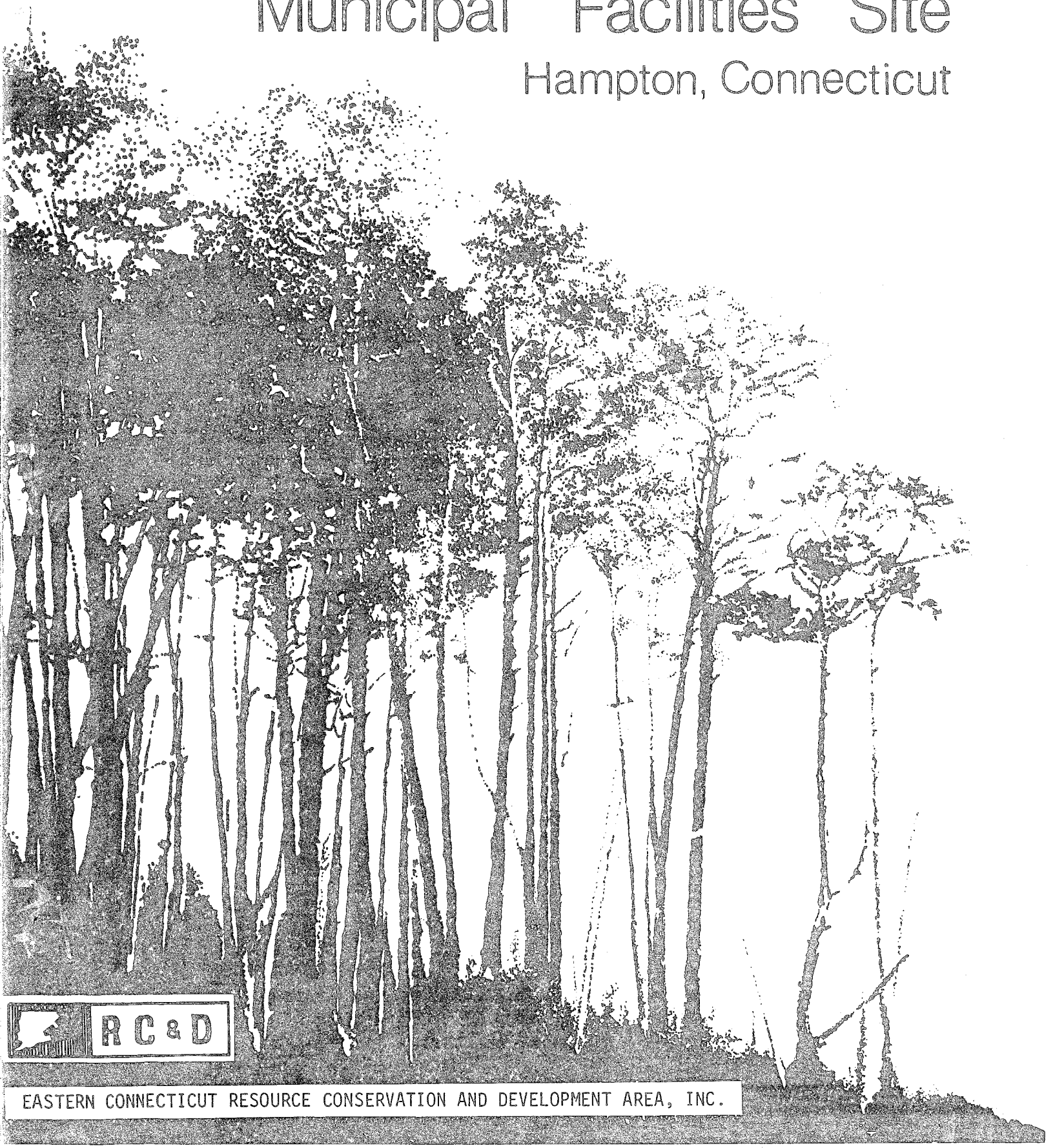
Environmental Review Team Report

Municipal Facilities Site

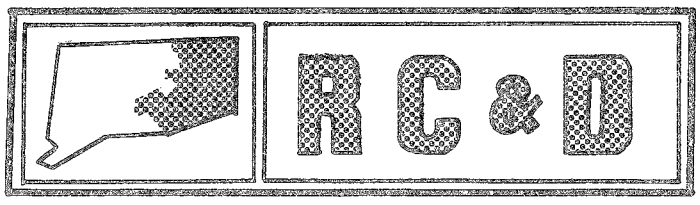
Hampton, Connecticut



R C & D

EASTERN CONNECTICUT RESOURCE CONSERVATION AND DEVELOPMENT AREA, INC.

Environmental Review Team Report
on
Municipal Facilities Site
Hampton, Connecticut
December 1979

