

SUNNY CREST PARK

ROCKY HILL, CONNECTICUT

DECEMBER 1988

*EASTERN CONNECTICUT
ENVIRONMENTAL
REVIEW TEAM
REPORT*

SUNNY CREST PARK
ROCKY HILL, CONNECTICUT

REVIEW DATE: NOVEMBER 7, 1988

REPORT DATE: DECEMBER 1988

*EASTERN CONNECTICUT RESOURCE CONSERVATION AND
DEVELOPMENT AREA, INC.*

*EASTERN CONNECTICUT ENVIRONMENTAL REVIEW TEAM
P.O. BOX 70, ROUTE 154
HADDAM, CONNECTICUT 06438
(203) 345-3977*

SUNNY CREST PARK
ROCKY HILL, CONNECTICUT

REVIEW DATE: NOVEMBER 7, 1988

REPORT DATE: DECEMBER 1988

***EASTERN CONNECTICUT RESOURCE CONSERVATION AND
DEVELOPMENT AREA, INC.***

***EASTERN CONNECTICUT ENVIRONMENTAL REVIEW TEAM
P.O. BOX 70, ROUTE 154
HADDAM, CONNECTICUT 06438
(203) 345-3977***

ENVIRONMENTAL REVIEW TEAM REPORT
ON

SUNNY CREST PARK
Rocky Hill, Connecticut

This report is an outgrowth of a request from the Rocky Hill Director of Parks and Recreation to the Hartford Soil and Water Conservation District (SWCD). The S&WCD referred this request to the Eastern Connecticut Resource Conservation and Development (RC&D) Area Executive Council for their consideration and approval. The request was approved and the measure reviewed by the Eastern Connecticut Environmental Review Team (ERT).

The ERT met and field checked the site on Monday, November 7, 1988. Team members participating on this review included:

Joe Hickey	Park Planner	DEP-Parks & Recreation
Kip Kolesinkas	Soil Resource Specialist	USDA-Soil Conservation Service
Elaine Sych	ERT Coordinator	Eastern CT RC&D Area
Bill Warzecha	Geologist	DEP-Natural Resources Center
Judy Wilson	Wildlife Biologist	DEP-Western District

Prior to the review day, each Team member received a summary of the proposed project, a list of the town's concerns, a location map, a topographic map, and a soils map. During the field review the Team members were given plans for the new improvements. The Team met with, and were accompanied by the Parks and Recreation Director and other town officials. Following the review, reports from each Team member were submitted to the ERT Coordinator for compilation and editing into this final report.

This report represents the Team's findings. It is not meant to compete with private consultants by providing site designs or detailed solutions to development problems. The Team does not recommend what final action should be taken on a proposed project -- all final decisions rest with the Town and landowner. 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. The results of this Team action are oriented toward the development of better environmental quality and the long-term economics of land use.

The Eastern Connecticut RC&D Executive Council hopes you will find this report of value and assistance in making your decisions on the proposed improvements and additions to Sunny Crest Park.

If you require additional information, please contact:

*Elaine A. Sych
ERT Coordinator
Eastern Connecticut RC&D Area
P.O. Box 70
Haddam, Connecticut 06438
(203)345-3977*

TABLE OF CONTENTS

1. SETTING AND LAND-USE 1
2. TOPOGRAPHY 1
Location Map 2
Topographic Map 3
3. CLIMATE 4
4. GEOLOGY 4
Geologic Map 6
Soils Map 7
5. SOIL RESOURCE 8
6. HYDROLOGY 9
7. WILDLIFE RESOURCES 10
8. RECREATION PLANNING CONCERNS 11

1. SETTING AND LAND-USE

The study area, about 1.5 acres in size, is encompassed by Sunny Crest Park in northern Rocky Hill. The Park which is 35.56 acres in size is located directly east of Stevens School. The Park is bounded by the Stevens School property and Orchard Street on the west, and the rear property line of residences along Parsonage Street on the north, Bailey Road on the east and Textbook Avenue on the south.

