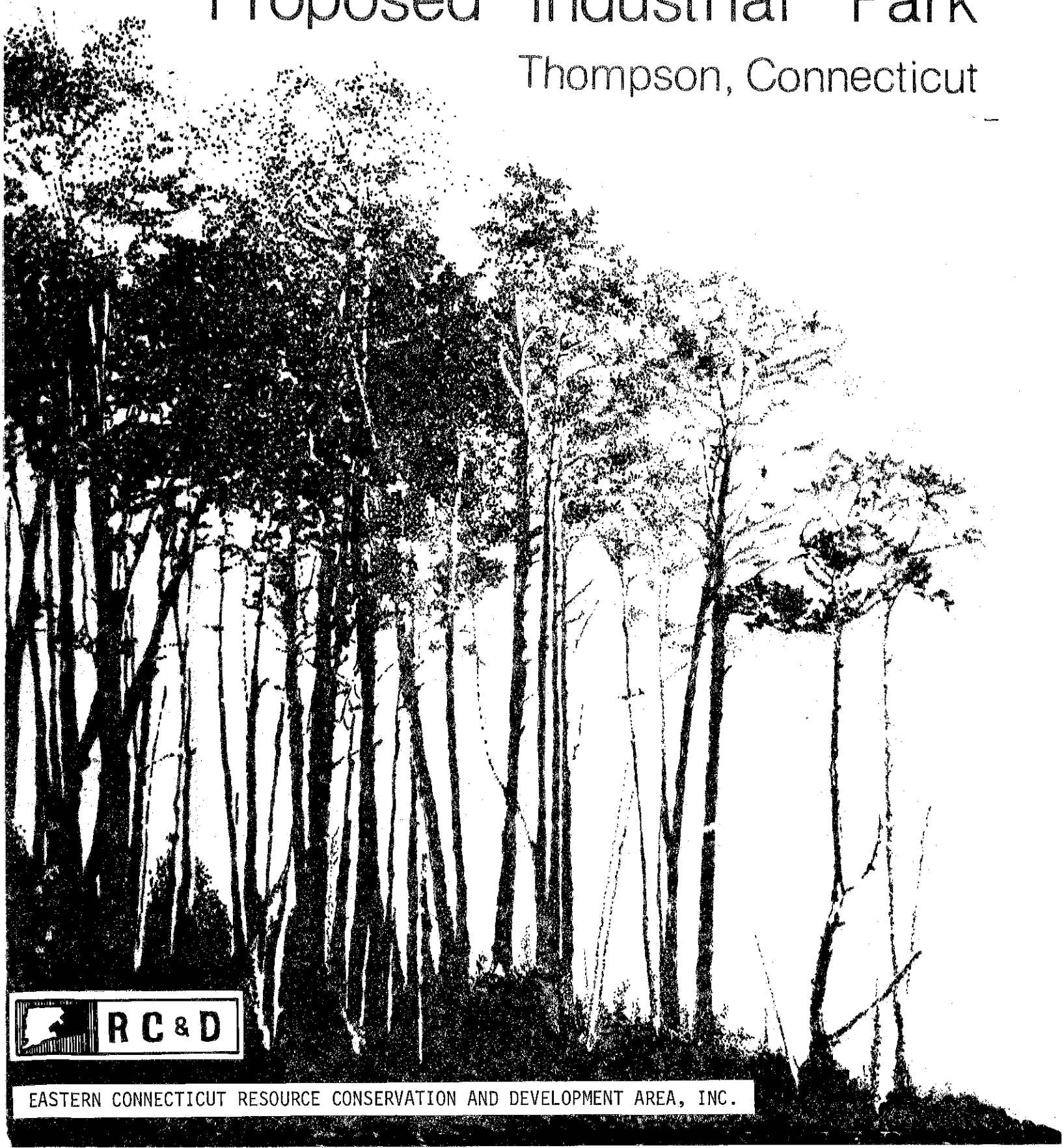
FILE COPY

Environmental Review Team Report

Proposed Industrial Park

Thompson, Connecticut



RC&D

EASTERN CONNECTICUT RESOURCE CONSERVATION AND DEVELOPMENT AREA, INC.

