

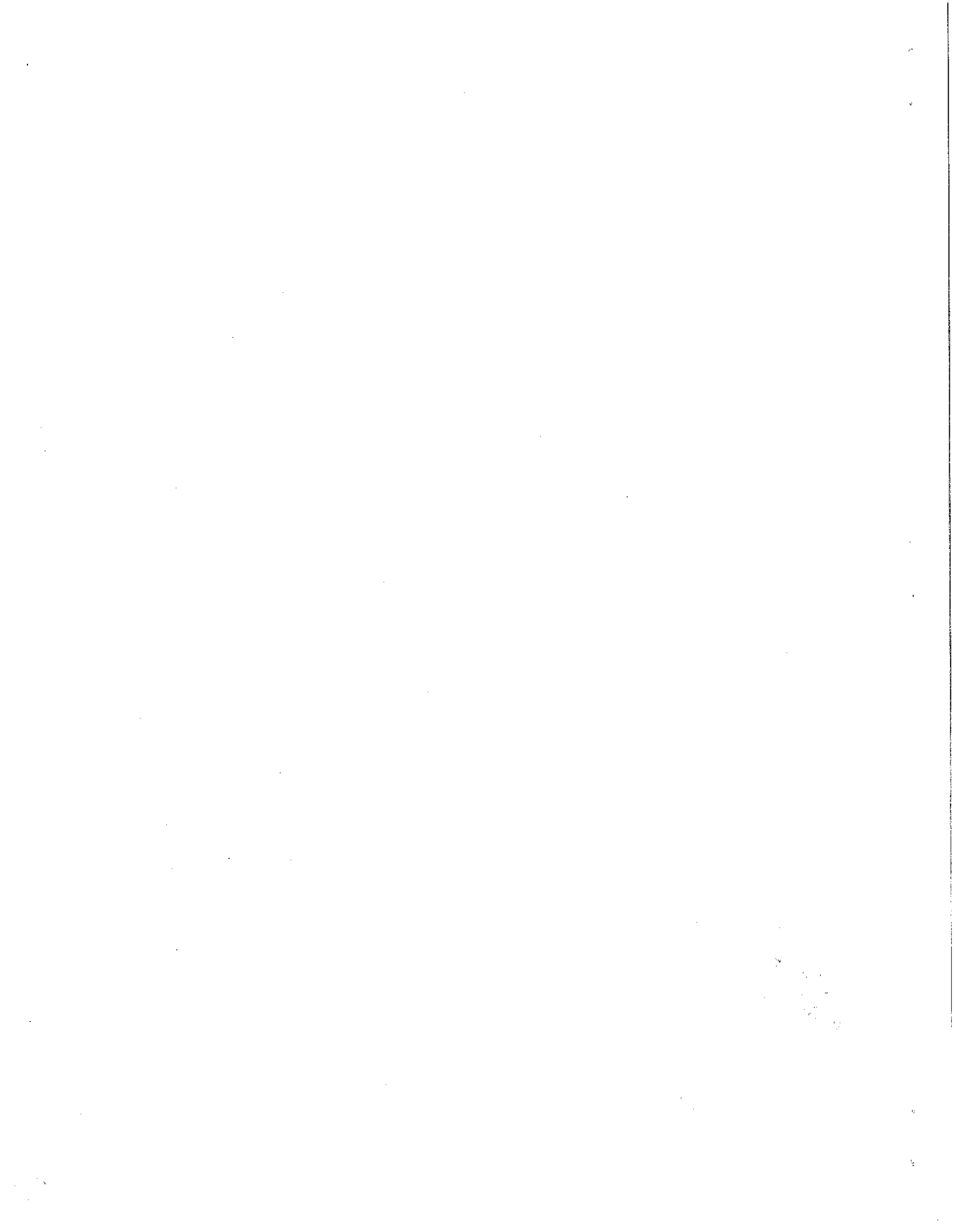
KING'S MARK
ENVIRONMENTAL REVIEW TEAM REPORT
on the

GROVE STREET PROPERTY ACQUISITION
SHELTON, CONNECTICUT
DECEMBER 1975

The preparation of this report was financially aided through a grant from the Department of Housing and Urban Development as authorized by the Community Development Block Grant of 1968, as amended.