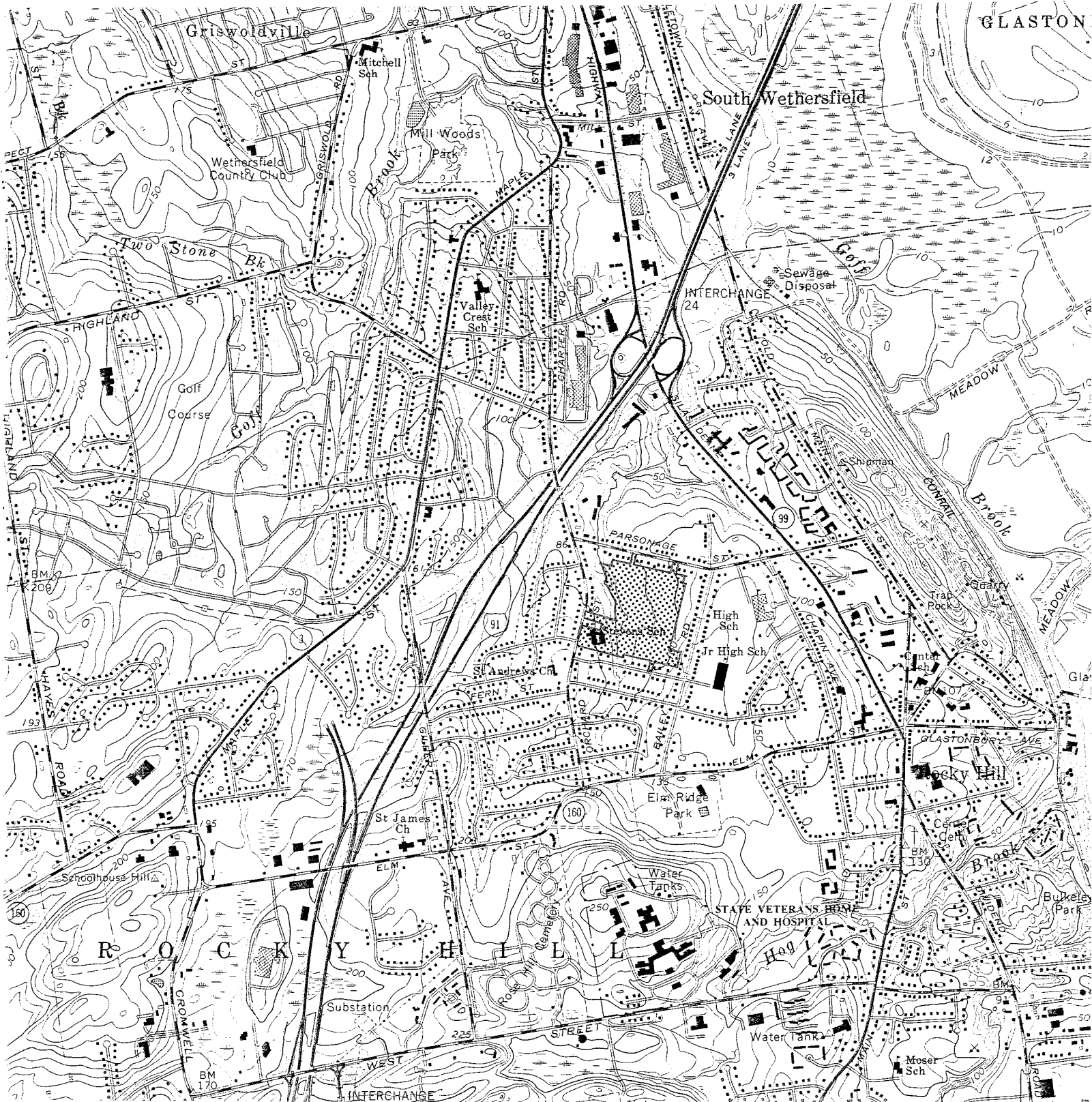
Except for a wooded, wetland area at the western limits of the site and a hedgerow along the eastern limits, the site consists of open playing fields. The area in the vicinity of the Park is characterized by high density residential land-use. A 1934 air photo, which includes the study site, revealed that the area had a strong agricultural past. Since 1934 changes in land use include a decrease in actively farmed acreage, an increase in residential density and an increase in area covered by paved roads and parking lots.