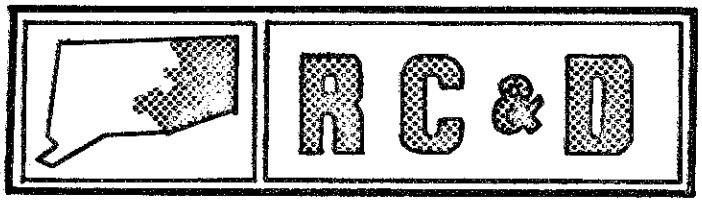
Environmental Review Team Report

on

Proposed Industrial Park

Thompson, Connecticut

October 1978

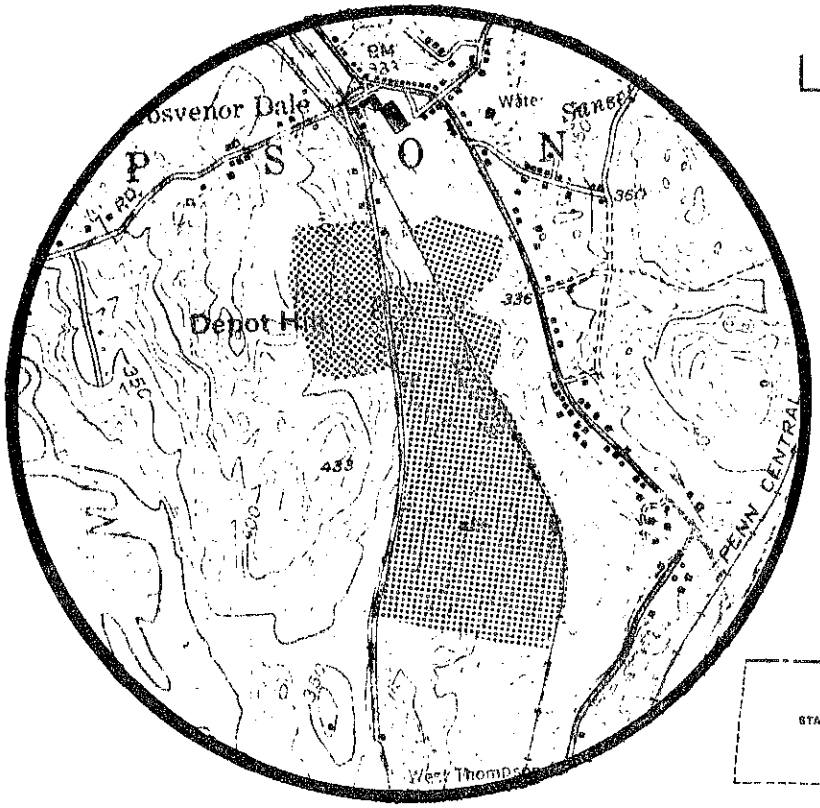


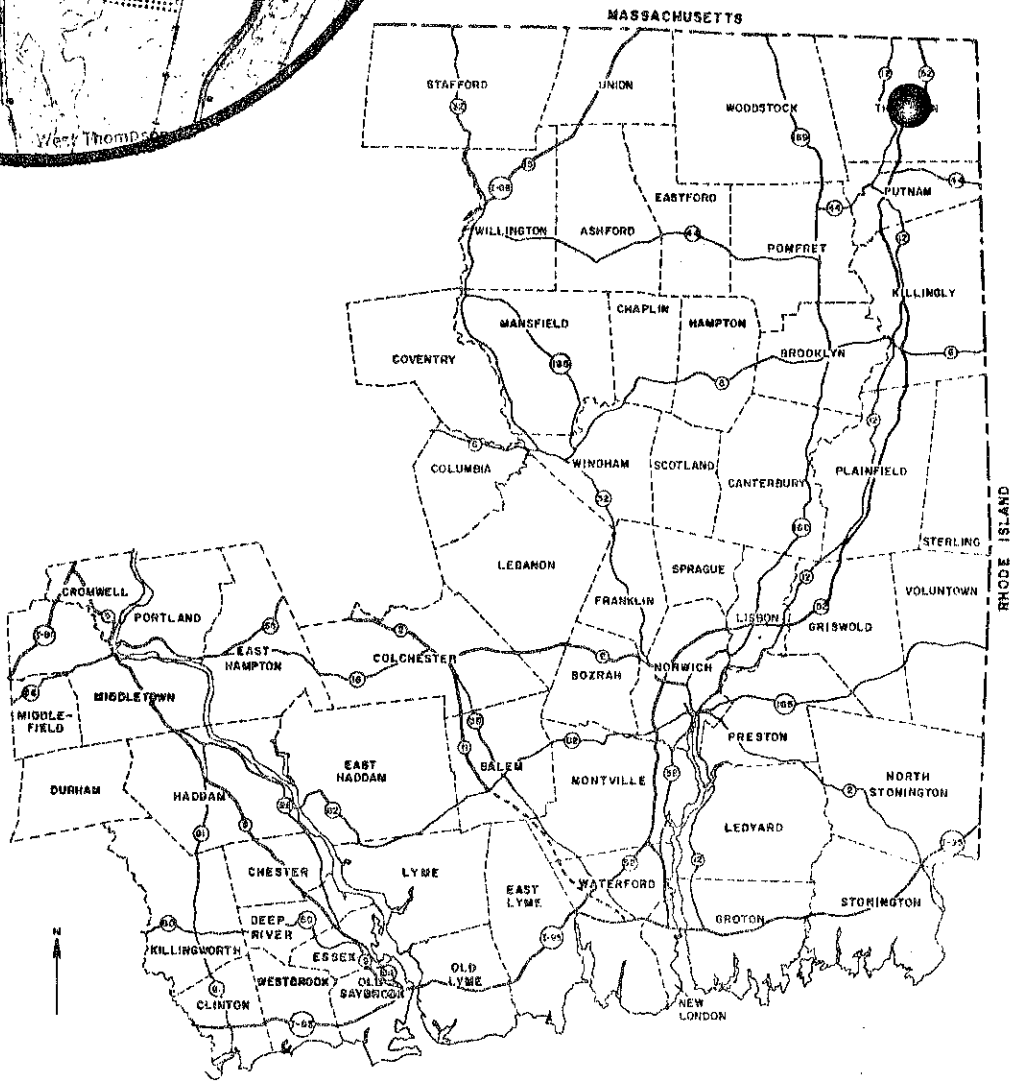
eastern connecticut resource conservation & development area