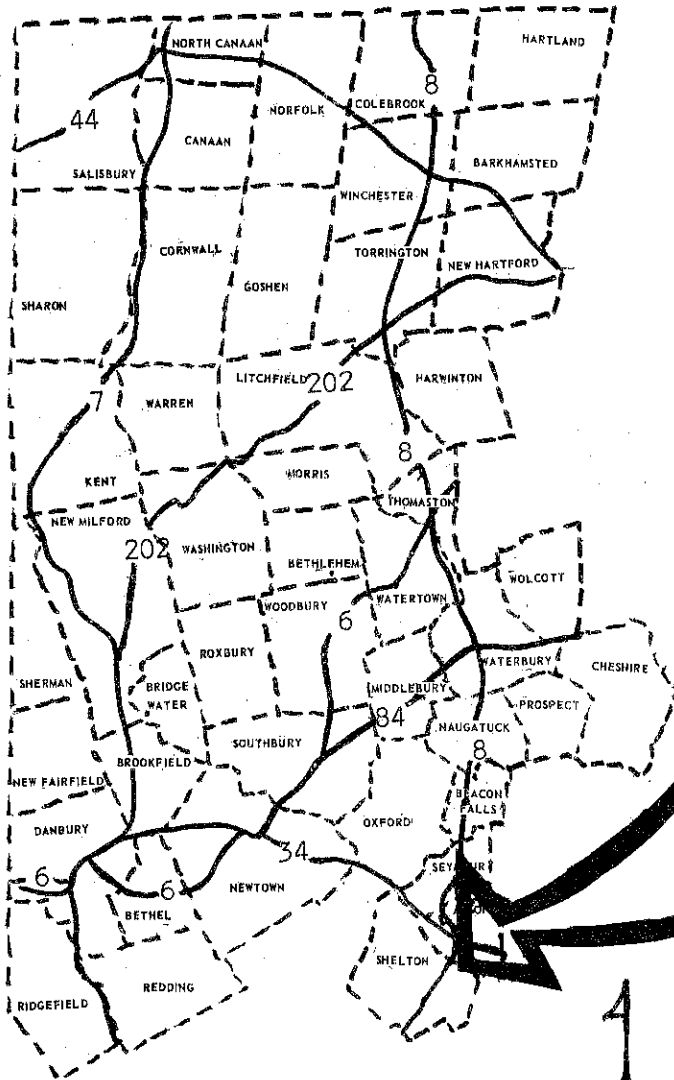
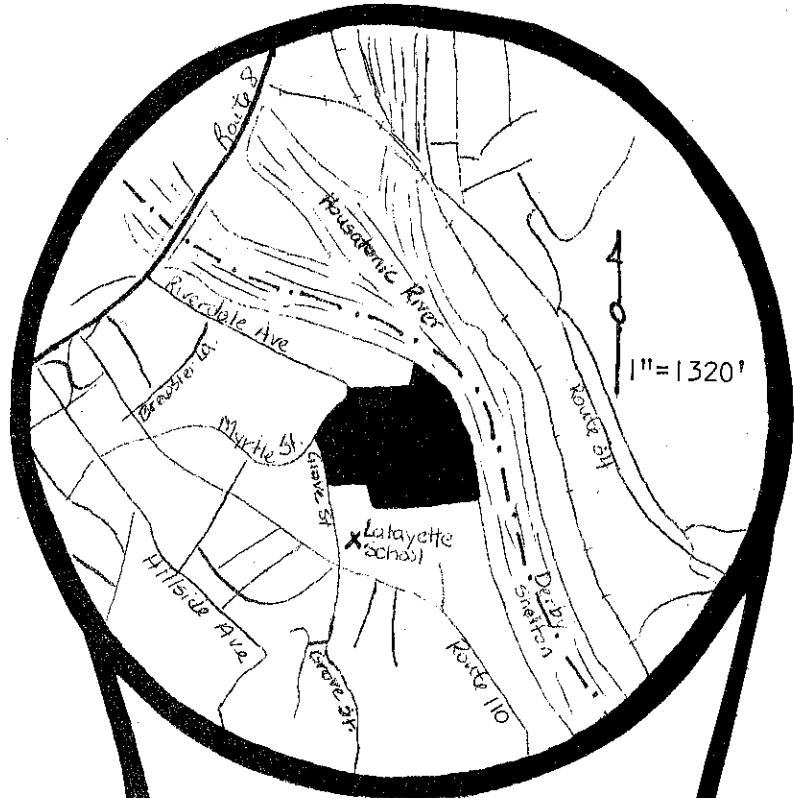
King's Mark Resource Conservation
and Development Project (RC&D)
Environmental Review Team
P. O. Box 30
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**ASSISTED BY: U.S. DEPARTMENT OF AGRICULTURE,
SOIL CONSERVATION SERVICE AND COOPERATING AGENCIES**

