substantial groundwater contamination. Application of salt to parking areas and drives should be minimized, especially in the vicinity of the water-supply wells.

SOILS

A detailed soils map of this site and detailed soils descriptions are included in the Appendix to this report, accompanied by a chart which indicates soil limitations for various urban uses. As the soil map is an enlargement from the original 1,320'/inch scale to 660'/inch, 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 limitations chart indicates the probable limitations of each of the soils for on-site sewage disposal, buildings with 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, New London County Interim Soil Survey Report, 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.

The gently sloping drumlins and rounded or elongated hills on the uplands are occupied by Woodbridge fine sandy loam. The mapping unit symbol is 31B, the letter "B" denotes a 3 to 8 percent slope. The Woodbridge soils formed in compact glacial till. The soils are moderately well drained. They have moderate permeability in the surface layer and subsoil, slow to very slow permeability in the substratum (fragipan). The soils have a seasonal high water table at 18 to 24 inches. Woodbridge soils have slow to rapid surface runoff. This soil qualifies as Prime Farmland soil in Connecticut.

The low lying, nearly level areas along drainageways in the uplands are occupied by Ridgebury, Leicester and Whitman extremely stony fine sandy loams. The soils are designated by the mapping unit symbol 43M. The letter "M" denotes extremely stony. The Ridgebury and Whitman soils formed in compact glacial till; the Leicester soils formed in friable glacial till. The Ridgebury and Leicester soils have moderate to moderately rapid permeability in the surface layer and subsoil and slow or very slow permeability in the substratum (fragipan). The Leicester soils have moderately rapid permeability throughout. The seasonal highwater table for Ridgebury and Leicester soils is at or near the surface 7 to 9 months of the year. The Whitman soils have high runoff potential. Runoff is slow to medium in Ridgebury soils and slow in Leicester soils. This soil is designated as a wetland soil and is regulated under Public Act 155.

The gently sloping well drained uplands are occupied by Canton and Charlton fine sandy loams. This soil is designated by soil mapping unit symbol 11B. The letter "B" denotes slopes as 3 to 8 percent. Canton soils formed in a fine sandy loam mantle underlain by friable gravelly sandy glacial till. Canton soils have moderately rapid or rapid permeability. Surface runoff is medium to rapid. This soil qualifies as a Prime Farmland soil in Connecticut.

The nearly level to gently sloping, extremely stony, moderately well drained areas on uplands are occupied by Sutton extremely stony fine sandy loam. This soil is designated by soil mapping unit symbol 41MB. The letter "M" denotes an extremely stony surface condition. The letter "B" denotes slopes as being 0 to 8 percent. Sutton soils formed in friable glacial till. Permeability is moderate to moderately rapid. A seasonal high water table exists at 18 to 24 inches. Surface runoff is slow to medium.

The gently sloping to sloping well drained soils on uplands are occupied by Canton and Charlton extremely stony fine sandy loams. This soil is designated

by soil mapping unit symbol 11MC. The letter "M" denotes an extremely stony surface condition. The letter "C" denotes slopes as 3 to 15 percent. Canton soils formed in a fine sandy loam mantle underlain by friable gravelly sandy glacial till. Canton soils have moderately rapid or rapid permeability. Surface runoff is medium. Charlton soils formed in friable glacial till. Charlton soils have moderate to moderately rapid permeability.

The nearly level and gently sloping moderately well drained areas on stream terraces and outwash plains are occupied by Tisbury silt loam. Tisbury silt loam is designated by soil mapping unit symbol 45A. The letter "A" denotes slopes as being 0 to 5 percent. Tisbury soils formed in silt-mantled glacial outwash. Permeability is moderate in the surface layer and subsoil and rapid or very rapid in the substratum. A seasonal high water table exists at 18 to 24 inches. Surface runoff is slow to medium. Tisbury silt loam, 0-5% slopes qualifies as Prime Farmland in the State of Connecticut.