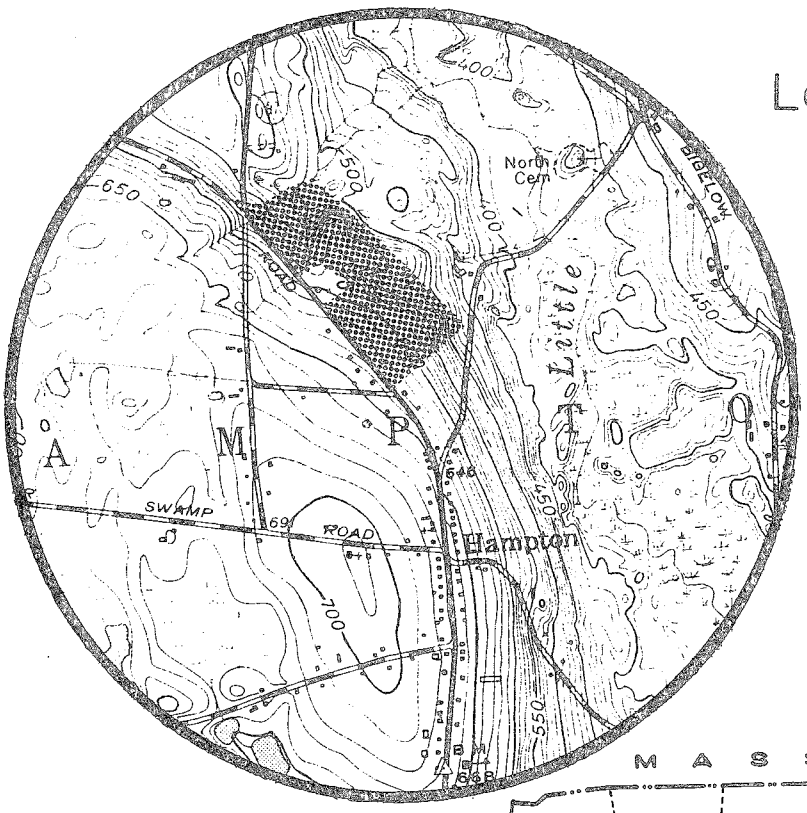


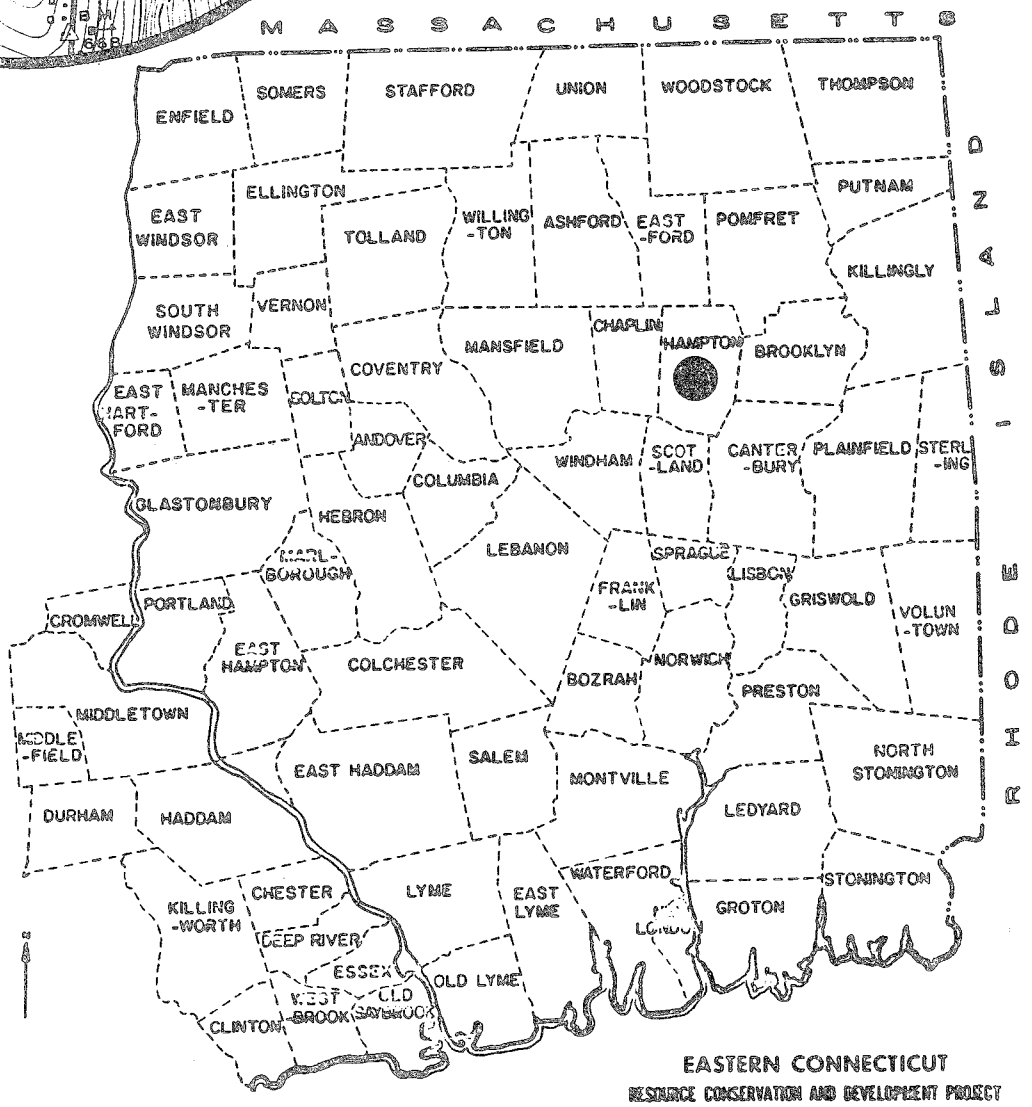
eastern connecticut resource conservation & development area

environmental review team
139 boswell avenue
norwich, connecticut 06360

Location of Study Site

MUNICIPAL FACILITIES SITE
HAMPTON, CONNECTICUT





ENVIRONMENTAL REVIEW TEAM REPORT
ON
HAMPTON MUNICIPAL FACILITIES SITE
HAMPTON, CONNECTICUT

This report is an outgrowth of a request from the First Selectman of Hampton to the Windham 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.

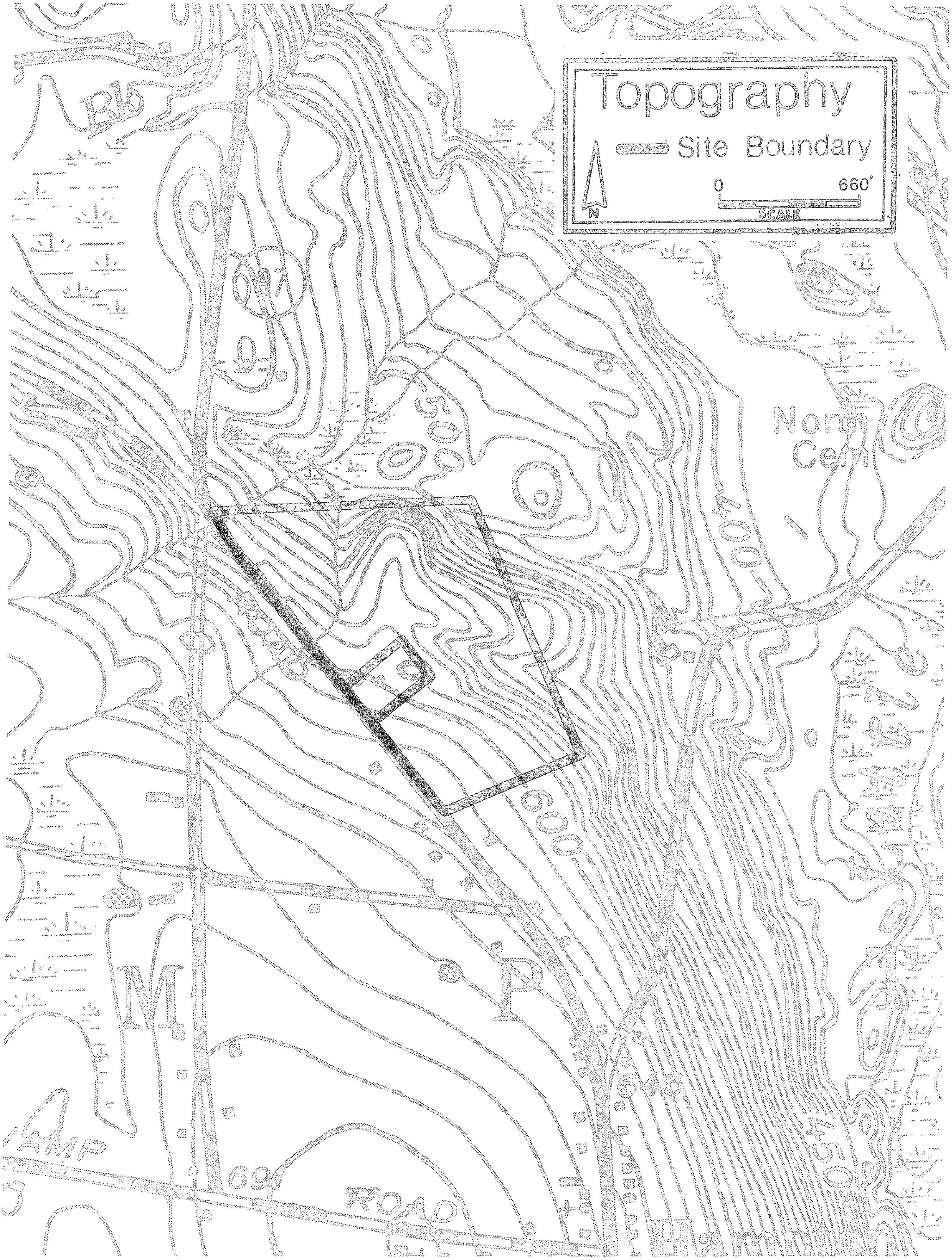
The ERT that field-checked the site consisted of the following personnel: Howard Denslow, District Conservationist, SCS; Michael Zizka, Geologist, Department of Environmental Protection (DEP); Rob Rocks, Forester, DEP; Marion Storch, Sanitarian, State Department of Health; Les Barber, Regional Planner, Windham Regional Planning Agency, Andy Petracco, Recreation Specialist (DEP); and Jeanne Shelburn, ERT Coordinator, Eastern Connecticut RC&D Area.