Valley Brook, a Goff Brook tributary flows in a northerly direction through the western parts of the Park. Goff Brook ultimately flows into the Connecticut River. The hydrology of Valley Brook as well as a tributary and former wetlands in the vicinity of the proposed new playing field were significantly altered about 23 years ago. This work was probably done to improve drainage conditions in the area so that the land could be used for playing fields for a full season.

2. TOPOGRAPHY

The site is located in a topographic saddle. The land surface slopes gently westward to Valley Brook. Site elevations range from about 115 above mean sea level at the southeast corner to about 80 feet above mean sea level along Valley Brook. Because of the gentle slopes that characterize the parcel cutting and filling activity should be minimal for the proposed Little League field and parking lot.

Location Map



LOCATION

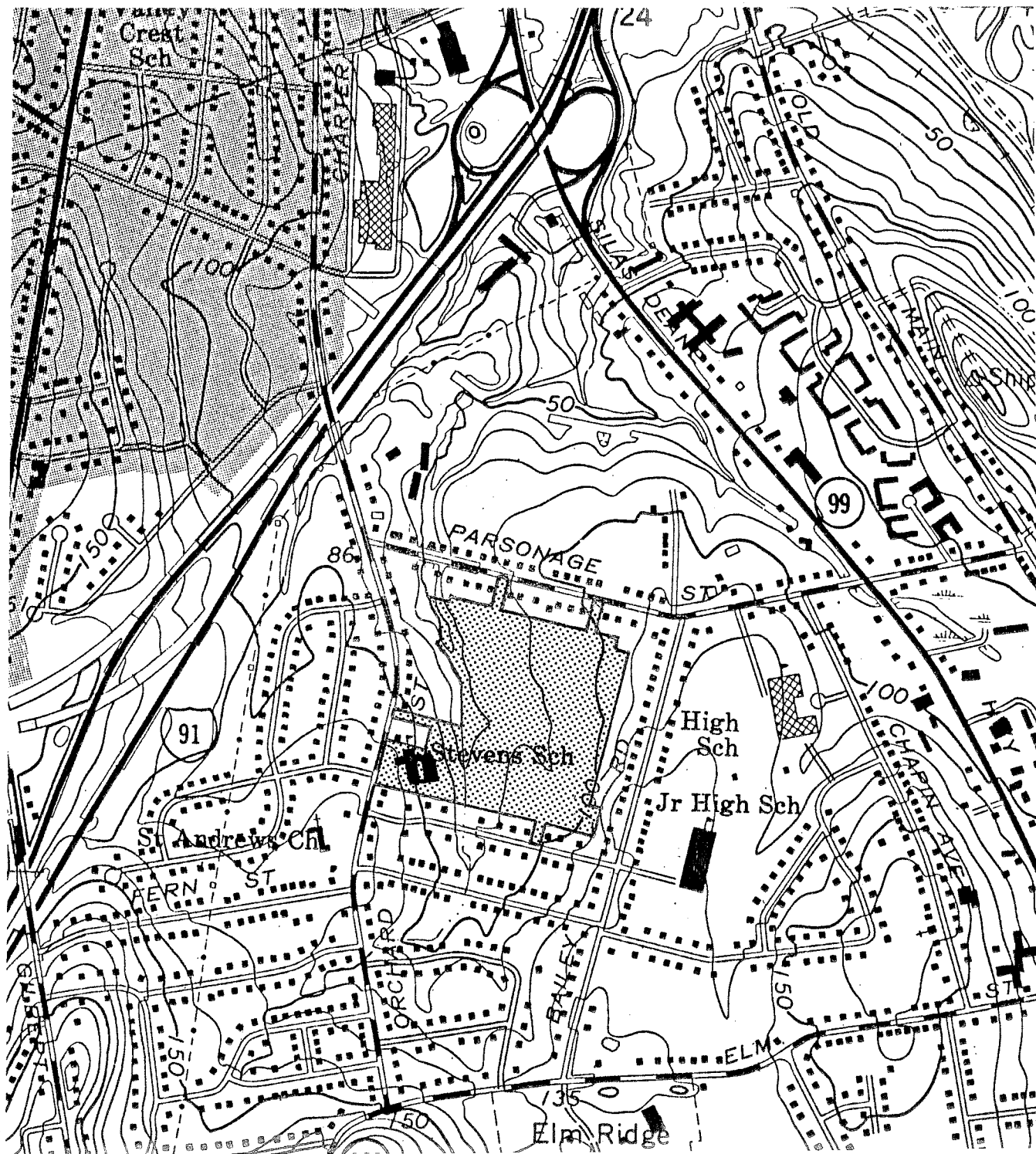


SCALE 1" = 2000'