environmental review team
139 boswell avenue
norwich, connecticut 06360

Location of Study Site

PROPOSED INDUSTRIAL PARK
THOMPSON, CONNECTICUT





EASTERN CONNECTICUT
RESOURCE CONSERVATION AND DEVELOPMENT PROJECT

ENVIRONMENTAL REVIEW TEAM REPORT
ON
PROPOSED INDUSTRIAL PARK
THOMPSON, CONNECTICUT

This report is an outgrowth of a request from the Thompson Inland Wetlands Commission, 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, Soil Conservation Service, (SCS); Mallory Gilbert, Soil Conservationist, (SCS); Michael Zizka, Geologist, Department of Environmental Protection (DEP); Tim Hawley, Forester (DEP); Tom Smith, Biologist, (DEP); Geoffrey Havens, Sanitarian, State Department of Health; Jon Hedu, Regional Planner, Northeast Regional Planning Agency, (NECRPA); Tom Maziarz, Regional Planner, (NECRPA); and Jeanne Shelburn, ERT Coordinator, Eastern Connecticut RC&D Area.

The Team met and field-checked the site on Thursday, September 7, 1978. Reports from each Team member were sent to the ERT Coordinator for review and summarization for the final report.

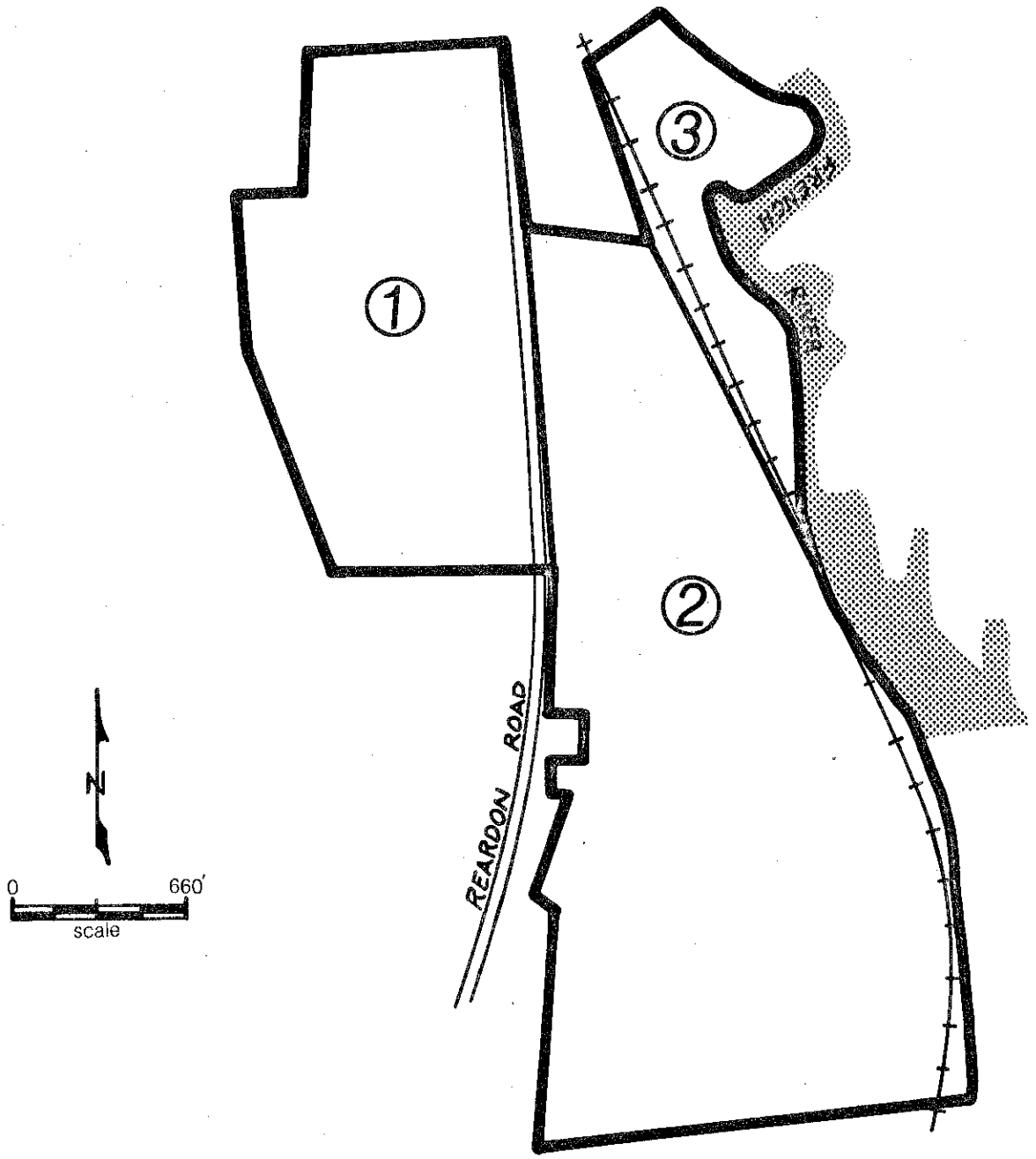
This report is not meant to compete with private consultants by supplying site designs or detailed solutions to development problems. This report identifies the existing resource base and evaluates its significance to the proposed development and also suggests considerations that should be of concern to the developer and the Town of Thompson. 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.

Parcel Location

PROPOSED INDUSTRIAL PARK
THOMPSON, CONNECTICUT



INTRODUCTION