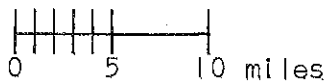


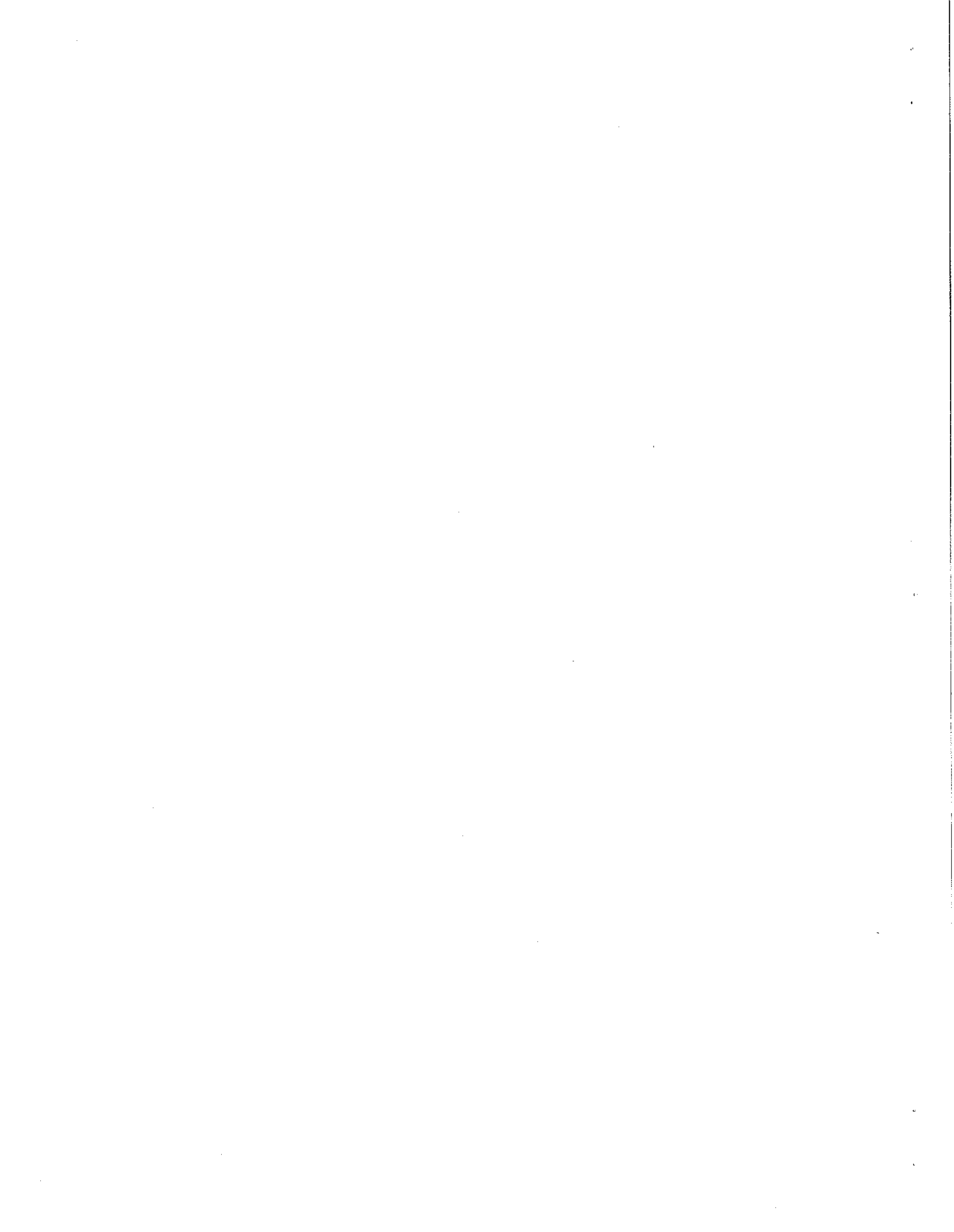
LOCATION OF STUDY SITE

GROVE STREET PROPERTY ACQUISITION
SHELTON, CONNECTICUT



King's Mark
Resource Conservation
and Development Project





ENVIRONMENTAL REVIEW TEAM REPORT
ON THE
GROVE STREET PROPERTY ACQUISITION
SHELTON, CONNECTICUT

The decision to undertake this review was approved by the King's Mark Resource Conservation and Development Project (RC&D) Executive Committee following a request from the Mayor's Office, City of Shelton. The City requested the Review Team's assistance in preparing the needed "Environmental Assessment" for the proposed land acquisition project. (Environmental Assessments are required in project applications for Federal assistance from the Land and Water Conservation Fund of the Bureau of Outdoor Recreation.)

The Environmental Review Team (ERT) draws together a range of experts who, based upon existing available data and field investigation, formulate an analysis of a proposed project.

The Team met and reviewed the site on October 31, 1975. Team members were provided reproductions of a soil survey map, soils limitations chart, location and topography map of the area. The soils of the site were mapped by a soil scientist of the USDA Soil Conservation Service prior to the review. Also, for this review, the Team was given a copy of the standard "Environmental Assessment Outline" used by the U. S. Department of the Interior, Bureau of Outdoor Recreation. (The outline is intended to give applicants an understanding of the various aspects of a project which should be addressed in an Environmental Assessment.) Each team member was assigned specific questions to answer on the outline. Following the review, individual team member reports were sent to the Team Coordinator for review and summarization.