Public sewers are available for the proposed project and community wells are planned for domestic water use. Approximately 40 acres of the site is occupied by Canton-Charlton extremely stony fine sandy loams (11MC). Most of the planned development will take place on these soils. Limitations to the type of development proposed will be due to slopes that range from 3 to 15 percent and surface stoniness. When these soils are exposed during excavation, they will erode so it will be important to develop and implement a sediment and erosion control plan. The sediment is to be contained on site and not allowed to enter into natural drainageways and wetlands that pass through the property. Critical areas to be acknowledged in the sediment and erosion control plan and in the runoff water outlet plan are the perennial stream and the intermittent stream that runs easterly to Oxoboxo Brook through the center and northerly edge of the property, respectively. Small areas of moderately well drained soils occur at the west and east end of the perennial stream that flows through the middle of the property. The soils are Sutton extremely stony fine sandy loams (41MB) and Tisbury silt loam (45A). The major limitations that these soils offer to the proposed development are a seasonal high water table, surface stoniness and potential frost heaving. These soils are best left undisturbed in conjunction with the perennial stream. The scale of the original soil map (1" = 1,320') did not allow for detailing the small pockets of wetlands that occur along the perennial stream. The local Inland Wetland Commission should have these wetlands clearly flagged prior to beginning of construction.

Access to the property from Old Colchester Road between lots 16 and 17 will require fill in order to meet the road grade requirements of the town. The existing grade in the steepest section is approximately 12 percent. Crossing the perennial stream will also be required to connect the properties. Both of these activities are to be planned to minimize the impact of erosion that can lead to sedimentation of the stream. Adequate drainage will need to be supplied to permit the stream to flow uninterrupted under the road. Short steep cut slopes and road banks will have to be seeded and/or mulched as soon after construction as possible, in order to further decrease the likelihood of sedimentation.

VEGETATION

The property proposed for the zone change and condominium development may be divided into four vegetation types. These include four mixed hardwood stands

which total 42 \pm acres; streambelt/hardwood swamp areas which total 5 \pm acres; old field/disturbed sewerline area, 4 \pm acres; and open swamp/shrub swamp, 1 \pm acre.

Vegetation Type Descriptions:

Type A. (Mixed Hardwoods) This 26 \pm acre fully stocked stand is made up of predominantly sapling to pole size black birch, sugar maple, red maple, white ash, yellow birch, shagbark hickory, mockernut hickory, butternut hickory and black oak. Scattered throughout this stand are sawtimber size red maple, black birch, sugar maple and white ash which were left after a harvest approximately twenty years ago. The majority of these larger trees are in extremely poor condition. The understory is made up of red maple and sugar maple seedlings, witch-hazel, flowering dogwood, spicebush and blue beech. In the more open areas, green brier, raspberry, and fox grape have become established. Christmas fern, New York fern, hayscented fern, club moss, dewberry and poison ivy are characteristic of the ground cover within this stand.

Type B. (Mixed Hardwoods) Seedling to sapling size red maple, eastern red cedar, black cherry, black birch, white oak, black oak, and occasional gray birch and apple are present in this over-stocked 7 \pm acre stand. The sparse understory which is present is made up of highbush blueberry, shadbush, smooth sumac and barberry. Ground cover consists of club moss, Pennsylvania sedge and poison ivy.

