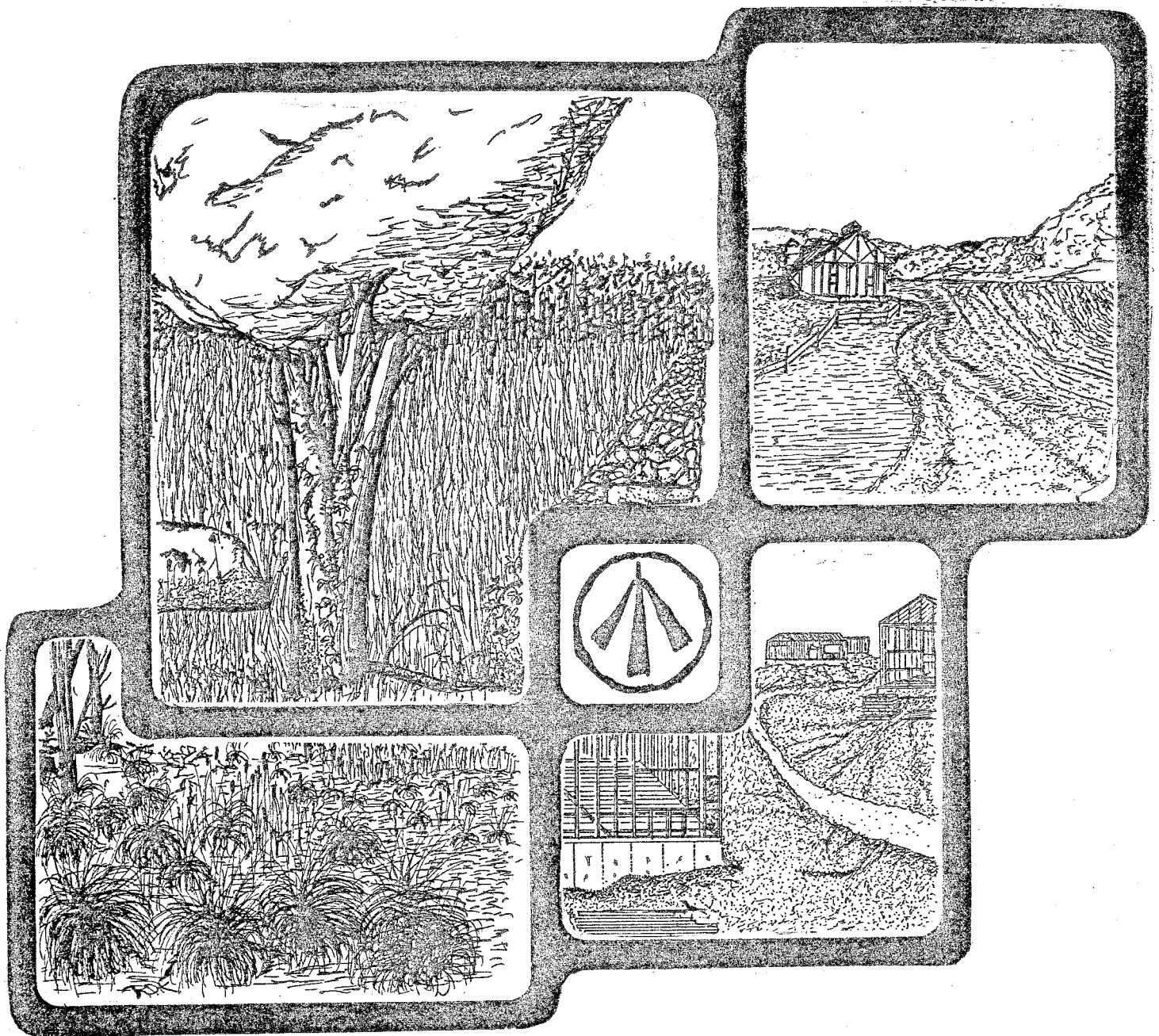


ENVIRONMENTAL REVIEW TEAM REPORT



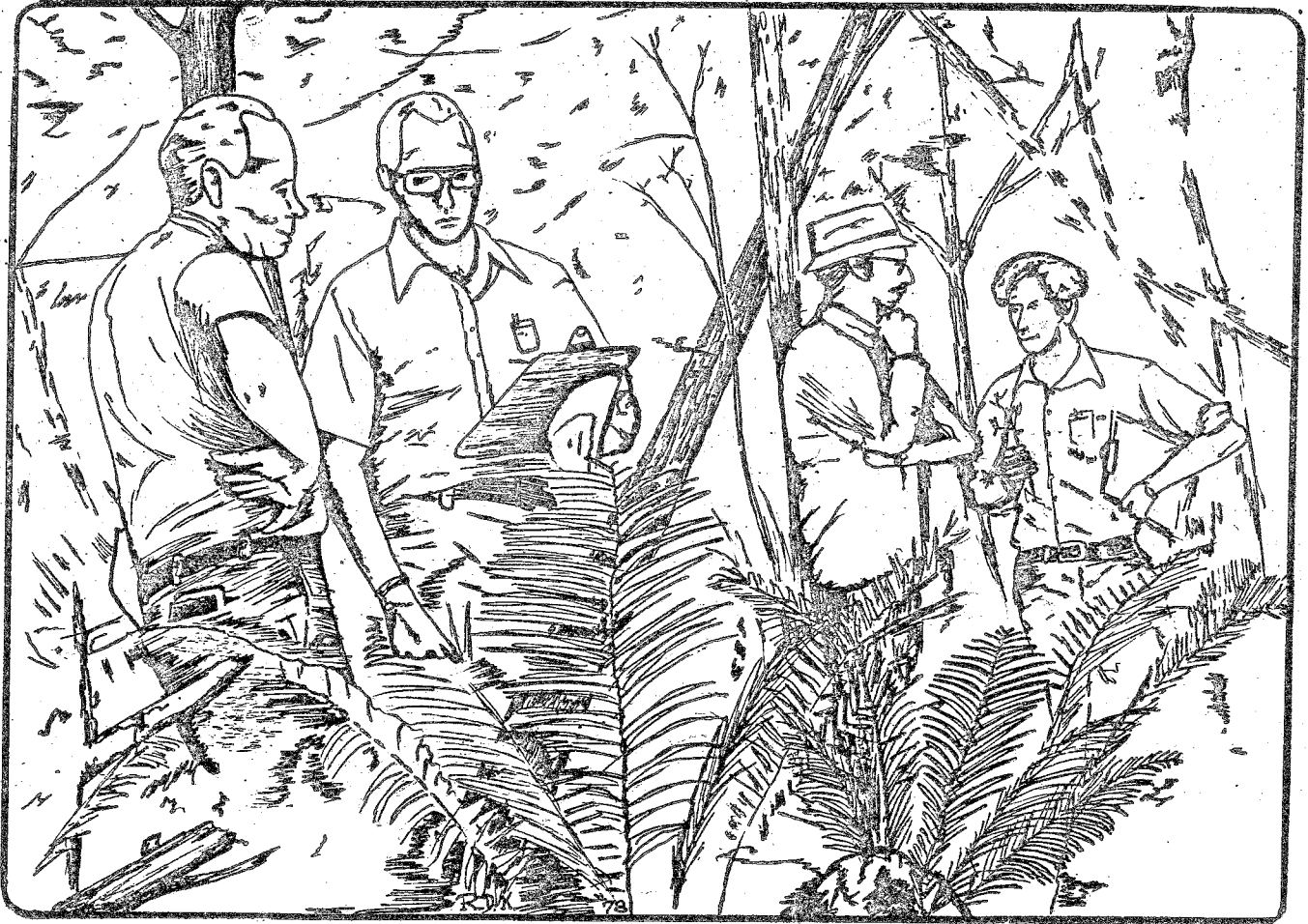
ELM RIDGE PARK
ROCKY HILL, CONNECTICUT

KING'S MARK
RESOURCE CONSERVATION & DEVELOPMENT AREA

KING'S MARK ENVIRONMENTAL REVIEW TEAM REPORT

ON

ELM RIDGE PARK ROCKY HILL, CONNECTICUT



FEBRUARY 1981

Kings 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
Moses Taylor, Coordinator

Staff Administration Provided By

NORTHWESTERN CONNECTICUT REGIONAL PLANNING AGENCY

Leicester H. Handsfield, Chairman
Charles A. Boster, Director
Richard Lynn, ERT Coordinator
Rebecca West, ERT Cartographer
Irene Nadig, Secretary
Brenda Lloyd, Secretary