APPROXIMATE SITE

Topographic Map



TOPOGRAPHY



SCALE 1" = 1000'



APPROXIMATE SITE

3. CLIMATE

The State of Connecticut can be divided into five climatic regimes. Rocky Hill is located in the Central Valley section of the Northeast regime. The annual mean temperature in degrees Fahrenheit is estimated to be about 50 degrees. The mean annual precipitation for Rocky Hill is about 45 inches.

4. GEOLOGY

The nearest exposure of bedrock is about 1,500 east of the Park near Rocky Hill High School. Rodgers identifies the bedrock underlying the site as the East Berlin Formation, a reddish-brown silty shale.¹ No commercial value can be ascribed to the East Berlin Formation on the site.

No subsurface data was available for Team members on the review day. Nevertheless, geologic mapping data for the quadrangle that encompasses the site suggests that the depth to bedrock ranges between 10 and 50 feet on the site. As such, it does not seem likely that the underlying bedrock will pose any problems in terms of creating an access road, parking lot and a Little League baseball diamond.^{2,3}

The Team's geologist examined air photos that included the study area, they dated back to 1934. Around 1965, the ground surface (unconsolidated materials) in the vicinity of the proposed ball field was disturbed as a result of grading, filling and drainage work. The purpose of this activity was probably to prepare the site for recreational fields. Because most of the site appears to have contained a high percentage of wetlands prior to 1965, the artificial drainage system was probably installed in the area of the proposed ball fields as well as grading and filling activity hopefully to ensure full season use. As a result of the past activity that took place on the site, most of land area in the vicinity of the proposed ball field and parking area has been altered so that it probably no longer constitutes regulated wetlands. It is understood that the town will hire a soil scientist to check the site for wetland soils prior to construction. Based on visual observations made during the field review, it appears there may be wetlands at the southeast corner of the site, primarily along the property boundaries.