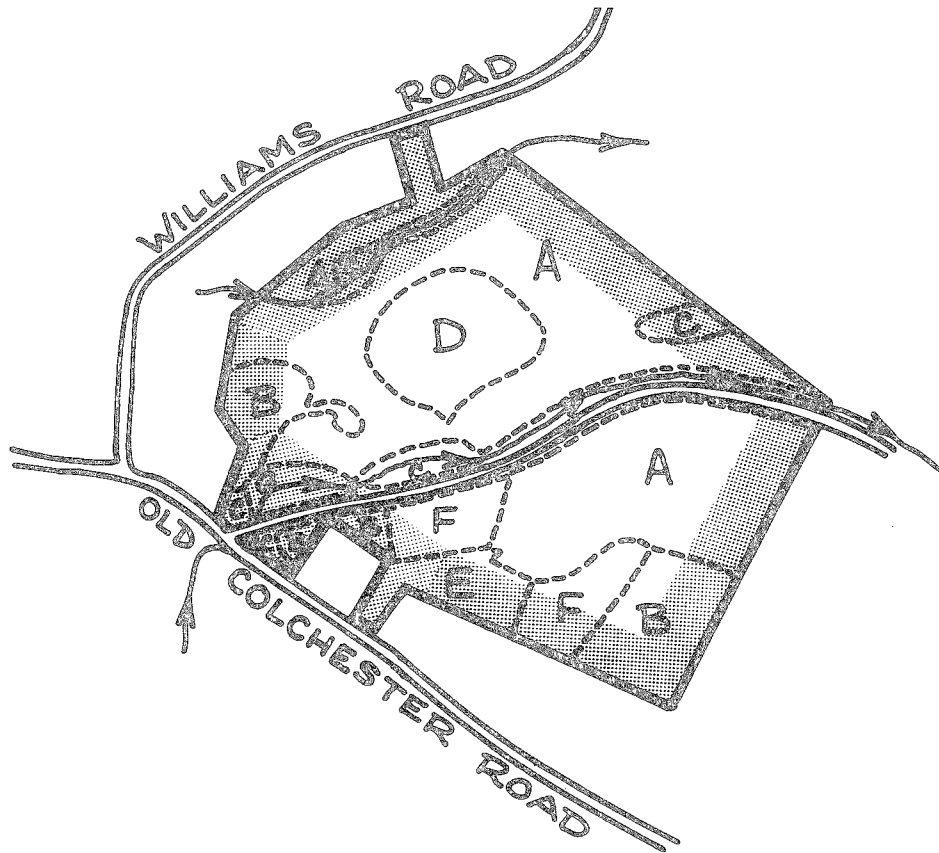
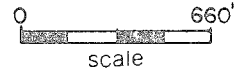
Type C. (Streambelt/Hardwood Swamp) Poor to medium quality, pole and occasional sawtimber size red maple, white ash, yellow birch and black birch make up this 5 \pm acre fully-stocked streambelt area. Highbush blueberry, sweet pepperbush, spice bush and barberry form a dense understory within this area. Cinnamon fern, marsh fern, sensitive fern, sedges, skunk cabbage, green brier and poison ivy form the ground cover in this area.

Type D. (Mixed Hardwoods) This 5 \pm acre understocked stand is made up of pole size red oak, black oak, black birch, red maple, black cherry and scattered white ash. Many of these trees were damaged during a recent fire. At that time, all of the understory and ground cover vegetation was destroyed. Since then, green brier and raspberry has become overly abundant, precluding the establishment of other understory and ground cover vegetation.

Type E. (Old Field/Sewerline Area) For the purposes of this report, both the old field area and sewerline area are described together. These areas are understocked with sapling size eastern red cedar, gray birch, black oak, white oak, black birch, black cherry, flowering dogwood and apple trees. Maleberry, hawthorn, bayberry, barberry, raspberry, and smooth sumac are the dominant shrub and woody species which are present. Grasses, goldenrod, dewberry, aster, milkweed, and assorted wildflower and weed species form the ground cover in these areas.

Type F. (Mixed Hardwoods) Pole size black birch, red maple, black cherry and occasional yellow birch are presently declining in health and vigor in this 4 \pm acre over-stocked stand. Understory vegetation includes highbush blueberry, blue beech and scattered eastern red cedar. Green brier, fox grape, raspberry, poison ivy, Christmas fern, New York fern, aster and enchanter's nightshade are also present.

Vegetation



LEGEND



Road



Property Boundary



Vegetation Type Boundary



Stream



Proposed 200' Buffer Zone
Around Development

VEGETATION TYPE DESCRIPTIONS*

- TYPE A. Mixed hardwoods - 26[±]acres, fully stocked, sapling to pole-size.
- TYPE B. Mixed hardwoods - 7[±]acres, over-stocked, seedling to sapling.
- TYPE C. Stream-belt/hardwood swamp, 5[±]acres, fully-stocked, pole to sawtimber-size.
- TYPE D. Mixed hardwoods, 5[±]acres, under-stocked, pole-size.
- TYPE E. Old field/sewerline area, 4[±]acres, understocked, sapling-size.
- TYPE F. Mixed hardwoods, 4[±]acres, over-stocked, pole-size.
- TYPE G. Open swamp/shrub swamp, 1[±]acres.

- * Seedling-size = Trees less than 1 inch in diameter at 4 1/2 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.

Type G. (Open Swamp/Shrub Swamp) This one acre wetland is vegetated with silky willow, pussywillow, swamp elderberry, speckled alder, winterberry, purple clematis and common cattail. Tussock sedge is also present in this wetland along with goldenrod, aster, sensitive fern, cinnamon fern, marsh fern and skunk cabbage. Pole size red maple and American elm are present along the edges of this open swamp.