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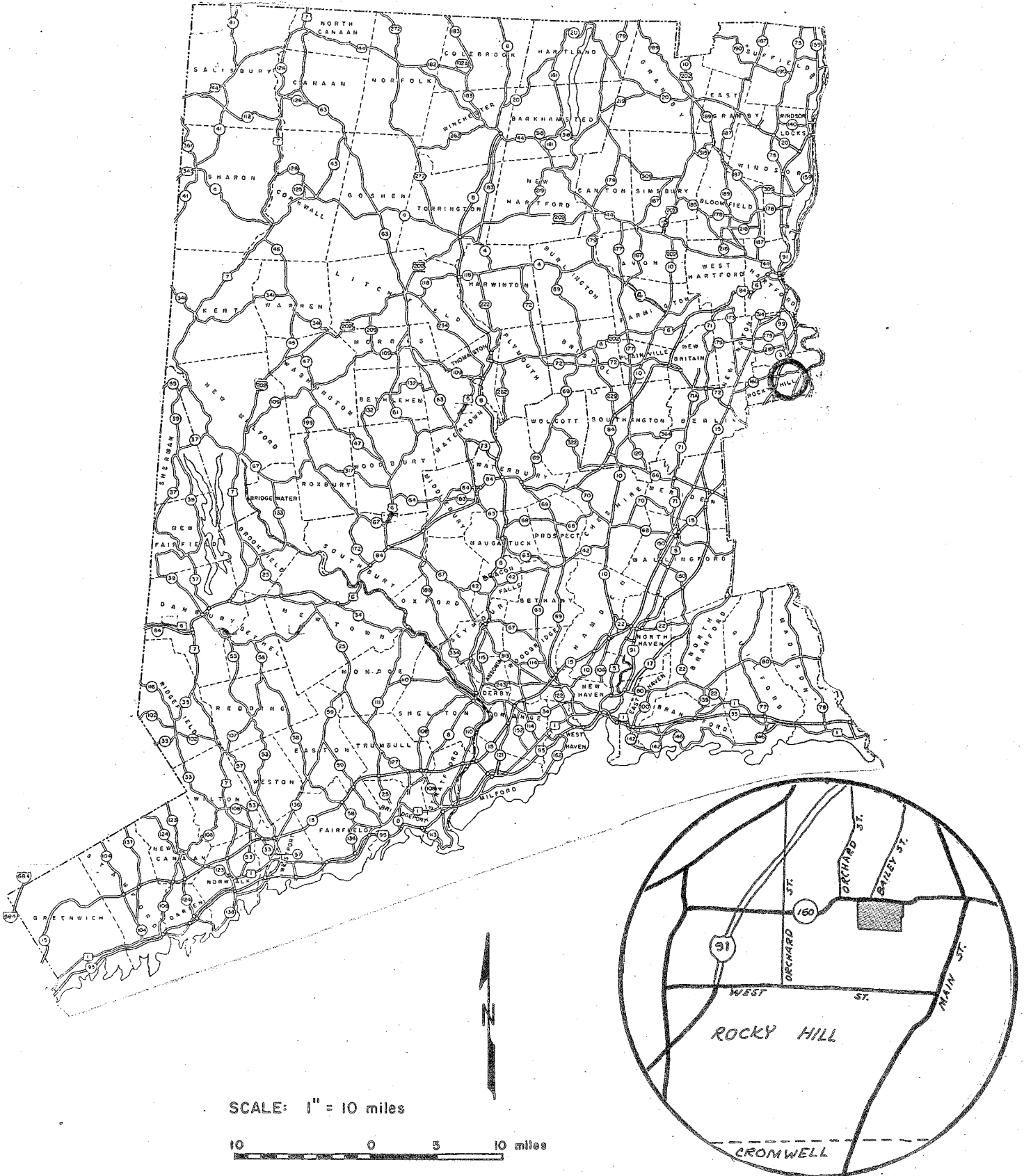
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LOCATION OF STUDY SITE

ELM RIDGE PARK ROCKY HILL, CONNECTICUT



ENVIRONMENTAL REVIEW TEAM REPORT

ON

ELM RIDGE PARK, ROCKY HILL, CT.

I. INTRODUCTION

The Town of Rocky Hill is applying for federal funds through the U.S.D.I. Heritage Conservation and Recreation Service to improve Elm Ridge Park. A town-owned facility, Elm Ridge Park is ± 29 acres in size and located near the center of town at the intersection of Elm Street (Route 160) and Bailey Road (see Figure 1).

The proposed improvements include the creation of an ice skating pond in a wetlands area and the construction of a new ball field.

The Director of Parks and Recreation from the Town of Rocky Hill requested the assistance of the King's Mark Environmental Review Team to assist the Town in applying for the federal funds. Specifically, the Team was asked to prepare the environmental assessment portion of the grant application. The Town's request was considered and approved as an ERT project by the King's Mark RC&D Executive Committee.

The ERT met and field reviewed the site on January 14, 1981. Team members for this review consisted of the following:

Christy Hass.....	Director, Parks & Recreation.....	Town of Rocky Hill
John Minnick.....	Soil Conservationist.....	U.S.D.A. Soil Conservation Service
Mike Zizka.....	Geohydrologist.....	Connecticut Department of Environmental Protection

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, and a topographic map of the subject site. 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. The format for the report follows that suggested by H.C.R.S. guidelines. If any additional information is required, please contact Richard Lynn (868-7342), Environmental Review Team Coordinator, King's Mark RC&D Area, Sackett Hill Road, Warren, Connecticut 06754.

FIGURE I.
TOPOGRAPHIC MAP



II. DESCRIPTION OF THE PROPOSAL

The Town of Rocky Hill is proposing to complete the filling of a wetland area in the eastern half of Elm Ridge Park and regrade a second wetlands area in the western half of the same park. The purpose of this action is to create a Little League baseball diamond in the filled area to the east and an ice skating arena in the regraded area to the west. These facilities will serve the entire population of Rocky Hill and the Hartford region. Baseball, softball, ice skating, and hockey, together with the spectator possibilities of these activities, will fill a recreational void now present. At the current time, there is no ice skating facility in Rocky Hill which is accessible for resurfacing, draining in summer months, lighting and plowing.

The physical setting for the project is a multi-facility park of 29 acres located on Elm Street, Rocky Hill. The park is developed with an outdoor swimming pool complex, 5 lighted tennis courts, lighted basketball court, baseball field, playground, shelter, parking and access road (see Figure 2). The proposed construction would complement the existing facilities at the park.