The Team met and field-checked the site on Thursday, September 20, 1979. 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 Hampton. 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
0
660'
SCALE
N
600
400
450
ROAD

INTRODUCTION

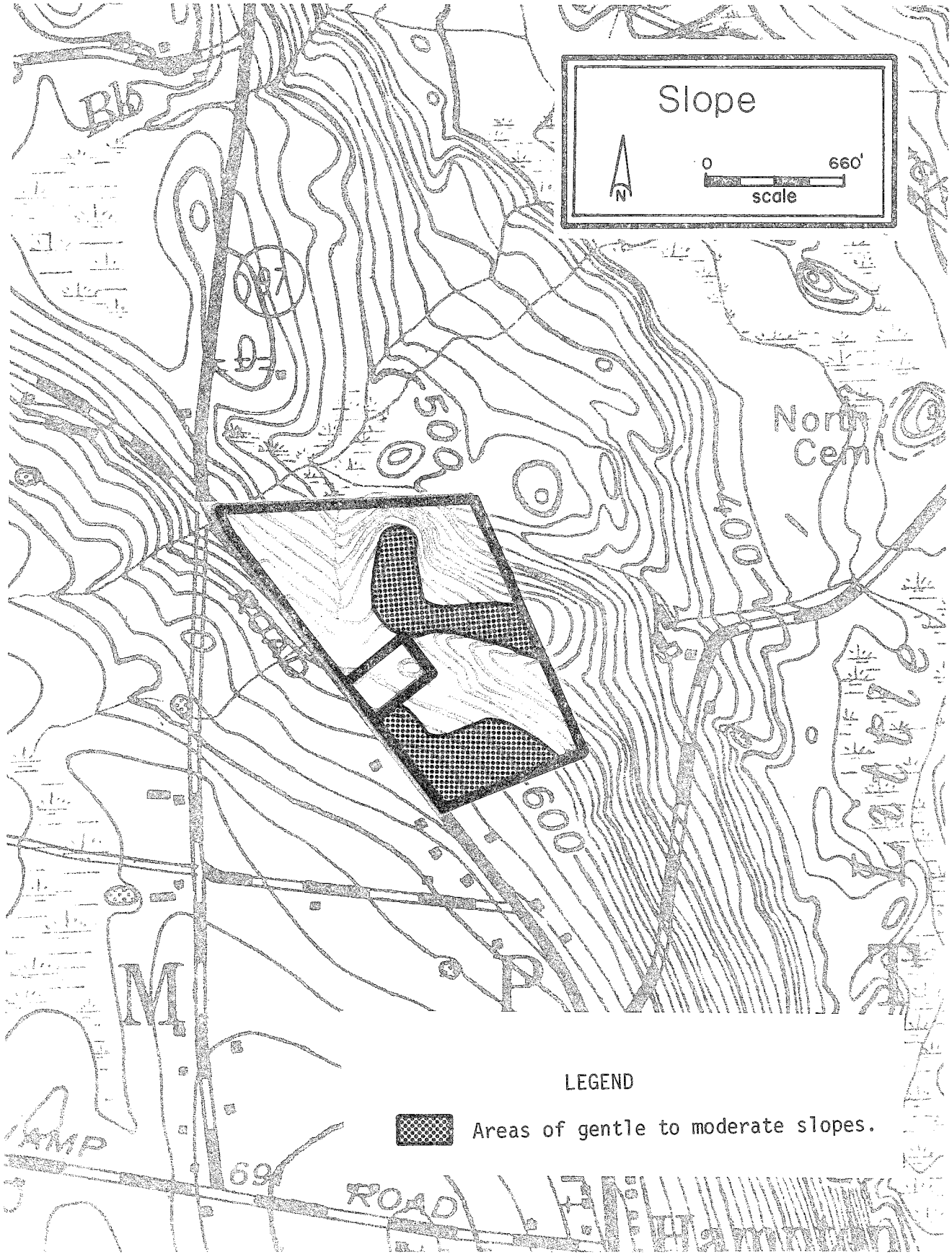
The Eastern Connecticut Environmental Review Team was asked to review a 30± acre parcel, located in the Town of Hampton on Route 97. The property is owned by the Town. At the time of the field review, no conceptual plans had been developed by an engineering firm. The Team was asked to review the parcel for the development of a public works garage facility, town hall, and recreation area, a new elementary school, or a combination of these facilities depending on the carrying capacity of the site. All of these uses would be served by on-site septic systems and on-site wells.

The property is located north of Hampton village on Route 97. A privately owned lot with a single family residence juts into the property, midway along the town property frontage on Route 97. A newly constructed fire pond is located on the parcel along Route 97 to the north of the house. The property is forested at present; several overgrown fields vegetated primarily by green briar and wild raspberry are located in the southern portion of the site. Steep slopes cut through the central part of the property and extend close to the eastern boundary. Several streams converge in the northeast section of the site and form a wetland area. The most desirable building land is found in the southern section of the site.