The impact of this proposal on existing vegetation will be significant within this tract. The proposed development of condominium units, roadways and parking lots will necessitate the clearing of much of the vegetation from the area north of the stream and sewerline. It will also necessitate clearing of approximately four acres south of the sewerline for the development of the proposed recreational fields. This widespread clearing of vegetation has the potential to result in accelerated erosion and sedimentation, therefore, a sediment and erosion control plan should be designed and implemented prior to construction on the site.

It should be noted that vegetation plays an important role in reducing erosion and stabilizing soils. It is imperative to revegetate areas with grasses or other suitable ground cover as soon as possible after the site has been disturbed.

Management Considerations

Management opportunities, in light of the proposed development and past misuse of the property (fire and poor harvesting practices), are somewhat limited at this time. However, several suggestions can be made to improve this tract.

To help preserve the integrity of the streambelt and open swamp areas, it would be desirable to leave a relatively undisturbed buffer strip of natural vegetation at least 30 feet wide around these areas. This will help to stop sediment and silt generated by the proposed development from reaching these wetland areas and degrading their water quality.

The retention of a relatively undisturbed buffer strip approximately 200 feet wide around this property has been proposed by the developer. This area should help to screen the proposed development from the single family residences to the northwest of the tract. To improve the effectiveness of this area as a visual barrier, it would be desirable to under plant with eastern hemlock or a combination of eastern hemlock and eastern white pine. These seedlings should be planted between 10 and 15 feet apart. Once established, these evergreen trees will provide a more complete barrier which will be effective throughout the year. This planting will also improve the value of the area for wildlife by providing high quality cover.

If trees are to be retained within proposed development area, it would be desirable to choose healthy undamaged trees. The retention of such trees would provide shade and also improve the overall aesthetic quality of the site.

Trees are sensitive to the condition of the soil within the entire area under their crowns. Soil disturbances which alter the balance between soil aeration and moisture levels, or change soil composition may cause a decline in tree health and vigor and potentially result in mortality within three to five years. Mechanical damage to trees or tree root systems may cause the

same results. Trees that are to be retained should be included in the final site plan for this development. These trees should be clearly but temporarily marked in the field so that they will not be damaged during construction. It would also be helpful to retain trees in small groups or "islands," where possible. This practice allows trees to be more easily avoided during construction.

Many of the trees which are to be removed for the development of this complex have value as fuelwood, and should be utilized as such.

The larger trees which were left in Vegetation Type A (mixed hardwoods) at the time of the last harvest and many of the trees in Vegetation Type D (mixed hardwoods) are of very poor quality or damaged. Removal of these poor quality trees for fuelwood from areas not proposed for intensive development would be feasible. This improvement thinning will reduce competition between residual trees for space, light, water and nutrients, resulting over time in improved tree health and vigor.

The trees which are present in Vegetation Type F (mixed hardwoods) are at present declining in health and vigor due to their crowded condition. These trees will respond well to a thinning using the "crop tree selection method."

Under the "crop tree selection method," 100 of the highest quality trees in each acre should be identified (trees spaced about 20' by 20' will equal 100 trees per acre), and one, two or three trees that are in direct competition with each of those identified should be removed. The 100 trees per acre that are selected as crop trees should be healthy, large crowned and show little or no signs of damage. Trees which are not competing with the 100 selected trees should not be removed unless they are severely damaged. This thinning if implemented will produce approximately four cords of fuelwood per acre.

A public service forester or private forester could be contacted to select the trees which should be retained as crop trees, and mark the trees that should be removed. They could also determine which trees have the highest value for retention in the area proposed for development.

WATER SUPPLY

The condominiums are planned to be served by on-site water-supply wells. The only aquifer on the site that is likely to be capable of supplying the development is bedrock. Wells drilled in bedrock generally supply small but reliable yields of groundwater. However, since the yield of a given well depends upon the number and size of water-bearing fractures that it intersects, and since the distribution of fractures in bedrock is irregular, there is no practical way of predicting the yield of a well drilled in a specific location. It has been shown, however, that the probability of increasing the yield of a well decreases with depth. If a well is unproductive after drilling 200 feet, it would probably be more fruitful to drill in a new location rather than to continue drilling in the original location.