The proposed new facilities were partially constructed (i.e. fill and regrading of ball diamond area and clearing of ice skating area) by the Connecticut National Guard. Construction activity was terminated by the Guard after three full weekends of work due to other project priorities, leaving the site in a disturbed state.

The proposed construction would be phased over a two-year period: Spring-Summer 1981, baseball diamond construction; Spring-Summer 1982, ice skating pond. Remaining improvements (see Figure 2) would be deferred to 1982-85 and financed through the general town fund.

The development of these facilities is compatible with the Town of Rocky Hill Plan of Development and with the Park and Recreation Advisory Board plans for future recreation facilities. Complemented by a proposed park on the I-291 property, these facilities would meet the projected Town needs for a 10 year period.

III. DESCRIPTION OF ENVIRONMENT

A. Planning and Land Use Considerations

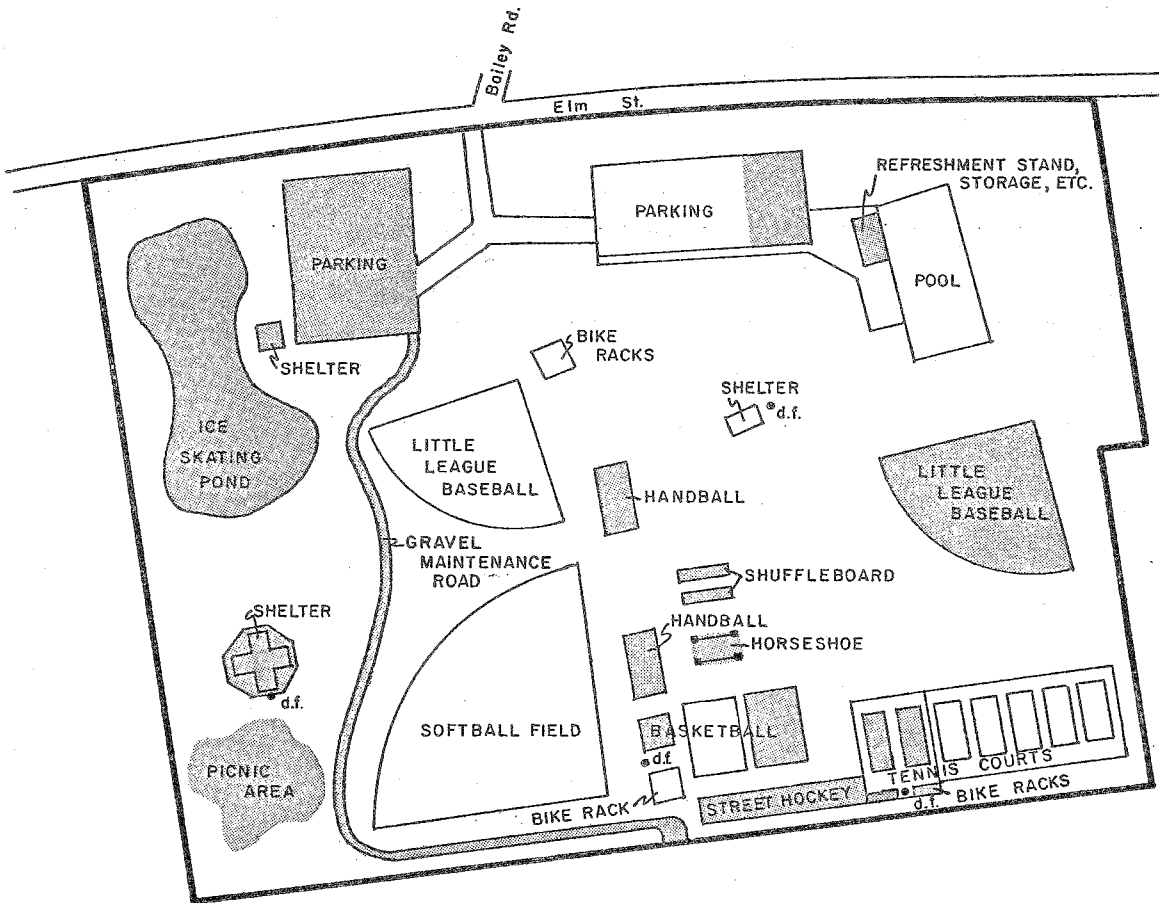
The present land use differs from past land use in that the park was previously part of the State Veterans Home and Hospital grounds and not utilized for active recreation pursuits.

To the knowledge of the town officials, there are no historical or archaeological sites or artifacts located on the site.

Waste disposal for the park is part of the MDC sewer system for sewage. Solid waste is removed by park employees from barrels strategically placed throughout the park and disposed of through a sanitary land fill.

FIGURE 2.
SIMPLIFIED SITE PLAN

• ADAPTED FROM PARK PLAN OF 1/14/80



• d.f. DRINKING FOUNTAIN

■ PROPOSED NEW FACILITIES

□ EXISTING FACILITIES

SCALE: 1" = 250'

Currently approximately 125 parking spaces are available within the park with an additional 50 on a grass area. Access to the park is provided by hourly Connecticut Transit System buses. For neighborhood access, bicycles, cars and foot traffic enter from Elm Street. The park is centrally located on Rt. 160 for the townspeople and within 1 mile of Rte. 99 and Rte. 3. Senior citizens and handicapped persons may avail themselves of the Town operated mini-bus on weekdays to utilize the park.