The Eastern Connecticut Environmental Review Team was asked to examine a 155 acre parcel located in the town of Thompson on Reardon Road for proposed industrial development. The site was formerly the Gobeil Farm and is being marketed by the Petrowsky Real Estate Company of Putnam. Site plans will be prepared by R.P. Dimmock Associates, a Marlborough engineering firm. Petrowsky Real Estate has produced a feasibility study from which exerpts follow. They have broken the site into three parcels.

" The first, on the west side of Reardon Road, is approximately 45 acres in size. It is wooded and sloped, with a maximum elevation differential of approximately fifty feet. For this section of the park, seven sites, each four to five acres in size, are projected. It is estimated that building sizes would range up to 100,000 square feet per site and two sites could be combined to accommodate a larger building. There is no rail frontage on this parcel.

The second, on the east side of Reardon Road and the west side of the railroad, is approximately 100 acres in size. It is wooded and sloped, with a maximum elevation differential of approximately 100 feet. This parcel has extensive sand and gravel deposits. For this section of the park, one site of forty acres and eight sites of four to five acres each are forseen. The forty acre site could accommodate a building size up to 500,000 square feet while the smaller sites would be comparable to those on the first parcel. There is 4,500 feet of rail frontage on this parcel.

The third, on the east side of the railroad and west side of the French River, is fourteen acres in size. It is relatively flat with a maximum elevation differential of approximately ten feet. For this section of the Park, two sites are projected. One site will accommodate a building up to 150,000 square feet in size while the other will accommodate a building up to 50,000 square feet in size. There is 2,000 feet of rail frontage on this parcel.