Assuming an average unit occupancy of 2.5 persons and an average per capita water use of 75 gallons per day, the total water demand of the development would be about 28,125 gallons per day. A total well yield of at least 19.5

gallons per minute (gpm) would therefore be required. Data on thirteen wells along Williams Road and Old Colchester Road were made available to the Team. These data show that only one well yielded more than 20 gpm, and only three wells yielded between 10 and 20 gpm. The average depth of the four wells was about 140 feet, while the average depth of the nine less productive wells was about 200 feet. This confirms that high yields are not necessarily related to deeper drilling in the bedrock aquifer.

An examination of the well data indicates that three or four wells with an average depth of 180 feet will probably be required to supply the development's needs. The developer should probably add at least one additional well after obtaining the required yield of 20 gpm in order to prevent future problems if one of the wells should fail to maintain its yield. The wells should be spaced at least 300 feet apart if possible to minimize the risks of mutual interference (i.e., the yield of one well detracting from the yield of another). In addition, since the peak demand of the development will undoubtedly exceed the peak potential yield of the wells, holding tanks should be provided to allow for the temporary high demand.

As this would be classified as a public water supply, necessary approval for any well locations is to be obtained from the Water Supplies Section of the State Department of Health Services. Water quality, yield, along with plans for pumpage, storage and distribution would also be reviewed and approved by that section. In addition, the Southeastern Connecticut Water Authority, which owns and operates the community water system for Montville Manor, is to be contacted. Under state statutes the authority is empowered to enter into agreement with the owners to construct and operate a water system of certain capacity and/or size which would or could apply to an overall regional concept or plan.

WASTE DISPOSAL

As indicated, a public sewer line crosses the property and as such the proposed project would be served by the municipal sewerage system. With a project of the size expected, site conditions and the development of an on-site water supply, the need for public sewers is evident. Some concern has been expressed about the system's capacity to handle more flow, particularly from this area. The sewage treatment plant is currently handling daily flows substantially below the design flow, so capacity does not appear to be a problem. It is apparently more of a question of allocation of flows from different areas as related to phases of future sewer system expansion. This aspect would best be reviewed and evaluated by the town's water pollution control authority. Factors of funding, time frame(s) for construction, areas to be served, projected flows and plant capacity, operating costs, would all seem to be part of a determination. At the present time, funding is apparently the major uncertainty in future expansion plans.

ROADS AND TRANSPORTATION CONCERNS

Primary access to the site will be via Old Colchester Road and secondary access via Williams Road. Because the site is lower in elevation than Old Colchester Road, filling will be necessary to bring the access road onto Old

Colchester Road at the same elevation. Realignment of Old Colchester Road from Chesterfield Road to Black Ash Swamp Road is listed as a high local priority in the Regional Transportation Plan.

Daily commuter bus service to the Groton industrial area is available at the Montville High School located at the intersection of Old Colchester Road and Chesterfield Road about one and one-half miles southeast of the site. Corridor bus service to Norwich and New London-Groton is available in Uncasville about five miles east of the site. Local bus service between Uncasville and Montville Manor is scheduled for Phase II of the regional transit system. Because of funding uncertainties, it is not known when this service will become a reality.

SERVICES TO SUPPORT DEVELOPMENT

A fire department and elementary school are located about one mile and one-half miles away, respectively, in the Montville Manor development. The Town Park and recreation facility is located about one and one-half miles east of the site. Other government facilities are located in Uncasville about five miles east.

UTILITIES

Water supply will be by on-site wells. The Southeastern Connecticut Water Authority owns and operates the water supply for nearby Montville Manor which has about 450 service connections. The enabling legislation which created this water authority required for a tract of land of 50 acres or greater that is to be developed for residential purposes that the proposed system be referred to the Authority for review and comment.

If this and other nearby tracts of land are to be developed for residential purposes, it would be desirable from a long term water supply and operational perspective to have one utility operating one system rather than two or three utilities.