The members of the Environmental Review Team consisted of the following: Timothy Dodge, Biologist, U. S. Soil Conservation Service (SCS); Howard Gates, Forester, State of Connecticut, Department of Environmental Protection (DEP); Robert Miller, Geologist, Natural Resource Center, DEP; Kevin O'Mara, Regional Planner, Valley Regional Planning Agency; Edward Rizzotto, Park and Recreation Specialist, DEP; David Thompson, District Conservationist, SCS; Barrie Wolf, Soil Scientist, SCS; Carol Youell, Team Coordinator, King's Mark RC&D Project.

This report is not meant to compete with private consultants by supplying site designs or detailed solutions to development problems. The report is designed to:

1. aid in the preparation of the Environmental Assessment.
2. identify the existing resource base and evaluate its significance to the proposed use.
3. suggest considerations that should be of concern to the City of Shelton in implementing the proposed project.

It must be noted that this report is not, in itself, a complete Environmental Assessment. Certain information critical to the formation of a complete assessment is lacking. For the most part, the topics covered in the report relate mainly to the natural environment. The actual assessment also requires one to take into account the social and economic environment in which the

project takes place. Therefore, completion of the Assessment will require refinement in a number of areas. For example, sections II and V, contain only a partial discussion of the environmental impacts of the proposed project. More information is needed, such as the socio-economic conditions in the area, and the expected intensity of recreational use; before one can adequately determine the impacts of the project.

The results of this Team Action are to encourage land use decisions that recognize both the long-term economics of land use and the need to maintain environmental quality.

The King's Mark RC&D Executive 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: Carol Youell (868-7342), Environmental Review Team Coordinator, King's Mark RC&D Project, P. O. Box 30, Warren, Connecticut, 06754.

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INTRODUCTION

The City of Shelton is considering the purchase of an 11-acre tract for recreation and open space purposes. The land is owned by the United Illuminating Company. It is located on Shelton's southeastern border adjacent to the west bank of the Housatonic River, east of Route 8, along Grove and Myrtle Street. From an environmental standpoint, it is the beginning of a wooded "corridor" that continues from the site southward approximately one mile. This border provides a travelway to wildlife and access to the river's edge. In addition, it provides esthetic values and may protect the river from land derived pollutants such as sediment. The site is the northern most projection of this "corridor" to the town's business district.

The City of Shelton owns a piece of property adjacent to the Grove Street Property, namely the Lafayette School and Field Site. This property contains playfields and courts, and the City Parks and Recreation office. The addition of the Grove Street Property combined with the Lafayette Site would make a sizeable recreation complex for the residents of Shelton. The site is located in an area of Shelton which lacks certain facilities for both the younger and older residents.

The Grove Street Property can be divided into two distinct land areas: a flat, open, upland area, and a steeply sloping, vegetated, river bank area.

Emphasis in the potential development of the site is oriented toward both active and passive forms of recreation for people of all ages. Active

recreation will be mainly restricted to the upland area, and proposals include: tennis courts, a small playfield, horseshoe pits, bocci court(s), and a playground area containing various playground equipment. Passive recreation will occur along the river front area and proposals include: picnic tables, benches, walking paths, and perhaps limited fishing. (See Sketch Site Plan in the appendix.)

The report format will be similar to that found in the Environmental Assessment Outline. Recommendations or comments made within this report are presented for consideration by all parties in the preparation and review of plans, and should not be viewed as mandatory or regulatory in nature.

* * * * *

EVALUATION

I. DESCRIPTION OF THE ENVIRONMENT

Topography. As seen on the topography map in the appendix, the tract can be divided into two distinct land areas: a flat upland area, and a steep slope river bank area. The steep slopes form a natural barrier between the proposed active recreation and passive recreation areas. The slope to the river breaks from that of 30% slope to approximately 5% slope just before coming into contact with the river. This slope break is probably indicative of the small flood prone area.

Bedrock and Surficial Geology. The entire site is underlain by the Southington Mountain Schist. The texture ranges from medium to fine grained, silver-gray to medium-gray. The composition is that of a muscovite schist. Structurally, the formation lies on the northwest side of Wepawaug Syncline which plunges north-north eastward. The surface outcrops show extensive weathering and indicate the relative stability of the composition minerals. To date, the bedrock has had no major economic importance.

The surficial deposits are composed of a thin layer of ice contact stratified drift on the flat upper area and till on the steep sloped area extending to the river. The ice contact material is composed of sand, gravel, silt and clay, in many places poorly sorted, with abrupt changes in grain size. The material is deposited in close relation to melting glacier ice with many deposits grading out into well sorted sands and gravels. The till deposits are those formed by the action of the moving glacial ice and are commonly compact, nonsorted sediments ranging in grain size from clay to large boulders.

It should be noted that surficial deposits are a thin covering over the bedrock material with thicknesses ranging from 0-20 feet.

The proposed plan of a recreational area for the site appears to be one which will not be restricted by geology.