Thompson has a municipal sewer plant designed for a capacity of 1.5 million gallons per day that was opened for service in the fall of 1973. It is currently operating at approximately 20% of capacity. A 36' interceptor line runs from an area near the proposed Industrial Park to the plant. Plans are being formulated to extend this line into the Industrial Park.

Water for industrial purposes will be supplied by wells and a large storage tank on the top of a nearby hill. It is anticipated that this will serve all of the water needs for companies located within the park.

Connecticut Light and Power (Northeast Utilities) will supply electricity in any quantity as needed.

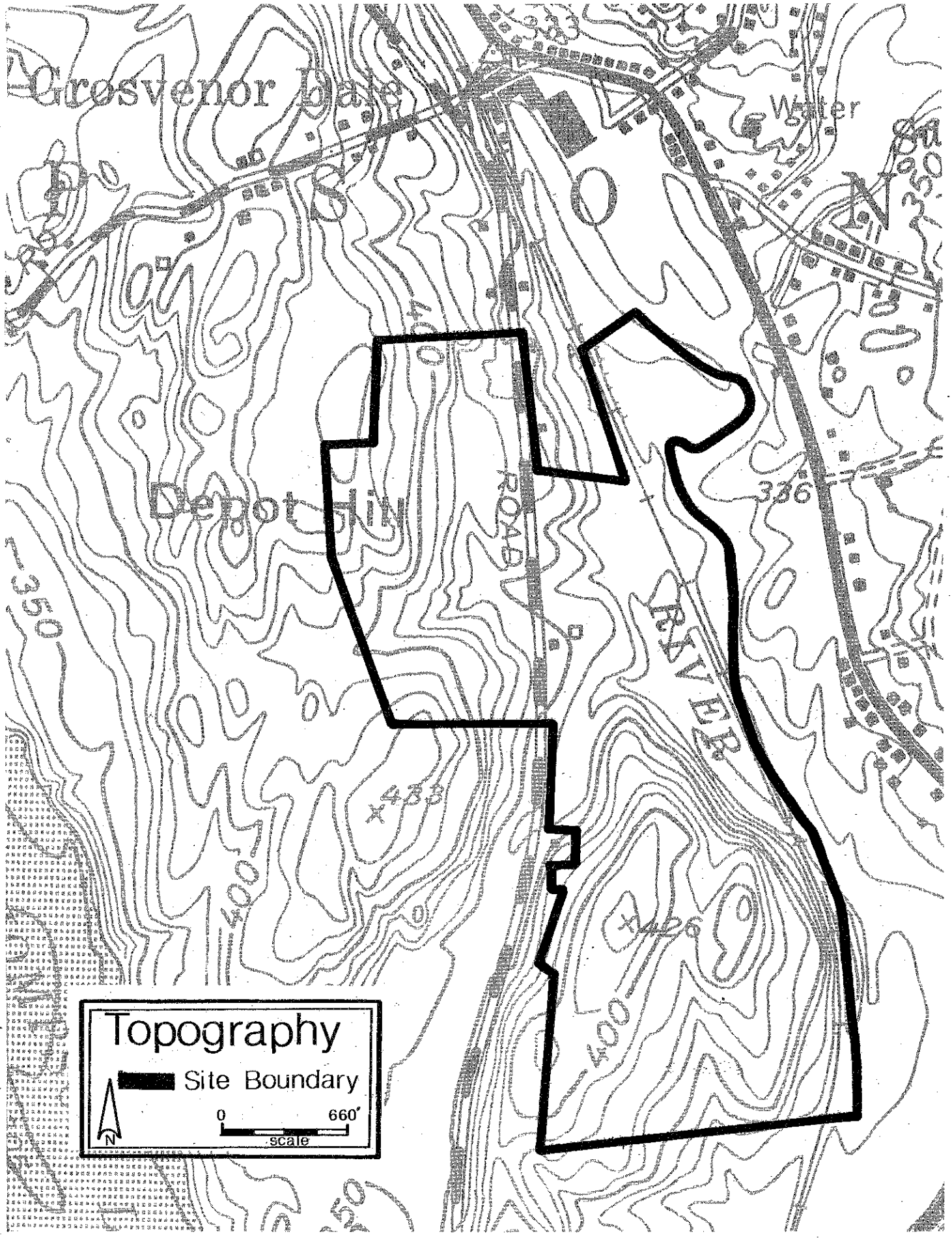
The proposed Thompson Industrial Park is located approximately one and one half miles from both interchange numbers 98 and 99 of Connecticut Route 52, the connector between the Massachusetts and Connecticut Turnpikes. The northern section of Route 52 between Oxford and Auburn, Mass. is scheduled for completion early fall of 1978.