The Team is concerned with the effect of the proposed development on the resource base of this site. Although difficult limitations on some sites can be overcome with proper engineering techniques, these measures are often costly, making a project economically unfeasible for the developers. This 30± acre parcel has some obvious limitations which must be avoided or overcome. The excessively steep slopes and wetland areas put major restrictions on the use of this site. The southern section of the site is relatively flat and contains approximately 5 to 6 acres of easily buildable land. The Team feels that unless the Town is willing to invest large sums in land development costs, most construction activity should be limited to this 5 to 6 acre area.

Due to the runoff increase produced by any of the development options, a sediment and erosion control plan should be included in the development proposal. The site should be able to provide an adequate water supply for the proposed development; however, care should be taken to place wells uphill of septic systems to avoid contamination of available ground water supplies.

After field review of the site and assessment of town needs, it appears that the site is suitable for location of the public works garage and associated facilities (i.e. sand/salt storage) and possibly the Town offices. There would not be sufficient area on this site to establish an elementary school and playing fields without considerable site excavation costs. Unless the entire 5 to 6 acre area was used entirely for active recreation purposes, the only type of recreation suitable for the major portion of the site would be a trail system or other form of passive recreation. It would seem that the Town's most immediate needs would be met by establishment of the municipal facilities in this central location on Route 97.


Slope
N
0
660'
scale
LEGEND
Areas of gentle to moderate slopes.
ROAD

ENVIRONMENTAL ASSESSMENT

TOPOGRAPHY

The site is located on the northeastern flank of a streamlined hill (drumlin) whose shape derives from the smoothing action of overriding glacier ice. The hill locally called Hampton Hill, forms the village center. The hill slopes moderately, then steeply eastward toward Little River on the eastern side of Route 97. On the site itself, the smooth slope is broken by an L-shaped rise. A perennial small stream flows northward from a fire pond near Route 97, curves sharply around the steep northern flank of the rise, then continues southeastward toward Little River. An intermittent stream flows southeastward along the southern flank of the rise. The top of the rise is gently to moderately sloping, but its narrowness and probable shallow depth to bedrock might hamper the construction of a large municipal building. The fact that the rise is surrounded by streams and steep slopes might also pose problems for proper salt storage. Nevertheless, small buildings or other accessory facilities might be located on the rise without much difficulty.

The southwestern corner of the site is the only other area containing both moderate to gentle slopes and relatively dry soils. About five acres are contained in this section. This is clearly the most suitable area for municipal development on the site. The accompanying illustration shows both this area and the most suitable section of the small rise described above.

GEOLOGY

Although no outcrops were observed on the site, bedrock, particularly in the small rise described in the Topography section of this report, appears to be fairly close to the surface (within 10 feet). The bedrock has been mapped as Scotland Schist, a foliated, medium to dark gray, fine- to medium-grained rock whose major mineral components are quartz, biotite, muscovite, and oligoclase.* Small percentages of iron-bearing minerals often cause the weathered surface of the Scotland Schist to have a rusty appearance. These minerals also commonly affect local groundwater quality.

The unconsolidated material (overburden) overlying bedrock on the site is till, a nonsorted glacial deposit consisting of rock particles of widely varying sizes and shapes. The texture of the till is sandy and loose on most parts of the site. A small knoll at the rear of the existing house lot was excavated, exposing a very coarse gravelly till that probably resulted from the winnowing action of meltwater. Other pockets of sandy and gravelly material may be scattered throughout the site, but the commercial value of these pockets would likely be small.

HYDROLOGY

Two perennial streams and one intermittent stream pass through the site. One perennial stream enters the property near the intersection of Route 97 and Station Road, flows northeast across the northwestern corner of the site, and exits within

---

* Source: Dixon, J.R., and Pessl, Fred Jr., 1966, Geologic Map of the Hampton Quadrangle, U.S. Geological Survey Map GQ-468.

a short distance. The other perennial stream enters the site at a shallow pond, flowing northward, then curves sharply southeastward at the base of a steep rise, leaving the site near the northeastern corner. The intermittent stream originates just to the east of the present residential lot and flows southeastward to exit near the southeastern corner of the site.

In view of the sandy, coarse nature of the local overburden, the presence of numerous watercourses on and near the property suggests that groundwater flow is impeded, probably by bedrock. The steep slopes of the site in the northern half of the site also supports this theory. Hence, the area around the rise appears to be an environmentally sensitive tract that could be developed for large municipal facilities only with considerable caution and expense. The possibility of salt storage is especially problematic; without proper care, salt may enter the groundwater supply for wells on the site or be carried by the local rills into Little River. The sand and gravel deposits of the Little River valley have potential to serve as a site for high-yielding wells in the future. Since wells located near rivers may be affected by the water quality of those rivers, protection of Little River should be a priority for the town. Of course, storage of fuel oil or other potential contaminants must also be weighed using the same considerations.

The southern section of the site has a greater likelihood of being easily developed for municipal purposes. Bedrock is probably not so close to the surface in this area and the closest stream is the intermittent one mentioned above. Although runoff from this section ultimately enters Little River, the path to the river would not be as direct: groundwater transport would probably be involved over a greater distance. Problems with salt storage might still occur, but the symptoms would most likely be visible in vegetative mortality east of the storage area. Corrective measures might then be taken to prevent further salt leakage before serious damage to the Little River aquifer occurred.

Since site development will also entail runoff increases, the southern section again appears to be preferable. The steeper slopes and probably shallower soils in the northern section would require more grading and filling; hence, soil erosion would tend to be more severe in that area.