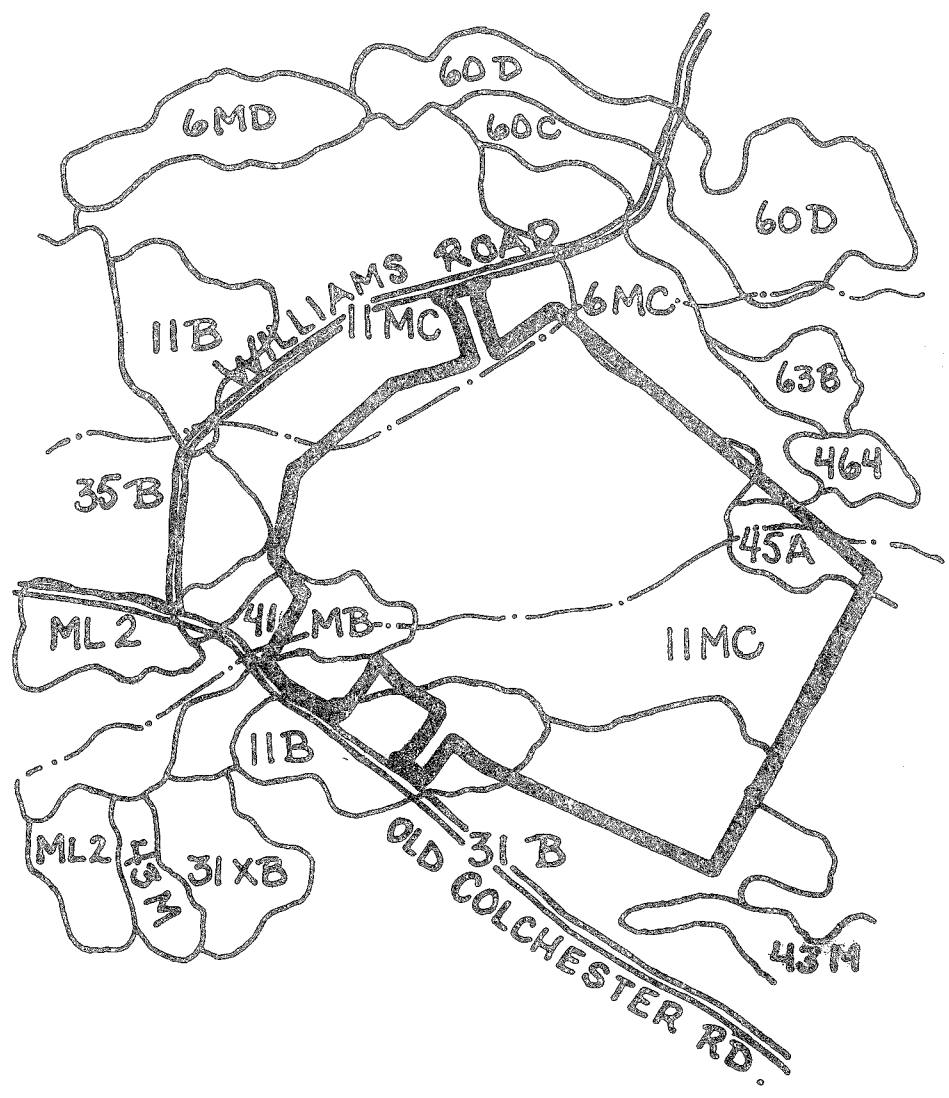
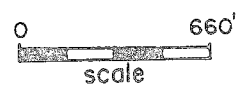
LAND USE

Nearby land uses are medium density residential, commercial, and undeveloped. The two commercial uses are located along Old Colchester Road. The adopted Regional Development Plan recommends this area for medium density residential uses and the 1979 Montville Town Plan recommends this area for medium density residential uses.

Appendix

SOILS

— Site Boundary



M & L HOMES
MONTVILLE, CONNECTICUT

PROPORTIONAL EXTENT OF SOILS AND THEIR LIMITATIONS FOR CERTAIN LAND USES

Soil Series	Soil Symbol	Approx. Acres	Percent of Acres	Principal Limiting Factor	Urban Use Limitations*			
					On-Site Sewage	Buildings with Basements	Streets & Parking	Land-Scaping
Canton-Charlton	11B	2	4%		1	1	1	1
Canton-Charlton	11MC	40	73%	Slope, large stones	3	3	3	3
Sutton	41MB	3	5%	Wetness, large stones	3	3	2	3
Tisbury	45A	2	4%	Wetness	3	3	3	1
Woodbridge	31B	8	14%	Percs slowly, wetness	3	3	3	1
		55	100%					

LIMITATIONS: 1 = slight, 2 = moderate, 3 = severe

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 (889-2324), Environmental Review Team Coordinator, Eastern Connecticut RC&D Area, 139 Boswell Avenue, Norwich, Connecticut 06360.