Soils. A detailed soils map of the property is given in the appendix at a scale of 1" = 100'. Due to the original scale at which the soils are mapped (1" = 1320') the lines shown on the soils map should not be viewed as precise boundaries, but rather as guidelines to the distribution of soil types on the property.

Five soil types have been identified on the property. The upland area is primarily composed of portions of soil types 17MC, M2, and 69B. These total roughly one-half of the acreage of the property. The remaining types, 15 and 17MD comprise the majority of the steeply sloping river bank area. The table in the appendix identifies the five soil types and their characteristics.

The nature of soils relative to fertility, erosion hazard, management response, etc., is described as capability. Capability classes range from I to VIII with the higher numerals indicating greater restrictions in the scope of potential uses. The Hollis-Rock Out-Crop Complex (17MC-17MD) are in capability class VII and have very severe limitations for potential uses because they are sloping shallow to bedrock soils having frequent ledge outcroppings. Although somewhat droughty, these soils will support good stands of timber, wildlife and recreation developments. The Hinckley and Windsor Soils (15) are in capability class VI and have severe limitations due to their steepness and droughtiness. Their potential use is very limited. Erosion hazard is high due to excessively steep slopes and rapid runoff. These soils are best suited for woodland, wildlife, and passive recreation. The Agawam fine sandy loam (69B) is in capability class II and has only minor limitations in the scope of potential uses. It is a good agricultural soil, but again, erosion control is a primary concern.

Water Resources. Due to the shallowness of the bedrock, there is little, if any, possible ground water potential for this site. The only area where ground water might be in question would be on the flat upper slope where sufficient depth of ice contact surficial material may allow for a shallow ground water table. There are no known aquifers present. The flood prone area on the site is very limited due to the steepness and elevation of the slopes.

The primary water resource is the Housatonic River which flows southward along the northeast and east property boundary. Immediately north of the property the Naugatuck River joins the Housatonic. Although the river system in this general area suffers from industrial pollution, water quality continues to improve.

In terms of recreation, even though water quality continues to improve, potential for significant swimming usage will probably never exist due to generally unsuitable (overly abrupt) streambank-streambed profiles and current turbulence strength in some areas. Boating already exists on the river but expansion of boater access is unlikely on the site due to the fairly steep topographical demarcation between inland and shore sections, and the existence of nearby alternative access points. Potential does exist for some use by watercraft-borne visitors.

Vegetation. The vegetation on this tract is on several soil types. The slope factor has more effect on the vegetation than any other single factor. The relatively flat upland portion of the site is largely open with vegetation consisting of low ground cover including weeds and wild grasses.

Grasses are poorly established, with weedy growth dominating. The perimeter of the open field area is in woody growth. Approximately 60% of the site is wooded containing mixed deciduous hardwoods and lesser amounts of shrubs and vines. The slope varies from 3% to 35% within the woody vegetation area.

Species composition consists mainly of substandard Northern Red Oak (*Quercus rubra*), Black Birch (*Betula lenta*) and scattered White Oak (*Quercus alba*). These trees are growing on very shallow soils which have ledge protruding extensively. The reproduction overall is favorable, but lacking in scattered areas. Due to the grade and quality of the larger trees, little commercial utility can be made of them. The steep sloped wooded area should be considered as a protection forest especially since it fronts on the Housatonic River.

Along the water line, there are three large Sycamore (*Platanus occidentalis*) which are unusual and lend themselves to the surrounding environment. There is also some low-growing mountain laurel on the site. (Refer to Sketch Site Plan in the appendix.)

Fauna. The fauna of the site include both game and non-game animals tolerant to infringement by man and his activities. The site provides habitat mainly to woodland type wildlife species, primarily non-game, songbirds. These include, but are not limited to, birdlife common to wood cover, such as the brown thrasher, wood thrush, and woodpecker. Cottontail rabbit, grey squirrel, and racoon also inhabit this type of area. Wildlife populations are probably low in numbers, due in part to the quality of the vegetation which they depend on for food and cover. Understory growth is generally sparse affording wildlife little in the form of food and cover. Some mast producing trees, such as red oak and American beech are present on the site. Overall, the quality of the vegetative food base and habitat is fair.

The Housatonic River which borders the property may provide seasonal Striper Bass fishing. Other fish are present in the area but the current quality of the river limits its fishing potential. As the water quality is upgraded, fishing should provide an additional attraction to the recreational development.

No threatened or endangered species of wildlife are known to exist on the site. Raptors and other birds of prey on seasonal migration flights over the Housatonic Valley may pass over the site. The project as described should have no adverse effects on these flights.

Climatic Conditions*. The mean annual precipitation in the Shelton area is 48" and it is fairly evenly distributed throughout the year.

The mean annual temperature is 50°F. The mean maximum temperatures range from 37°F in January to 84°F in July. The mean minimum temperatures range from 20°F in January to 60°F in July.