B. Geology

Elm Ridge Park is located in an area encompassed by the Hartford South topographic quadrangle. A surficial geologic map of the quadrangle, prepared by R. E. Deane, has been published by the Connecticut Geological and Natural History Survey (Quadrangle Report No. 20). The map indicates that till and stratified drift are the principal components of the park's surficial geology (see Figure 3). Both materials are glacial sediments, but till was deposited directly from glacier ice while stratified drift was deposited by meltwater. In consequence, till is nonsorted and contains rock particles ranging in size from boulders to clay. Stratified drift, on the other hand, is commonly well-sorted and distinctly layered, with sand and gravel being the predominant constituents. The stratified drift in the park is part of a small patch that forms an outlier to a large stratified drift deposit in the Dividend-Rocky Hill Center area. The patch is probably less than 10 feet thick in general, and it appears to be underlain by compact till.

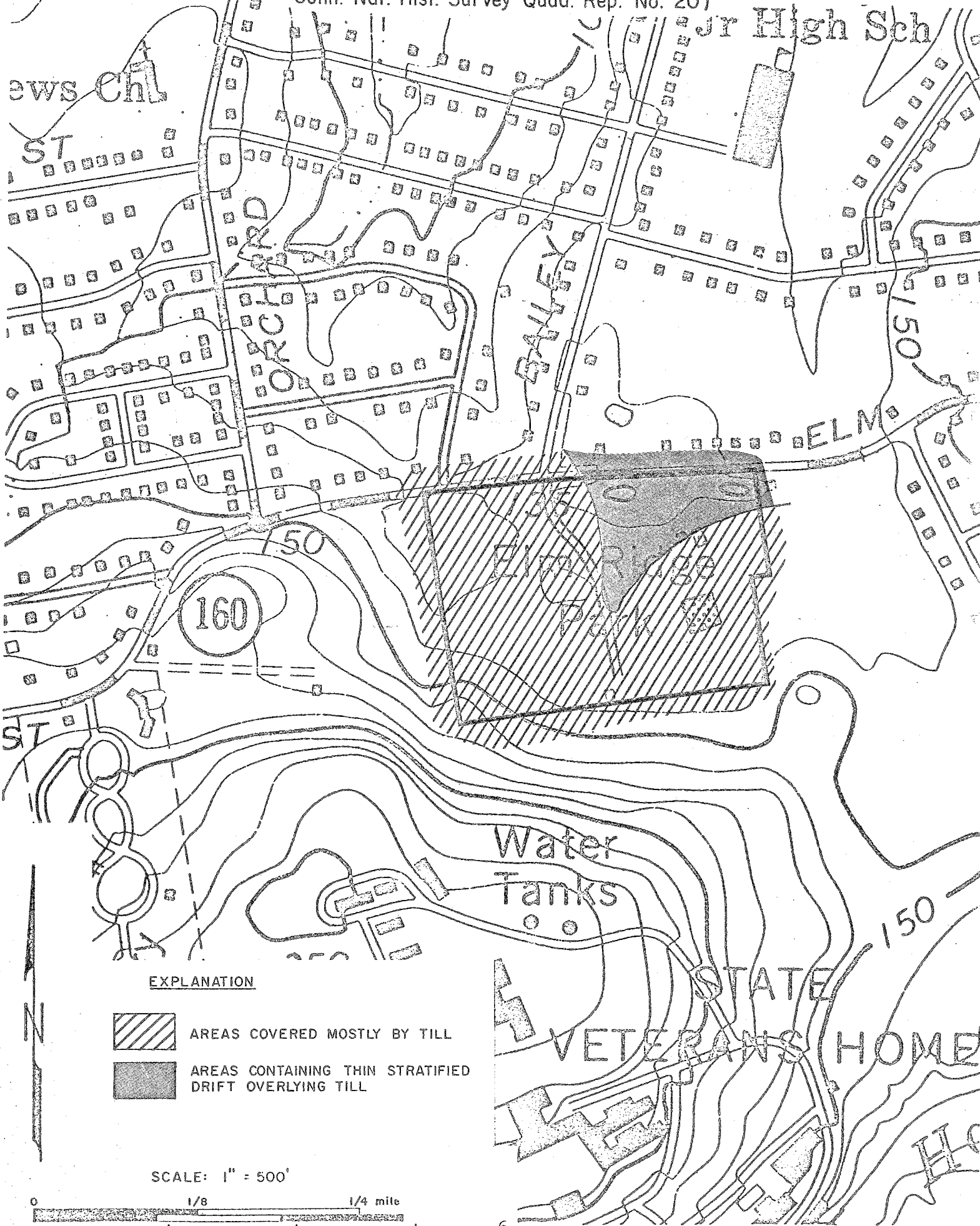
No bedrock outcrops were observed on the site. The East Berlin Formation, a sedimentary rock unit composed of gray to reddish-brown shales, mudstones, feldspathic sandstones, and arkoses, underlies the park. The East Berlin Formation has no known economically valuable mineral concentrations, but it is notable for its numerous dinosaur footprints. Dinosaur State Park, less than one mile south of Elm Ridge Park, contains a domed structure housing an exposure of about 500 dinosaur tracks on an arkose layer of the East Berlin Formation.