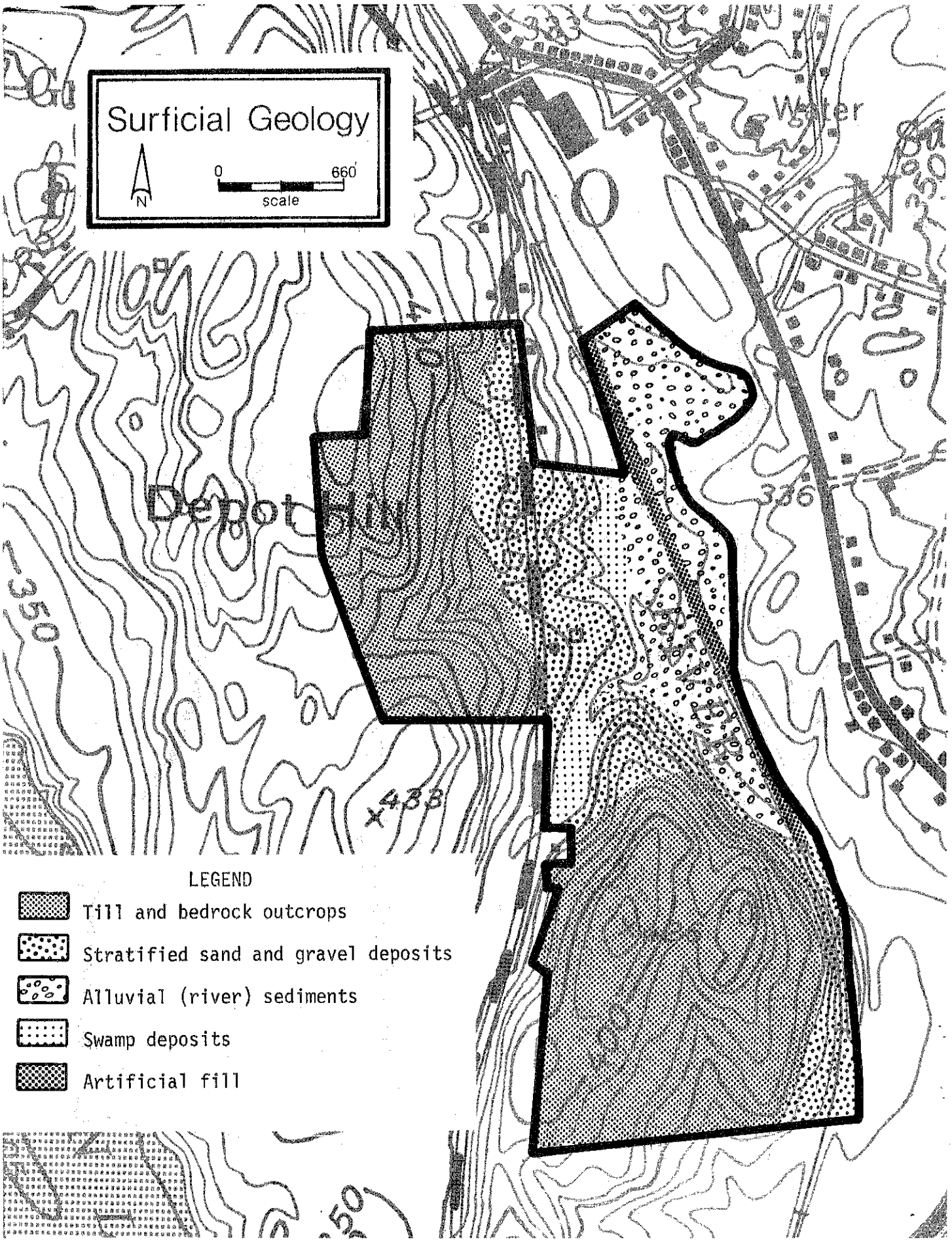
The completion of Interstate Route 84 between Hartford, Ct. and Providence, R.I. has within the past two months been endorsed by the governors of both Connecticut and Rhode Island. This Interstate Highway will connect to the Connecticut Turnpike in Killingly, approximately 15 miles south of the Park.* //

Rail access, provided by the Providence and Worcester Railroad, and air access from major nearby airports is also available to this site.