VEGETATION

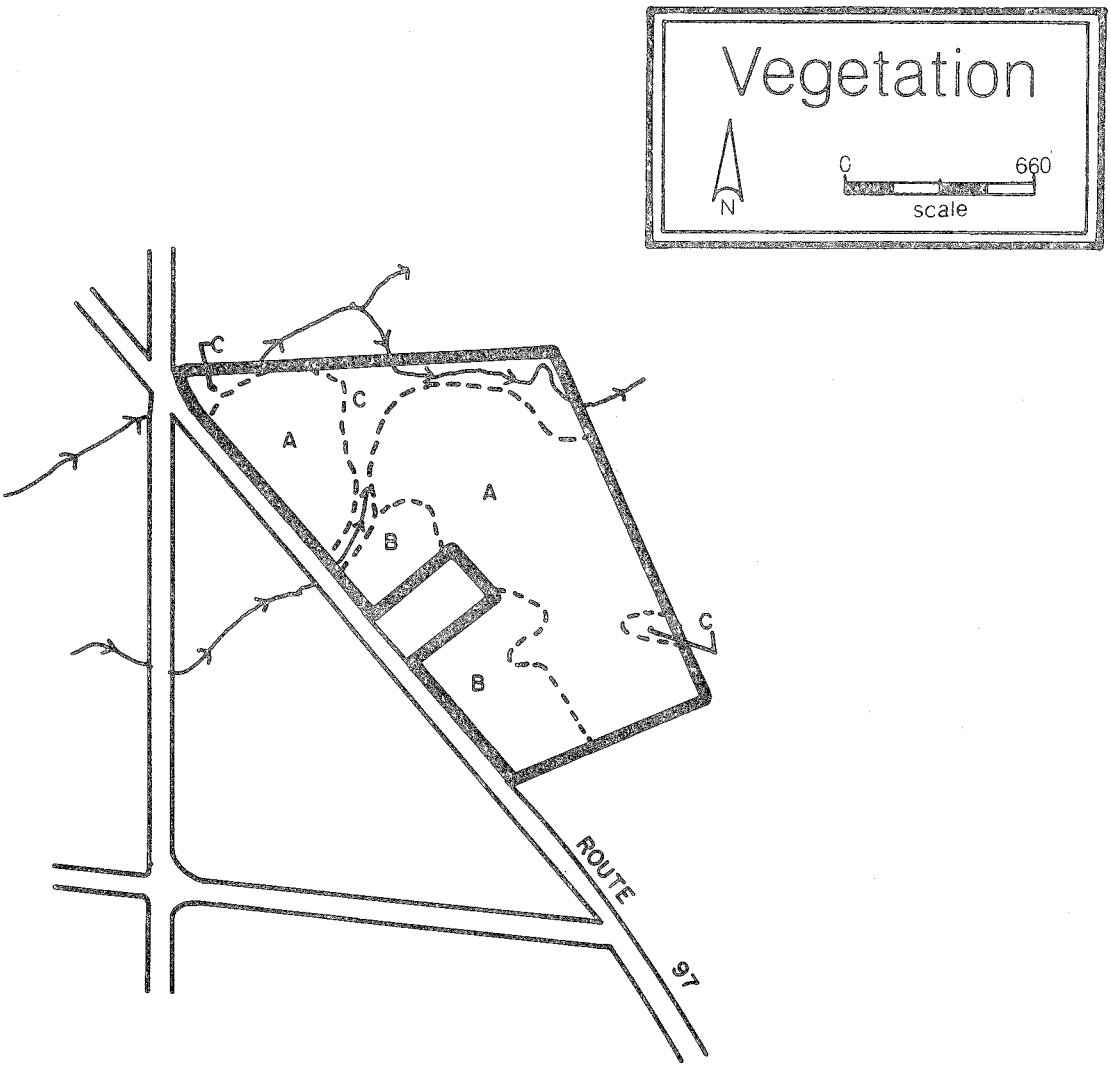
The 30± acre site contains three distinct vegetation types. (See vegetation type map.)

The high water table in the streambelt/hardwood swamp area limits vegetation growth. Timber management in this area is not feasible at present. Development in this area will increase the already high windthrow hazard.

The trees in the mixed hardwood stand are becoming crowded. A fuelwood thinning using the "croptree selection method" (see section on Suggested Management Techniques) will improve the health and vigor of the residual trees in this stand. This thinning will generate approximately 100 cords of fuelwood.

Vegetation Type Descriptions:

Stand A. (Mixed Hardwoods.) Medium-quality pole-size red oak, shagbark hickory, white ash, black birch, white oak, and occasional American beech are



LEGEND

Road

Stream

Property Boundary

---- Vegetation Type Boundary

STAND A Mixed hardwoods, fully stocked pole-size, 19 acres.

STAND B Old fields, understocked, seedling to sapling size, 6 acres.

STAND C Streambelt/hardwood swamp, fully-stocked, pole and sawlog-size, 5 acres.

* Seeding-size trees = Less than 1 inch in diameter at breast height (dbh).
Sapling-size trees = 1 to 5 inches in dbh.
Pole-size trees = 5 to 11 inches in dbh.
Sawlog-size trees = 11 inches and greater in dbh.

present in this fully stocked 19-acre stand. The growth rates of the trees in this stand have slowed considerably in the last five years due to crowding. Total volume is between 13 and 15 cords per acre. Bluebeech, mapleleaf viburnum, witchhazel, and hardwood tree seedlings form a dense understory in this stand. Ground cover species include club moss, huckleberry, and spotted wintergreen.

Stand B. (Old Field.) This 6-acre understocked stand is composed of sapling-size bigtooth aspen, red maple, gray birch, eastern red cedar, and remnant apple trees, as well as seedling size black birch, red oak, black cherry, and white ash. Groundcover is dominated by grasses, goldenrod, poison ivy, old field juniper, barberry, bayberry, winged sumac, steeplebush, dewberry, and oriental bittersweet.

Stand C. (Streambelt/Hardwood swamp.) Medium-quality pole-size red maple in clumps and widely scattered sawlog-size yellow birch are present in this 5-acre fully-stocked stand. Highbush blueberry and sweet pepper-bush form a dense understory in this area. Ground cover is dominated by cinnamon fern, hayscented fern, Christmas fern, skunk cabbage, and clubmoss.

The high water table in Stand C (streambelt/hardwood swamp) limits vegetative growth to species that are tolerant of excessive moisture conditions. Red maple are able to survive under these conditions; however, growth rates are slow and tree stability is generally low because of shallow root systems. The high water table in this area also severely limits operability of timber-harvesting equipment. Management of this stand for timber production is not feasible at present.

Windthrow is a potential hazard in Stand C (streambelt/hardwood swamp). The trees in this stand are shallow-rooted and unable to become securely anchored in the saturated soils. Linear clearings in or near this stand which would allow wind to pass through rather than over it will intensify the windthrow hazard and therefore should be avoided.

Construction of roadways, buildings, and septic systems will undoubtedly require intensive alteration of the soil. It should be recognized that trees are very sensitive to changes in the condition of the soil within the entire area under their crowns. Changes in soil aeration, moisture level, or physical constitution under a tree's canopy may cause the death of that tree within three to five years. Hence, soil disturbances under trees that are to be saved should be limited whenever possible and careless injuries to trees should be avoided.

SUGGESTED MANAGEMENT TECHNIQUES

The trees in Stand A (mixed hardwoods) are becoming crowded and as a result are declining in health and vigor. A fuelwood thinning removing approximately 1/3 of the total volume will reduce crowding, stimulate growth and increase stability over time. For the purposes of this thinning 100 of the highest quality trees in each acre should be identified (trees spaced approximately 20' x 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 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 dead or severely damaged. This thinning, if implemented, will result in between 4 and 5 cords of fuelwood per acre.

Trees removed from areas that are cleared for construction of the proposed municipal facilities could be utilized for fuelwood.

A publicly employed service forester or consultant forester should be contacted to assist the town with selecting crop trees to be saved.