C. Soils

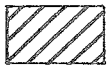

Elm Ridge Park lies within the Wethersfield-Branford-Berlin soil association area. In general, soils in this association have formed in glacial till from reddish triassic material; reddish sandstone, shale and basalt rocks; or reddish silt and clay deposits on lacustrine terraces.

A soils map of the property is presented in the Appendix of this report together with a Soils Limitation Chart. Soils on the site include: Biddeford silt loam (BgA, 0-3% slope), Wilbraham silt loam (WrA, 0-3% slopes), Ludlow loam (LoA, 0-3% slope) (LoB, 3-8% slope), and Wethersfield loam (WkB, 3-8% slope).

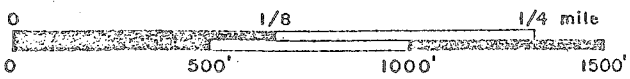
SOIL CHARACTERISTICS: The area labeled BgA is silt loam over dense silty clay and clay loam. An organic muck surface layer is present over most of the area. This area is very poorly drained, with the water table at the surface or within 6 inches of the surface throughout the year. The area is well suited to pond construction. Wetland and shallow water plants will establish easily in this area. This soil presents severe limitations (wetness, low strength, slow permeability) to all road and building construction.



EXPLANATION

-  AREAS COVERED MOSTLY BY TILL
-  AREAS CONTAINING THIN STRATIFIED DRIFT OVERLYING TILL

SCALE: 1" = 500'



The WrA area represents soil having silt loam surface horizons over a very firm fragipan of gravelly loam. The deep fragipan substratum begins at about 20 inches below the soil surface. This soil is poorly drained, with a seasonal high water table from 6 to 18 inches below the surface from November to April. The area is well suited to establishment of wetland and shallow water plant and wildlife species. Severe limitations to road and building construction (wetness and frost action) exist in these areas. Filled areas should have properly designed subsurface drainage to favor good drainage throughout the year.

The area labeled LoA and LoB represents soil made up of silt loam surface horizons over compact gravelly loam substratum. The compact layer begins at about 26 inches below the soil surface. This soil is moderately well drained, having a seasonal high water table from 18 to 24 inches below the surface from November to April. The soil is well suited to grass establishment and open-land wildlife habitat. This soil is poorly suited (wetness, severe frost action, slow permeability) to all building and road construction. Wet seep areas will occur in areas where excavation cuts are made. Cut banks are subject to cave-in during wet seasons.

The Wethersfield soil area (WkB) consists of loam surface horizons over a gravelly loam fragipan at depths ranging from 20 to 36 inches. This soil is well drained and suited to establishment of upland plants and wildlife habitat and to buildings with basements. Moderate frost action and high erosion hazard limit extensive excavation and road building in this area. Wet seep areas may develop in cut-banks which may be subject to slides and cave-ins during wet seasons.

FERTILITY: The native fertility of all soils on the site is directly connected to the degree of acidity (pH) of the soils. The existing pH of all the soils on the site is moderately acid (pH 5.6 - 6.0) to very strongly acid (pH 4.5 - 5.0). This prevailing acid soil condition decreases available plant nutrients. Native species are limited to those tolerating low pH and low fertility conditions. A management system which includes adding ground limestone and soluble fertilizer to the soil will increase the growth rate and diversity of favored species.

EROSION HAZARD: Erosion hazard in the area labeled WkB (Wethersfield) is high. Extensive erosion and sediment control precautions should be used when soil in this area is exposed to weather.

Erosion hazard in the Ludlow (LoA, LoB) areas is slight to moderate depending on slope. Less extensive erosion and sediment control measures will be necessary in these areas, depending on site specific development plans.

Erosion hazard in areas BgA (Biddeford) and WrA (Wilbraham) is slight, primarily because of the relative flatness of these areas. However, when these soils are left open to concentrated stormwater runoff during periods of excavation (e.g. pond building), they can be easily eroded. Also, as runoff waters decelerate or stand in these areas, deposition of sediment in these areas may occur. Surface and subsurface soil textures in BgA and WrA areas are medium (silt loam) to fine (silty clay).

D. Fish and Wildlife

No existing suitable habitat for game fish was observed on the site. Two small areas of standing water were frozen on the day of the ERT's field inspection. These small areas may provide habitat for small fish and amphibian species during wet seasons.

Wildlife species observed were limited to indigenous overwintering songbirds (chickadees, tufted titmice, juncos, etc.) and rodents (muskrats, squirrels, field mice, etc.). The intensive use of this area diminishes the potential of this land for supporting a diverse wildlife population.