As a zone change would be necessary before industrial development could occur on this site, the Team recommends careful consideration of all factors involved, economic as well as environmental, before the Town allows this zone change from residential-agricultural to industrial to occur. The Team is primarily concerned with the impact of this proposed industrial park on the natural resource base of the site. A substantial portion of this site is obviously flood prone, any filling in these areas would result in a reduction of the temporary water storage effect of the floodplain area. The increase in impervious surface after development will create a substantial drainage problem that must be carefully designed for, due to the proximity of the site to the river. Surface run-off must not be allowed to carry sediment and pollutants (e.g. oil and gasoline residues from the parking lots) to the river. With recent efforts to improve water quality in the French River (Federal Water Pollution Control Act Ammendments 1972) all proposed industries should have adequate means of industrial waste water treatment which would eliminate both thermal and chemical pollution of the river. Steps should be taken prior to development of the site toward regulation of sewage quality, especially regarding the exclusion of toxic or carcinogenic or otherwise hazardous materials not subject to biological inactivation. For further protection of water quality in the river, a 150 foot buffer zone should be required between the river and any development activity. Reardon Road will most likely require extensive reconstruction to accomocate heavy truck traffic and projected sewer lines. Adequate supplies of non-contaminated fresh water may also be difficult to locate on this site. These concerns should be carefully addressed by local commissions before a zone change is allowed to occur.

* taken from: Proposed Rail Industrial Park, Thompson, Connecticut, August 21, 1978, prepared by Howard Smith, GRI.


Grosvenor Dale
Depot Hill
ROAD
RIVER
336
Topography
Site Boundary
0
660'
scale
N


Surficial Geology
N
0
660'
scale
Depot Hill
LEGEND
Till and bedrock outcrops
Stratified sand and gravel deposits
Alluvial (river) sediments
Swamp deposits
Artificial fill

ENVIRONMENTAL ASSESSMENT

SURFICIAL GEOLOGY

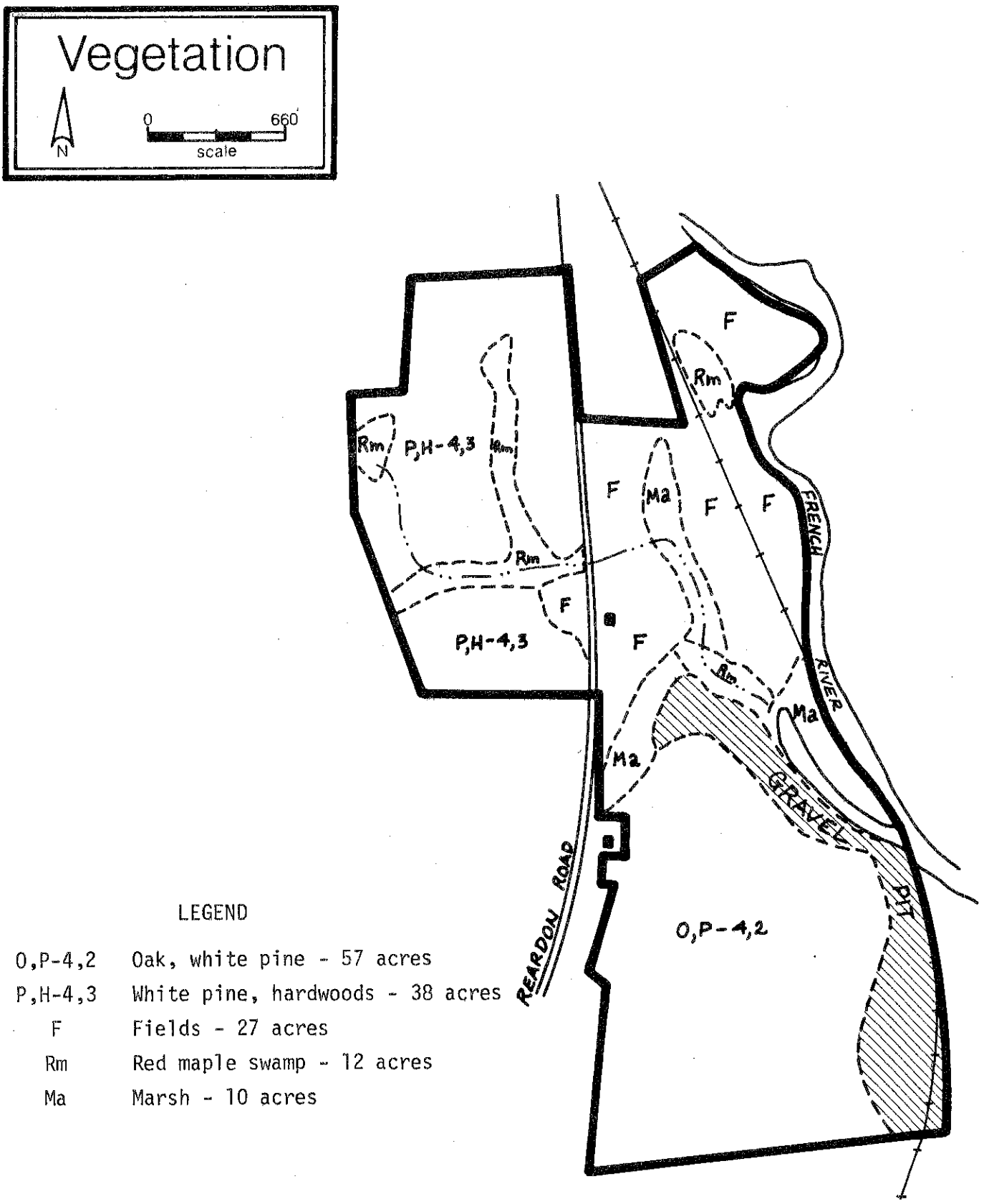
The surficial geology of the property is mapped in an accompanying illustration. The map shows those materials which lie above solid bedrock but below the active soil zone. The map was prepared on the basis of field observations, interpretation of aerial photographs, and soils data.