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 limitation chart indicates the probable limitations for each of the soils for on-site sewerage, buildings with basements, buildings without basements, streets and parking, and landscaping. However, limitations, even though severe, do not preclude the use of the land for development. If economics permit large expenditures for land development and the intended objective is consistent with the objectives of local and regional development, many soils and sites with difficult problems can be used. Know Your Land: Natural Soil Groups for Connecticut can also give insight to the development of the soils and their relationship to the surficial geology of the site.

Soils typical of this site include the Charlton-Hollis series, the Woodbridge series, the Canton-Charlton series and the Ridgebury, Leicester and Whitman series. Most soils on the site are moderately well-drained, except the Ridgebury, Leicester and Whitman soils which are regulated wetlands under Public Act 155.

7LC Charlton-Hollis fine sandy loams, very rocky, 3 to 15 percent slopes. This gently sloping to sloping unit consists of two soils, Charlton and Hollis, which occur in patterns too intricate to separate in mapping. About 50 percent of the unit is similar to the soil described for the Charlton series. Charlton are well drained soils developed in upland till normally deeper than 5 feet. These soils are moderately permeable in the subsoil but slowly to very slowly permeable layers may be present below 60 inches. The water table normally is below 60 inches most of the year. The Charlton soils are naturally stony and contain few to many stones throughout the soil. Most use problems are related to slopes and stoniness. Hollis soils make up about 30 percent of this mapping unit and occurs when bedrock is a few to 20 inches deep. This mapping unit has rock outcrop covering 10-25 percent of the surface and few to many stones on the surface.

17LD Charlton-Hollis fine sandy loams, very rocky, 15 to 35 percent slopes. This moderately steep to steep unit consists of two soils, Charlton and Hollis, which occur in patterns too intricate to separate in mapping. About 50 percent of the unit is similar to the soil described for the Charlton series. Charlton are well drained soils developed in upland till normally deeper than 5 feet. These soils are moderately permeable in the subsoil but slowly to very slowly permeable layers may be present below 60 inches. The water table normally is below 60 inches most of the year. The Charlton soils are naturally stony and

contain few to many stones throughout the soil. Most use problems are related to slopes and stoniness. Hollis soils make up about 30 percent of the mapping unit and occurs when bedrock is a few to 20 inches deep. The remaining part of the mapping unit is an unnamed soil that ranges from 20 to 40 inches to bedrock.

31MC Woodbridge extremely stony fine sandy loam, 3 to 15 percent slopes. Woodbridge are moderately well drained soils developed in fine sandy loam mantles, about 24 inches deep, over a hardpan. The hardpan normally extends below 60 inches. These soils, normally deeper than 10 feet, occur on rolling uplands. The slowly to very slowly permeable hardpan restricts internal drainage. The water table normally rises to within 20 inches of the surface during the winter and spring months. A perched water table may occur above the hardpan after a hard rain. Woodbridge soils are naturally stony and contain few to many stones throughout the soil. Most use problems are related to the very slowly permeable hardpan, seasonable high water table and stoniness. This soil is gently sloping and sloping. Areas occur in patterns too intricate to separate in mapping. Water may also move down slope over the hardpan during wet seasons. More than 3 percent of the surface is covered with stones.

85MC Canton & Charlton extremely stony fine sandy loams, 3 to 15 percent slopes. This gently sloping to sloping unit of Canton and Charlton well drained soils occur in patterns too intricate to separate in mapping at the current scale. Each mapping unit may contain an individual soil or percentage of each of the two soils. More than 3 percent of the surface is covered with stones. In general, these soils are normally deeper than 5 feet. These soils are rapidly permeable in the subsoil but slowly to very slowly permeable layers may be present below 60 inches. The water table normally is below 60 inches during most of the year. The Canton and Charlton soils are naturally stony and contain few to many stones throughout the soil. Gravel size rock fragments generally make up 10 to 30 percent of the surface and subsoil. Most use problems are related to slope and stoniness.

43M Ridgebury, Leicester & Whitman extremely stony fine sandy loams. This mapping unit is made up of poorly and very poorly drained soils. These soils occur in an intricate and complex pattern and separation of each individual soil was not practical at the scale surveyed. Each mapping unit may contain an individual soil or a percentage of each of the three soils. More than 3 percent of the surface is covered with stones. In general, these soils are normally deeper than 5 feet. They have a hardpan at a depth of 18-24 inches. They are found in low-lying nearly level upland areas. They are slowly to very slowly permeable in the subsoil, are naturally stony and contain few to many stones throughout. Most use problems are related to the slowly to very slowly permeable subsoils and long seasonal high water tables. The water table is at or near the surface from late fall through early spring.

On-site investigation reveals 5 or 6 acres in the southwest section of the site, adjacent to the road and extending back 3 or 4 hundred feet, which would be suitable for construction. Large boulders would be encountered occasionally. Terracing and grading of soil disturbed around buildings to slow runoff and direct it properly to prevent erosion would be especially desirable. Roofs, pavement, and drainage around buildings will increase runoff volumes. This water must be directed to safe outlets and not allowed to spill from a storm culvert over a steep filled slope. A drainage/erosion control plan should be developed as part of any land grading plan/design. The local Soil and Water Conservation District can recommend appropriate control measures if requested.

A second logical building area - east and north of the private property parcel - may provide 3 or 4 acres of relatively flat ground. Some grading would be required, and stabilization of slopes to prevent erosion and subsequent sediment movement into the woods and/or wetlands is important.

The northern and eastern areas of the site slope steeply. Recreational use compatible with the terrain might include a trail system for walking or running, conservation education, picnicking, a multipurpose pond, etc. Although additional on-site evaluation would be necessary, development of a good pond might be possible. There is a substantial watershed feeding the streams in this area. Any filling or other encroachment on the streams and wetlands on this site is not recommended.

Since both point and non-point pollution (sediment, nutrients, chemicals, salt, etc.) is of paramount concern, prevention is important. Stabilizing steep slopes, outletting drainage properly, etc., would be very important. Any filling or general disturbance of vegetation and soil near watercourses and on slopes should be stabilized as soon as possible.

If requested, the Soil and Water Conservation District at the Agricultural Center in Brooklyn will offer assistance in planning for specific conservation measures to prevent erosion and drainage problems.

WATER SUPPLY

Water supply for the proposed facilities would most likely be provided by bedrock-based wells. Yields from such wells depend upon the number and size of water-bearing fractures penetrated. Since the distribution of fractures in the local bedrock is irregular, it is difficult to predict what the yield of a well drilled on the site might be. Nevertheless, 90 percent of the bedrock wells surveyed in the Shetucket River basin for Connecticut Water Resources Bulletins Nos. 11 and 12 yielded at least 3 gallons per minute (gpm). More locally, records of 3 wells drilled on Hampton Hill near the proposed municipal site showed yields of 5, 11, and 10 gpm for well depths of 210, 205, and 105 feet, respectively. Yields of this magnitude probably would be sufficient for the planned municipal facilities.