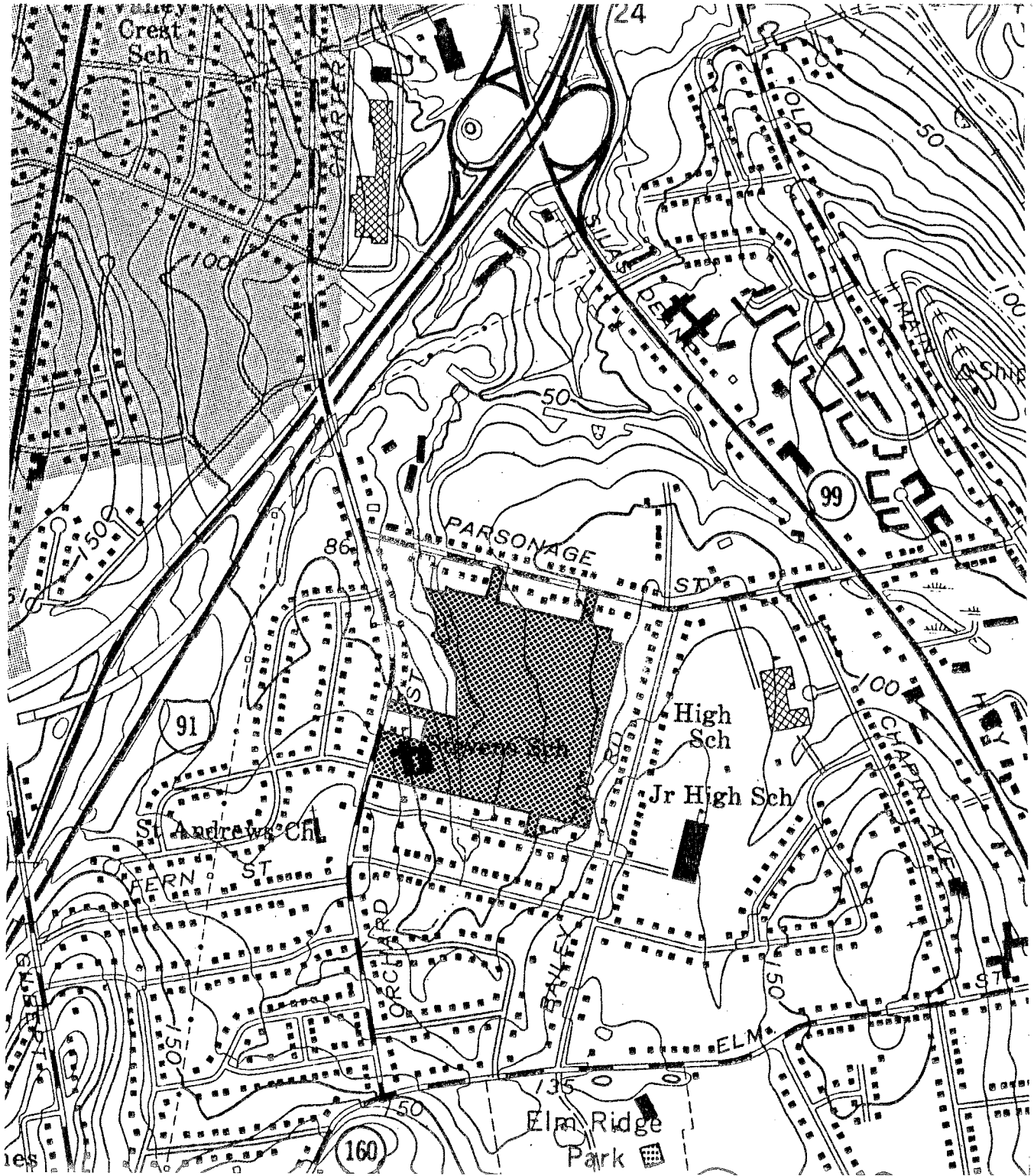
According to the "Surficial Geologic Map of the Hartford South Quadrangle" by R.E. Deane, 1954 and 1962, the unconsolidated material (overburden) covering bedrock in the site is till. Till is a non-sorted glacial deposit consisting of rock particles of widely varying size and shapes.

Based on soil borings by the Team's soil scientist in the area of the proposed ball field, the upper two feet of the soil surface is composed primarily of fill material, which was placed in the area at some point between 1965 and 1975. Below the fill material, the presence of a clay layer results in a low vertical permeability. As a result, the downward movement of water is impeded. During the wet time of year (late winter and early spring and again late fall) the more permeable material above the clay layer becomes saturated with ground water resulting in a seasonally high water table. Because of this condition, excavation activities that begin before mid-May and after mid-November can be seriously hampered by mud, surface and subsurface drainage and the potential for erosion. In order to control these potential hazards, detailed planning prior to construction start is required to prepare the site for a trouble-free activity. First, artificial drainage, which includes surface and subsurface drains for the ball field will be essential because of the seasonally high water table in the area. This will hopefully keep the ball field dry and ensure full season use. Because of the generally flat conditions that exist, the need for fill material should be minimal. (Also refer to *SOIL RESOURCES* section)

Secondly, a detailed soil and erosion control plan needs to be devised for the project. When the plan is prepared, it should address phasing of all construction activities. It must prescribe; (1) the design criteria for the access road; (2) starting and completion date for excavation and grading, erosion and siltation control for the construction site and the fill slopes; (3) final stabilization schedule and techniques; (4) landscaping specification and (5) post project care. The text should also state how the plan will be implemented and who will monitor the implementation. The outlets for all drainage systems must be properly protected with energy dissipators these will help to minimize the chance for erosion problems.

Assuming a fault-free installation of the ball field and parking lot, the final product will have a visual impact on several homes, particularly those on Textbrook Avenue. However, it seems likely that the impact should be minimal and not much different than existing conditions.