Description Of Probable Future Environment If The Project Is Not Initiated. If the proposed project is not initiated, and the land is left in nature's hands, the area will still evolve to hardwood brush and growing stock. Without proper maintenance, the woodland will suffer from an abundance of diseased and broken-topped trees. Some now exist and would normally be removed to make the land more compatible with recreation.

* Source - Connecticut, A Thematic Atlas by Allen R. Smith. 1974.

Other possible alternatives for the probable future environment are urban uses of the land. The site will accommodate a variety of residential and industrial uses. The advantages of location minimize the attendant site development considerations. Public water and sewer facilities are available.

II. ENVIRONMENTAL IMPACT OF THE PROPOSED ACTION*

Surrounding Land Uses. The proposed acquisition and recreational development should have very insignificant effects on land uses in the area. Some similar usage of the site currently exists; neighborhood children often frequent the site for recreational purposes. All in all, the site seems to be a minimal additional recreational outlet for a local area of this density, therefore, no quantifiable land use changes are expected to result.

Air Quality, Ambient Noise Level, And Energy Consumption. There will probably be an increase in air and noise pollution as well as fuel consumption due to travel to and from the site. These increases will probably be minimal because use of the site will most likely be confined to local residents of the immediate vicinity. Therefore, travel distances will be short and many residents will be able to walk to the site.

The actual planned recreational use of the site is not expected to have any adverse effect on air quality or energy consumption. It will, to some degree, cause an increase in the ambient noise level. This increase is again expected to be minimal because the proposed area of highest recreational congregation is, to some degree, screened from adjacent sites by land forms and plant materials. The area can be further screened by the planting of vegetation in strategic locations during actual construction of the facilities.

Water Resources. Water resources should not be greatly affected by the proposed recreational development. As previously noted, there is little, if any, ground water potential on the site. Therefore, construction and use should not significantly alter this resource.

The river system may be negatively influenced by activities during and after construction if protective measures are not taken. The most probable effect of construction activities and recreational use of the site may be an increase in the volume and speed of surface water run-off. This may occur due to alteration of drainage patterns, soil compaction, and increases in the impermeable surfaces. Consequently, due to the steep topography, erosion may occur increasing the sediment inflow and hence, turbidity of the river. If protective measures are taken in the upland area, the river will probably not be adversely affected because no major construction or land alteration is scheduled to take place in the steeply sloping river front area.

Most concern over water pollution is eliminated by the likelihood of connection to the City water supply and waste treatment systems (if necessary).

Vegetation. Development of the site for active recreation will probably take place on a small percentage of the total area and disturb little vegetation. Some reduction in vegetation will occur where play facilities are installed. The actual amount will depend on final plans.

* (Note - in many of the following cases, user impacts cannot be fully determined until an estimate is made of the expected intensity of recreational use.)

Minimal vegetation should be affected in the area scheduled for passive recreation. Some trails are already established and picnic table sites will be few in number because of the topography. Clearing of some shrubs and trees will be necessary in implementing the project.

Fauna. The effect of the recreational development on the fauna should be minimal. There will be some habitat destruction due to the implementation of the project. Mobility of wildlife will not be further restricted, nor will food chains be adversely affected. Human intrusion may increase, however, recreational use of the area is already happening. Species of wildlife on the site are adaptable to man.

III. MANAGEMENT PRACTICES SUGGESTED FOR THE AREA

The development of the site will require the following management considerations. It may be desirable to incorporate these suggestions into an overall "plan of development" for the area, prior to construction.

Slope Stabilization. The steep slope descending from the existing school athletic field along the southerly boundary will need attention to insure its stability. Vegetational or mechanical measures can be utilized.

The wooded slopes surrounding the site's existing open playfield are in need of reinforcement to more adequately protect them from erosion. An underplanting of hemlocks will fulfill this requirement.

Runoff Control. Runoff from the existing athletic field parking lot must be redirected from the site.

Runoff from proposed developments must be dispersed and not allowed to concentrate or flow down the slopes to the river.

Trail layout must be on the contour as much as possible. Trail surfaces must be erosion proof.

Access. Pedestrian access must be restricted to the trail descending from the existing parking lot, and possibly from the foot of Grove Street which could service the river front area at a more acceptable grade for elderly visitors.

Maintenance (vehicle) access should be from Grove Street through the existing lane.

Recreational Developments. All facilities that are proposed for development, except picnic sites, must be accommodated on or adjacent to the present playfield on level areas. Development should be kept away from steep slopes where loss of vegetation could promote erosion.

Care should be observed in constructing permanent features (stairways, benches, picnic tables) near sites of bedrock outcrop as this material has a tendency to weather quickly and possibly slide or break apart, creating a potential hazard. Before any final decision is made as to the location of permanent features in the proposed river front park area, more information is needed regarding the actual flood water level at this specific location.

Trails. Pedestrian access is required to the river front. Trails must be designed on the contour to facilitate all age groups and to circumvent erosion hazards. Access from the foot of Grove Street needs to be carefully considered to determine if sloping trails can be avoided.