In terms of quality, the water should be fairly good with the possible exception of a too-high iron and/or manganese concentration, which has occurred in many areas underlain by the Scotland Schist. Ample precautions should be taken to keep wells safe from salt or septic system contamination. Such precautions would include placement of wells uphill from storage areas or septic leaching fields, and conservative separating distances.

WASTE DISPOSAL

The property is being proposed as a location for one or more town facilities. These include an elementary school, town offices, town garage--including storage for road equipment, sand and salt piles--and an active-use recreation area. The elementary school may be the most immediate concern of the town.

The present elementary school is located on seven acres. It doesn't appear that comparable land area could be found on this property. Areas of suitable

soil must be located for a subsurface sewage disposal system and a 100% reserve area that meet all the separating distances required by the Public Health Code. The leaching areas should not be located under parking lots or other areas that receive heavy usage, as this can cause system failure.

Areas that would have to be avoided in the construction of leaching systems are the steep slopes in the northern and eastern sections, the wetlands associated with the streams and pond, and any other areas with high maximum groundwater levels. Areas which are shallow to bedrock, or with a hardpan layer close to the surface, should also be avoided as these situations can cause failure of leaching systems, and pollution of groundwater and nearby wells. Soil testing would have to be done to determine specific areas of suitable soil.

The property may be better suited for the town garage and/or town offices, as they would require less land for construction and for leaching systems. The limited areas previously mentioned should be avoided.

If salt and sand piles are to be stored on the property, they must be properly located and protected so that the groundwater or any wells in the area will not become contaminated. It is possible for salt leaching through the soil to travel along cracks in the bedrock and contaminate wells a considerable distance away.

PLANNING CONCERNS

The parcel under consideration is well situated for the location of any number of community facilities. It is less than a mile north of the center of Hampton and served by Route 97, the major north-south state highway in the Town. Convenient and unlimited access would be provided for any facility for which a central location was important. As Route 97 is already the major arterial road tying most of the town together, new facilities on this road would not introduce new kinds or volumes of traffic to the surrounding neighborhood.

There already is a continuing tradition of locating the town's major community facilities near the Village. This location would generally support that tradition.

As with any other location in Hampton, on-site systems must supply potable water and septic disposal facilities. No public utilities are planned or anticipated for any portion of Hampton in the foreseeable future. The site does contain a recently constructed fire pond.

While the site, in gross acreage, is adequate for one or more of the uses suggested as possible for the site, the amount of relatively flat, easily developable land is limited. A final assessment of the suitability of this site will, of course, depend on the scale of buildings and ancillary uses proposed and on the necessity of expansion in the more distant future.

Among the uses considered for the site, a town hall and an elementary school are compatible uses for which there might be some advantages to location at the same site; parking facilities, for instance, might to some degree be shared. The two facilities together could provide a locus of municipal government which would provide some community identity benefits, although the strong visual impact imparted by the village itself limits the need for such a municipal complex in Hampton. The third suggested use for the site, a relocated public works facility,

is less compatible with these proposed uses and might be inappropriately located in close proximity to them, given the kinds of activities, vehicles and operations associated with a public works facility.

The question of association of uses is limited as a concern by the restrictions of topography inherent to the site. There probably would not be enough room to combine two or more developed uses without substantial and unacceptable reworking of the topography.

Of the three uses suggested, the public works facility could be the most easily sited without significant regrading. The easily usable portions of the site are sufficiently large to permit buffering of the generally recognized negative aspects of such a use, i.e., its unsightliness with outside storage of sand, salt, and the inevitable vehicles and other equipment. The public works facility would be the most obtrusive of the uses, even with substantial screening. The visual and operational features associated with the public works facility would make it difficult to share the site with either the school or town hall and be adequately screened, without considerable alteration of the site's topography or use of the more environmentally sensitive portions of the site.

Both the town hall and the elementary school would be the least disruptive to the neighborhood, although municipal or institutional uses are not currently present in the neighborhood. A town hall would perhaps be most easily accommodated on the site. Such a building, of modest size, would not be burdened with extensive ancillary uses. Parking facilities which are most amenable to siting within the dictates of the site would be the only other major site improvement.

The elementary school probably presents the greatest siting problems. The facility itself, if modest in size and not expected to be significantly expanded in future years, could be sited on the level portions of the site. The required parking could also be accommodated without major disruption to the site. Extensive recreational facilities in the form of ball fields and other similar development would require considerable alteration of the site through terracing or filling. The parcel is sufficiently large that such alteration could be buffered from surrounding property.

The use of this parcel for one or more of the uses proposed is certainly possible; the combination of two or more of those uses will likely entail substantial alterations of the site.

The site is pleasing as a natural area, without being spectacular. Use of more than the limited flat area for development purposes would obliterate any inherent value the site has as a natural area. Development of the site would also tend to blur the visual definition of the village at the north, by essentially encouraging and contributing to the expansion of the urban qualities of the village for a further half mile or more up Route 97. Intensive use of the site would tend to accentuate that result.

RECREATION POTENTIAL

From a recreational development standpoint the site has a potential for both active and passive recreation facilities under the following conditions:

Passive recreation - The site has very few restrictions on the installation of hiking/jogging/nature trails; these could be compatibly blended with most other activities because they can be routed away from any intensely developed portions of the site. Soil and terrain requirements are minimal and usually do not preclude trail development.

Active recreation - Site requirements for ball fields, tennis courts, basketball courts, etc. are more restrictive and may dictate an either/or situation in which this site specifically is developed for recreation only or into one of the building development alternatives. The amount of relatively level and readily usable land is insufficient to meet a wide range of needs. A larger site or one which has proportionally more usable land would enable some separation of activities and offer the possibility of multiple uses.

If the tract were developed solely for recreational use, both active and passive recreation could be established, though at a high cost. The lack of level terrain would require earthmoving (cut and fill) for establishing ball fields, tennis and basketball courts, etc. Because of the rural character of Hampton and the extensive nearby state forest lands (Goodwin and Natchaug) with their network of hiking trails, it is doubtful that any great need exists for passive recreation facilities. These state forests also have areas for picnicking, fishing, horseback riding, canoeing, and the possibility of skating on Pine Acres Lake (Goodwin) during the cold months.