E. Vegetation

Mixed perennial turf grass species have been planted in lawn and recreation field areas. In the area of very poorly drained soil (BgA), perennial tussock grass, rush and sedge species dominate where water stands for long periods. Woody shrubs, sapling tree species, and bramble species (e.g. multiflora rose, wild raspberry) have invaded the drier sites within the same area. In areas of shrub and tree growth, swamp dogwood (Cornus amomum), grey dogwood (Cornus racemosa), red maple (Acer rubrum), silver maple (Acer saccharinum) and black willow (Salix nigra) are present. The dominant vegetation species, except in disturbed and filled areas, reflect the prevailing very poorly drained, poorly drained and moderately well drained soil drainage classes on the site.

The area of widest plant and animal diversity on the site is in the eastern section, beyond the improved pool area eastward to the property line. This area is probably the best on the site for development of a small nature study area if one is desired. Low-impact management techniques may be used to favor selected species of plants and animals.

During the January 14, 1981 ERT field inspection, no rare or endangered species of plant or animal, or critical habitat for them, was identified. A field biologist should be consulted for inspection during active growing seasons (April to November) if questions arise.

F. Water Resources

There are no outstanding natural surface-water or groundwater resources in Elm Ridge Park. Swampy conditions are present in a basin at the north-western corner of the park. Plans for the site call for stripping and grading the basin in order to provide an ice skating facility. The regraded basin would double as a stormwater detention area and theoretically would be adequate for a 100-year storm.

Flashboards will be installed in the pond's outlet structure in early October to store fall runoff in the pond. When water surface level reaches the planned elevation, the depth of water will be 4.2 feet at the north outlet; water depth will decrease according to planned bottom elevations to 1.7 feet at the southeast corner of the pond.

Since there is no perennial stream recharge to favor fish and aquatic wildlife habitat, the pond will be drained in mid-May. Draining the pond will minimize nuisance insect and weed growth which occurs in stagnant water conditions and will reduce the public safety hazard of open water. Runoff from the + 71.2 acre watershed above the pond will flow through a planned waterway to the proposed 36 inch reinforced concrete pipe storm sewer.

A shallow wetland also exists in the northeastern section of the property. The present swimming pool was constructed in fill that was placed at least partly within the wetland. The poor groundwater drainage and the resultant freeze-thaw cycles have caused cracking and foundation movement in and around the pool. Just south of the pool, a square, shallow excavation below the water table was previously used for ice skating. This excavation will be filled to accommodate a new little league baseball field. Drainage channels at the southern and eastern periphery of the field will carry surface runoff toward the northeastern wetland.

Because the principal type of overburden on the site is till, the groundwater resources are not especially suitable for public water supplies. The till itself would be an inadequate aquifer since the transmission of groundwater through it is very slow and would allow at best a very low sustained yield (probably less than 3 gallons per minute for a standard well diameter of 36 inches or less). The underlying bedrock might provide a better yield, but it is unlikely that a well tapping the rock would produce more than 30 gallons per minute. In contrast, a well tapping a thick section of saturated, coarse-grained stratified drift may yield much more than 100 gpm. In general, then, the use of the park will not affect the development of any high-potential aquifers.

IV. ENVIRONMENTAL IMPACT

The proposed recreational development involves no major commitments of land or water resources. Stripping the wetland in the northwestern section of the park will require the removal of only the thin, organic-rich "skin" of the overburden and perhaps a foot or two of till.

Slightly more surface runoff will result from the creation of the desired recreational facilities. The redefined basin (i.e. the new skating area) in the northwest section of the site will have a 100-year storm retention capacity, so that no significant problems should occur in the residentially developed area north of (downstream from) the skating pond. In the eastern section of the park, a portion of the wetland will be filled to allow the creation of a new little league baseball diamond. To the extent that wetland storage space is diminished and the runoff paths are improved by channeling, a slight increase in peak flow rates from the swamp to the stream course north of Elm Street may be expected. However, because the area of fill will be small relative to the overall size of the wetland and since the fill will be restricted to what is essentially the wetland margin, the flow increases should be insignificant.

Because the soils on this site are erodible, provisions should be made for erosion and sediment control prior to land disturbance. Technical assistance and review of erosion and sediment control measures, pond design, and stormwater management is available from the Hartford County Soil and Water Conservation District.

The proposed development will provide additional recreational activities to the townspeople of Rocky Hill and the surrounding area. The overcrowding of existing baseball facilities will be ameliorated and the introduction of an ice skating facility will provide a new dimension in winter outdoor activities available within the town.

Due to the location of the park along Route 160, additional traffic generated by the new facilities should be easily absorbed by the current road system. The existing parking space within the park is expected to be adequate for these two new facilities due to the seasonal nature of the peak usage (i.e. the facilities would be utilized at different times of the year).

The current state of terrain within the park, as left by the National Guard in the Spring of 1980, is undesirable at best. Partially filled wetlands and mounds of stripped organic materials have created an eyesore in the highly used park. The completion of construction can only improve the aesthetic quality of the park.

Due to the present activities currently happening in Elm Ridge Park, the new facilities will cause no significant increases in noise levels or energy consumption.