Geologic Map



GEOLOGY

SCALE 1" = 1000'

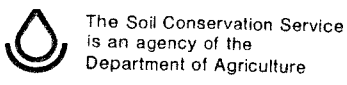
 TILL*



*Entire site underlain by East Berlin Formation

Soils Map

SCALE 1" = 1667'



The Soil Conservation Service
is an agency of the
Department of Agriculture

HARTFORD COUNTY USDA-SCS
MIDWAY OFFICE PARK
1101 KENNEDY ROAD, ROOM 105B
WINDSOR, CT 06095

5. SOIL RESOURCE

The original soils in the vicinity of the proposed playing field and parking area consists of dominantly poorly drained soils formed in silty and clayey lacustrine deposits. Small areas of very poorly drained soils and moderately well drained soils were included in mapping. A watercourse was also present in the vicinity of the proposed parking area. The land use appeared to be hay and pasture land.

In as early as the 1960's drainage modifications were being made that would affect wetlands on the parcel. Air photos from April 1965 show that the watercourses had been straightened or partially straightened and that a subsurface drain was being installed in the area of the proposed current activities ball field and parking area. By 1980 the present site modifications had been done which included cutting, filling, and grading of wetland and nonwetland soils. Extensive surface and subsurface drainage systems had been installed to create playable and maintainable fields.

Currently the proposed ball field and parking area is in the same area as the present soccer field. Although areas of natural soil may be present, the site is dominated by soils disturbed by upgrade cutting, and filling. The soils appear to be moderately well drained with a seasonal highwater table of 1.5 to 2.5 ft. . Soil borings in the soccer field indicated about 2 to 3 feet of loamy to sandy material over the dense silts and clays, creating a perched water table.

There are few areas of remaining wetland soils in the project area. A few small areas of remnant natural wetland soils exist (near the right-of-way and near the property boundary to the east), and the disturbed soils in the shaped swale on the eastern side may also qualify as poorly drained wetland soils. A watercourse and some associated wetland soils exist to the north of the project.

From the proposed plans as presented, it does not appear that activity will take place in any of the wetland areas, and that with proper erosion and sediment controls activities should not impact the wetlands/watercourse to the north.

The perched seasonal highwater table and silty and clayey textures of the soil subsoil and substratum are limitations for the development of playing fields and parking areas. Surface drainage and the grading of areas to prevent the ponding of water are essential to the development of full season usage of these facilities. The following are some additional comments and recommendations:

- 1) Maintain and improve all existing surface drainage systems to prevent ponding of water.
- 2) Grade the ball field and parking area to promote the runoff of surface water.
- 3) Maintain and improve existing catchbasin inlets.
- 4) Locate and improve the outlets of the existing subsurface drainage system.
- 5) Although surface drainage may be adequate for the playing field, the installation of a well planned subsurface drainage system will assure good playing conditions throughout the season. It will be important to consider the extent and functions of the existing drainage system in planning the layout.
- 6) An erosion and sediment control plan should be developed that will help stabilize any disturbed areas and prevent sediment from reaching the watercourse. Construction should be timed to take advantage of prime spring or fall seeding dates.
- 7) Plant materials selected for any buffer areas should be tolerant of the disturbed soils, shallow rooting depth, and the seasonal high water table.

6. HYDROLOGY

The entire site lies within the drainage area of Valley Brook. Valley Brook ultimately flows into Goff Brook, a Connecticut River tributary.

The surface and ground waters on the site generally flow downslope toward local discharge areas such as intermittent stream channels, drainageways, wetlands and/or artificial drainage system. Once water reaches these areas it is then routed to Valley Brook.

Based on visual observations made during the field review, it appears that a culvert may need to be placed beneath the access road for the proposed parking lot near its intersection with the southern property line. A west flowing drainageway flows along the southern property to a catch basin near right field for the existing Little League field. The water is then routed to Valley Brook. The Town's public works department should check the area around the catch basin as it appears to be in need of maintenance so that it

functions properly.

Groundwater in the area is classified by the DEP as GA, which means that it is suitable for private drinking water supplies without treatment. If there is a need for a water supply at the new facilities now or in the future, a municipal water supply (Metropolitan District Commission of Hartford County) is available to the site. The principal aquifer in the area of the site is the underlying sedimentary bedrock (East Berlin Formation). Drilled wells that tap the sedimentary bedrock are generally capable of yielding 2-10 gallons per minute. However, some wells have been known to produce yields in excess of 50 gallons per minute.

A Floodway and Flood Boundary Map was prepared for the Town of Rocky Hill in February 1980. According to the map, the site does not lie within an area which is subject to flooding. However, it is to be expected that water would pond in topographical depressions within the site following periods of heavy precipitation, especially in view of the slowly-permeable clay layer that exists in the vicinity of the new ballfield.