Forestry Management. Dead and diseased trees should be removed. Reproduction should be encouraged (i.e., oaks) and an evergreen, such as hemlock, should be planted in the understory on selected areas. (Refer to Sketch Site Plan.) The trampling effect on vegetation by people should be a major concern in management. By underplanting additional vegetation and encouraging existing reproduction, heavy site use can be partially offset.

Wildlife Management. During development, plantings for wildlife should be considered. Fruiting shrubs adapted to soil conditions and having values for wildlife should be clump planted around the perimeter of the play area. Areas with existing fruiting shrubs and nut bearing trees should not be disturbed, but might be release cut* if necessary.

IV. MITIGATING MEASURES WHICH SHOULD BE INCLUDED IN THE PROPOSED ACTION

A sediment and erosion control plan should complement the actions stated in the development plan. There are no erosion problems at present. The objective of the plan will be to insure that none are created.

Air, noise, and water pollution controls are not anticipated as being necessary, however, this will depend upon the extent of development and the number of visitors.

V. UNAVOIDABLE ADVERSE EFFECTS

Proper plan implementation should eliminate many adverse effects. The following are examples of those which cannot be avoided. There may be others, depending upon final site designs and socio-economic conditions.

There will probably be a loss of a small section of the woodland which occupies the level areas adjacent to the playfield. It is estimated that this area constitutes a maximum of two acres.

There will also be an increase in disturbance to wildlife by recreation visitors. Again, this should be minimal.

VI. RELATIONSHIP BETWEEN THE LOCAL SHORT-TERM USE OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

The immediate and long-range impacts of the proposed project are most beneficial. The project, as proposed, will exploit the natural character of the land and provide for excellent long-term environmental use. The site affords one of the few viable new recreation outlets in the locale. If implemented, the project will insure public recreation and open space for

* Release Cutting - a cutting of large individual trees that are over-topping young trees, for the purpose of freeing the young trees to permit them to make good growth.

future urban generations. Without the project, the area would probably be developed to residential or commercial usage, thereby further increasing the demands for recreational opportunity, while simultaneously lessening the potential for the same.

VII. IRREVERSIBLE OR IRRETRIEVABLE COMMITMENTS OF RESOURCES

The implementation of the project will not irretrievably alter the resources of the site or restrict the possible range of uses of site resources.

VIII. ALTERNATIVES TO THE PROPOSED ACTION

There are several viable alternatives to the proposed action including a modification of the proposal and the alternative of "no action". The following is a brief description of the suggested alternatives and an evaluation of their environmental impact. (There may be other possible alternatives.)

A modification of the proposal might be for the City to obtain the property only for passive recreation and undertake no construction or development. In this case, the vegetation and wildlife would remain similar to present conditions, altering only as the vegetation underwent successional changes. There would be few adverse environmental effects; and the environment might remain in a natural condition. This alternative, however, may not fulfill the recreational needs of the community.

If there were no action taken, the area might remain as it is, in which case it would undergo environmental changes similar to the first alternative. The only difference being, the quality of the site may deteriorate due to unsupervised human use.

If there were no action taken, the area might also be sold for residential or industrial use, in which case the environment might be totally altered. Adverse effects would include partial to complete loss of habitat and loss of species present. Expansion of the urban area will also preclude the opportunity of providing substantial open space within walking distance of the urban center.

IX. CONCLUSION

The needs of the community dictate the development of specific recreational facilities in this area. The types of facilities needed, other than those to enrich the lives of the elderly, cannot be realized without construction activities. Being close to the center of town, available land is very scarce. Thus, alternate sites for the project are very limited. The proposal is well within the capability of the site to support.

Failure to initiate the project may result in a conversion of the site involving significant environmental impact, total commitment of the resource base, and conceivably noise and air pollution.

APPENDIX

APPENDIX A

SOIL CHARACTERISTICS TABLE

Mapping Symbols	Mapping Unit Name	Slope (%)	Acres	Description
15	Hinckley & Windor Soils	15-35%	1.1	Soils in this unit are of sandy or sandy and gravelly materials on slopes greater than 15%. They occur on steep terrace breaks, kames, and eskers. Slopes are generally short and range from about 100 to several hundred feet in width.
17MC	Hollis extremely rocky fine sandy loam	3-15%	4.1	Shallow soil, less than 20" to underlying bedrock, somewhat excessively drained, bedrock outcrops are numerous, surface stones and boulders present. Soil is very friable fine sandy loam and is moderately permeable above the bedrock. Sloping topography - mostly irregular.
17MD	Hollis extremely rocky fine sandy loam	15-35%	3.2	Moderately steep and steep soil, less than 20" deep over bedrock. Somewhat excessively drained. Bedrock outcrops are numerous, surface stones and boulders present. Soil is very friable or friable fine sandy loam and is moderately permeable above the bedrock.
69B	Agawam fine sandy loam	3- 8%	0.7	Well to somewhat excessively drained soil on terraces developed in deep sands. Textures in the surface and upper subsoil range from fine sandy loam to sandy loam grading into loamy sand or sand at 18-30" in depth. Permeability, moderate to rapid.
M2	Borrow and fill land, coarse materials	-	1.9	This unit consists largely of coarse-textured borrow or cut and fill areas where nearly all of the soil horizons have been destroyed or removed. In places, substratum may also have been disturbed.