To conclude, the proposed project will enrich the recreational resources of the Park, enhance the aesthetics of the area, and not result in any significant adverse environmental impacts. Careful engineering in pond design and drainage plans, together with sound erosion and sediment controls, will help ensure a successful project.

V. CONSULTATION AND COORDINATION

The proposed project is consistent with the Town of Rocky Hill Plan of Development, which was proposed and adopted in 1972. The proposed development at Elm Ridge Park was the subject of a highly publicized public hearing on September 10, 1980. Only positive statements surfaced at the hearing.

The following town agencies have given their approval and necessary permits to the plan:

Town Council - August, 1980 - Resolution

Inland Wetlands/Open Space Commission - February 11, 1980 - Permit

Planning & Zoning Commission - September 8, 1980 - Resolution

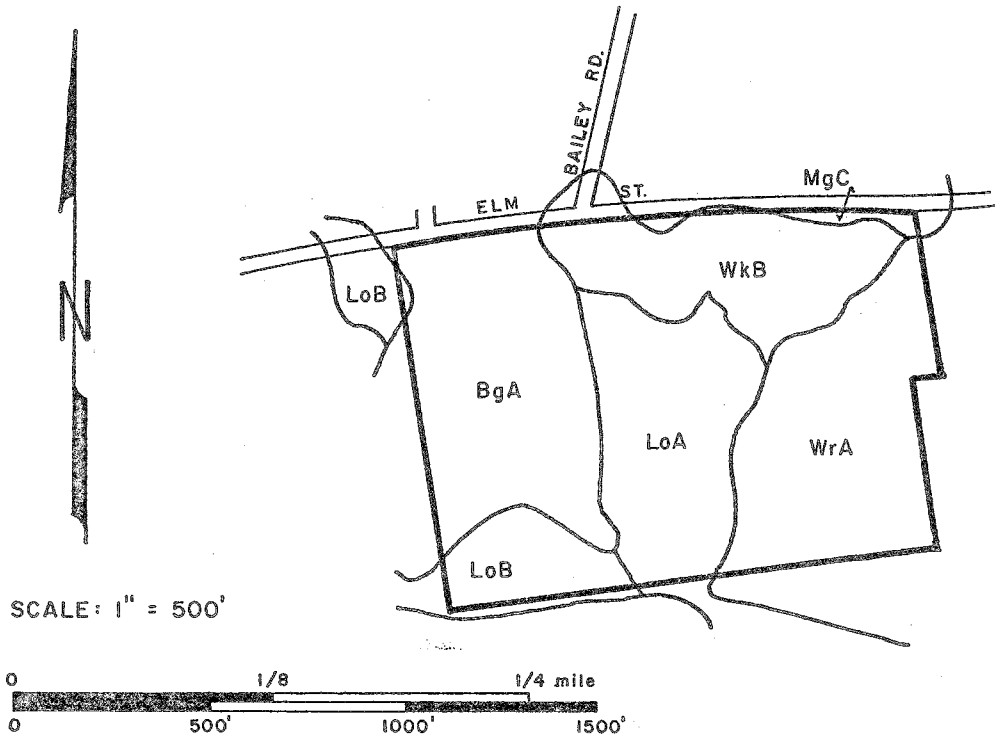
Park & Recreation Advisory Board - September 1980 - Resolution

The local papers have followed the grant procedure, the National Guard work, and the proposed park plan with a series of articles. No objections to the proposed plan have been raised from residents abutting the property nor from any town residents. The most affected abutting landowner hopes the project will be completed as it will help improve the drainage of his property.

* * * * *

APPENDIX

SOILS MAP



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

• SOIL BOUNDARY LINES DERIVED FROM SMALLER SCALE MAP (1" = 1667') AND SHOULD NOT BE VIEWED AS PRECISE BOUNDARIES BUT RATHER AS A GUIDE TO THE DISTRIBUTION OF SOILS ON THE PROPERTY.

SOILS LIMITATION CHART - ELM RIDGE PARK

MAP SYMBOL	SOIL NAME	ROADS & PARKING LOTS	LANDSCAPING	PICNIC AREA	PLAYGROUNDS
BgA	Biddeford silt loam, reddish variant, 0-3% slopes	Severe; Wetness, Low strength	Severe; Wetness, Excess humus	Severe; Wetness	Severe; Wetness
LoB	Ludlow loam, 3-8% slopes	Severe; Frost action	Slight	Slight	Moderate-Severe; Percs slowly, Slope
LoA	Ludlow loam, 0-3% slopes	Severe; Frost action	Slight	Slight	Moderate-Severe; Percs slowly, Slope
WrA	Wilbraham silt loam, 0-3% slopes	Severe; Wetness, Frost action	Severe; Wetness	Severe; Wetness	Severe; Wetness
WkB	Wethersfield loam, 3-8% slopes	Moderate; Frost action	Moderate; Small stones	Slight	Moderate-Severe; Slope, Percs slowly
MgC	Manchester gravelly sandy loam, 3-15% slopes	Slight-moderate; Slope	Severe; Small stones, Droughty	Moderate; Small stones, Slope	Severe; Small stones, Slope

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.

EXPLANATION OF RATING SYSTEM:

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.