7. WILDLIFE RESOURCES

Area Description and Wildlife Habitat

One and half acres of Sunny Crest Park is being considered for use to build an access road, a plus or minus 40 car capacity parking lot, and a Little League baseball field. There currently exists in this section of the park a baseball field and a soccer field. Sunny Crest Park is 35.56 acres in total area. The remaining area of the park contains ball fields, a basketball court, a pavilion, parks garage and parking area.

Reportedly past disturbances by man have changed the area considerably. A major part of the area is maintained in short grass to facilitate recreational use. A brook runs through the approximate center of the park and there is a small red maple stand in this area associated with the wetlands in this area. The brook is channelized at the western boundary of the property. The entire park is surrounded by roads, houses and driveways.

The major cover type within the 1.5 acres slated for change is short grass. There is a shrub perimeter on the southern boundary towards Textbook Avenue. While this area does provide habitat for some species, the lack of habitat diversity limits wildlife use and variety in this area. Grass, which is kept short, provides little cover or food for species of wildlife such as birds and small mammals which utilize grassy field habitat. The

shrub edge is probably used by some species of wildlife, such as birds.

Impacts and Recommendations

Although the area does provide habitat for some species, the diversity of species found there would expectedly be limited. The area in question is small and lacks habitat diversity and the value of the grassy cover type is greatly diminished because it is maintained in a very short state. The area is probably prone to disturbance due to the proximity of houses and the recreational area. The movement of species into and out of the area is probably restricted due to the densely developed surroundings.

As planned, it appears that the proposed changes would have minimal impact on the area because they would represent limited changes in habitat. Moving the soccer field would represent no change to the short grass habitat except that people might frequent that particular area more. Creation of an access road and parking lot would destroy some habitat, but the loss appears to be minimal.

If possible as much of the shrub perimeter should be left intact in order to continue to provide for the species that might be using it. Also, consideration should be given to letting the grass grow up in areas where a maintained state is not necessary and mow every year or every other year in the late fall. This would help to provide some cover, and perhaps food to species tolerant to the type of conditions present.

8. RECREATION PLANNING CONCERNS

This is a simple, straightforward proposal to convert a section of the park presently used as a soccer field to a baseball field. The site in question is level as well as relatively high and dry and therefore very suitable as a ball field location. Furthermore, being bordered by swales to the west and east it should have relatively good drainage (see **GEOLOGY** and **SOIL RESOURCE** sections for comments on drainage) and not suffer use limitation at the beginning of the baseball season in the spring.

The proposed access is off Textbook Avenue which is logical. Parking is proposed to the east of the field. Because of the great depths of the lots fronting on Bailey Road and the planned maintenance of the existing vegetation along this boundary, visual impact on Bailey Road residents should be minimal. If additional planting is included in the project, there will be even less impact.

The main issue is to reassure Textbook Avenue residents that they will not suffer any real impact. Already an existing fence protects them from trespass. In addition, the planting of buffer vegetation will provide a visual barrier.

In summary, this seems to be an appropriate project to meet a growing recreational need in the town of Rocky Hill.

1"Bedrock Geologic Map of Connecticut", by Rodgers, 1985.

2"Surficial Geologic Map of the Hartford South Quadrangle, Connecticut", by R.E. Deane in 1954 and 1962, QR-20, Connecticut Geologic and Natural History Survey.

3"Contour Map of the Bedrock Surface, Hartford South Quadrangle, Connecticut", by Robert B. Ryder and Elinor H. Handman, 1973, U>S> Geological Survey, Miscellaneous Field Studies Map MF-487A.

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, soil specialists, engineers and planners. The ERT operates with state funding under the supervision of the Eastern Connecticut Resource Conservation and Development (RC&D) Area --- an 86 town region.

The services of the Team are 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, landfills, commercial and industrial developments, sand and gravel excavations, 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 official 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 and the ERT Coordinator. A request form should be completely filled out and should include the required materials. 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 and request forms regarding the Environmental Review Team please contact the ERT Coordinator: 203-345-3977, Eastern Connecticut RC&D Area, P.O. Box 70, Haddam, Connecticut 06438.