Total = 11.0 acres (approximately)



APPENDIX B

SOILS AND TOPOGRAPHY MAP
GROVE STREET PROPERTY ACQUISITION
SHELTON, CONNECTICUT

Prepared by:
USDA SCS 1975
Advance Copy, Subject
to Change



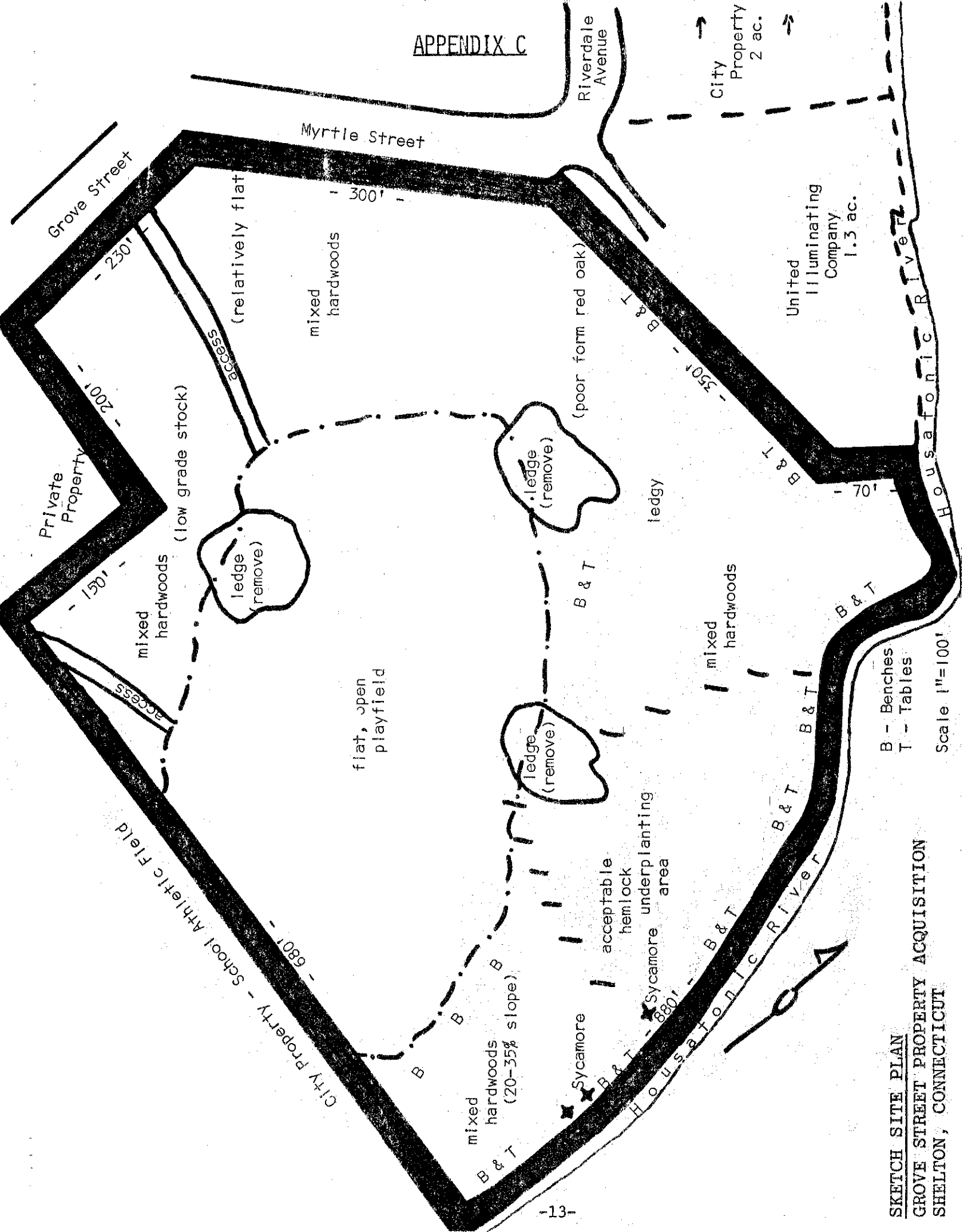
KEY

-  = Property Boundaries
-  = Soil Types Boundaries

Scale 1"=100'

Boundaries are approximate

APPENDIX C



SKETCH SITE PLAN
 GROVE STREET PROPERTY ACQUISITION
 SHELTON, CONNECTICUT

B - Benches
 T - Tables
 Scale 1"=100'