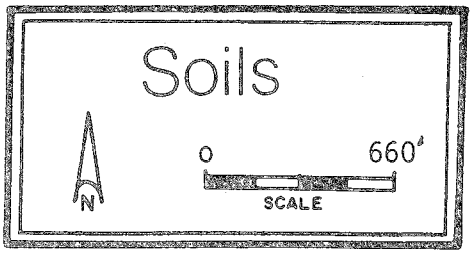
From a suitability standpoint, the following recreational activities appear feasible for the site (based on development for recreation use only):

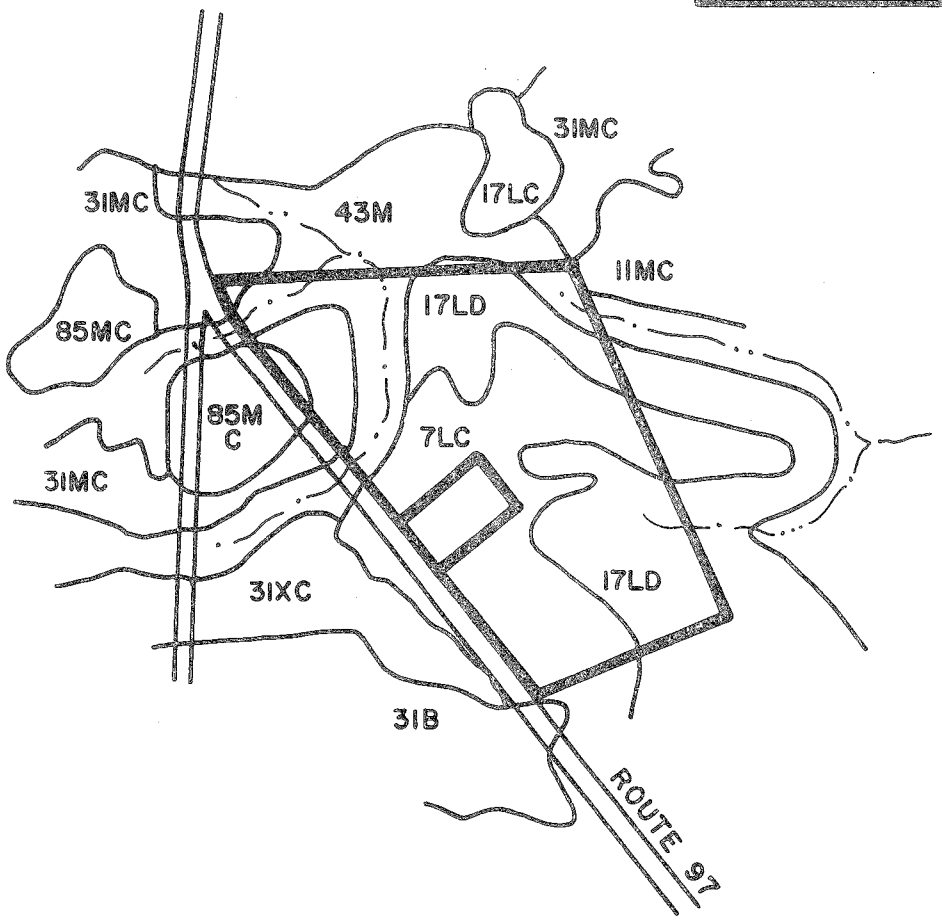
Ball field, basketball, tennis courts - expensive due to needs for cut and fill,
Picnicking, trail uses - doubtful needs since these activities are provided at nearby state forests,
Camping - not normally a town need,
Winter sports - sloped areas would lend themselves to establishment of sled, toboggan, and beginner ski runs.

The plan for site development should incorporate those recreational elements for which there is a need and which can be compatibly blended into the design. No recreational activities should be installed close to a sand and salt storage area where heavy equipment will be operating.

A summary recommendation for the study site would be incorporation of design elements requiring minimal site changes and looking for additional land tracts to accommodate the range of needs of the town. Acquisition of additional land should help in sorting out the land/activity determinations. Another tract may also have less restrictive soils and slopes and may be able to accommodate a wider range of activities.

Appendix





Soil Map Symbol	Soil Name	NS Group
7LC	Charlton-Hollis fine sandy loams, very rocky, 3 to 15% slopes.	B-1b
17LD	Charlton-Hollis fine sandy loams, very rocky, 15 to 35% slopes.	B-1d
31MC	Woodbridge extremely stony fine sandy loam, 3 to 15% slopes.	C-2b
85MC	Canton and Charlton extremely stony find sandy loams, 3 to 15% slopes.	B-1c
	WETLAND SOIL	
*43M	Ridgebury, Leicester and Whitman extremely stony fine sandy loams.	C-3b

* Designated wetland soil by PA 155.

HAMPTON

RTE. 97 PARCEL

HAMPTON, CONNECTICUT

Principle Limitations and Ratings for Certain Land Uses

	Sanitary Facilities	Building Site Development		Water Management	Recreation	
Soil Symbol and Series	Septic Tank Absorption Fields	Dwellings with Basements	Small Commerical Buildings	Drainage	Playgrounds	Paths and Trails
71C Charlton-Hollis	Moderate, slope	Moderate, slope	Moderate, slope	Deep to water	Severe, slope, large stones	Slight
17LD Charlton-Hollis	Severe, slope	Severe, slope	Severe, slope	Deep to water	Severe, slope	Moderate, slope
31MC Woodbridge	Severe, percs. slowly, wetness	Severe, wetness	Severe, slope	Percs. slowly, slope	Severe, large stones	Moderate, wetness
85MC Canton & Charlton	Severe, large stones	Severe, large stones	Severe, slope, large stones	Not needed	Severe, slope, large stones	Severe, large stones
*43M Ridgebury, Leicester & Whitman	Severe, percs. slowly, wetness	Severe, wetness	Severe, wetness	0-3% - percs. slowly, frost action. 3+% - slope, percs. slowly, frost action	Severe, wetness, large stones, small stones	Severe, wetness

* Designated wetland soil by P.A. 155

SOIL INTERPRETATIONS FOR URBAN USES

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

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

Slight Limitations

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

Moderate Limitations

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

Severe Limitations

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

About the Team

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

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

PURPOSE OF THE TEAM

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

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

REQUESTING A REVIEW

Environmental reviews may be requested by the chief elected officials of a municipality or the chairman of town commissions such as planning and zoning, conservation, inland wetlands, parks and recreation or economic development. Requests should be directed to the Chairman of your local Soil and Water Conservation District. This request letter should include a summary of the proposed project, a location map of the project site, written permission from the landowner allowing the Team to enter the property for purposes of review, and a statement identifying the specific areas of concern the Team should address. When this request is approved by the local Soil and Water Conservation District and the Eastern Connecticut RC&D Executive Council, the Team will undertake the review on a priority basis.

For additional information regarding the Environmental Review Team, please contact Jeanne Shelburn (889-2324), Environmental Review Team Coordinator, Eastern Connecticut RC&D Area, 139 Boswell Avenue, Norwich, Connecticut 06360.