Basically, the property may be divided into three sections as regards surficial geology. The northwestern and southern sections contain a glacial deposit known as till. Till consists primarily of rock particles of all shapes and sizes. Because the particles were carried in and deposited directly from glacier ice, they are not sorted by grain size. Consequently, the texture of the till is subject to wide variations. It is suspected, however, that much of the local till is sandy and stony. The thickness of the till is not known. Bedrock crops out or appears to be within five feet of the surface in several areas. Nevertheless, pockets of till up to 20 feet deep may be present in other locations.

The northeastern section of the property contains a relatively well-sorted deposit of sand and gravel. These materials, which were laid down in meltwater derived from wasting glacier ice, are approximately 30 to 40 feet thick. Much of the deposit is coarse-grained, comprising principally cobbles and boulders. Floodplain deposits of sand, silt, and some gravel cover the coarser materials near French River. Accumulations of organic material, sand, silt, and clay have formed in small swamps in a few areas.

HYDROLOGY

All surface runoff from the property drains into French River either directly or via small tributary streams. Industrial development of the property as proposed would result in a significant increase in runoff volume for a given storm. The actual percentages of increase would depend upon the particular development design, the amount of topographic modification performed, the size of the storm, and other factors. The greatest volumetric increases, which would occur for the smaller, more frequent storms, could easily exceed 100 percent (i.e. the present runoff volume would be more than doubled). Because most of the runoff is confined within the limits of the property before reaching French River, the threat of flash flooding during or immediately following heavy precipitation is, for the most part, one that should concern the developer and future industrial residents, but one that need not concern the Town. The peak flows in French River would not be perceptibly altered. Of most concern to the Town would be those areas where runoff from the property crosses Reardon Road, and in particular, the culvert that carries drainage from the western part of the site. Because development of that parcel is likely to substantially affect the runoff flows which the culvert must carry, it is strongly recommended that the developer, upon submission of his final plan, include at least a hydrologic assessment of peak flows from that parcel and a discussion of whether the culvert would need to be enlarged. Any other new drainage measures that would affect Reardon Road should be included.



LEGEND

O,P-4,2	Oak, white pine - 57 acres
P,H-4,3	White pine, hardwoods - 38 acres
F	Fields - 27 acres
Rm	Red maple swamp - 12 acres
Ma	Marsh - 10 acres

The floodprone area bordering French River has been identified in a map prepared by the U.S. Department of Housing and Urban Development, Federal Insurance Administration. A reproduction of part of that map is included in this report. Virtually all of that part of the property lying east of the railroad tracks is included in the flood hazard zone. Any industrial development of this parcel is unwise and should be totally discouraged by the Town. Even if flood waters were somehow prevented from encroaching upon that parcel, e.g. by an artificial embankment of some sort, the effect would be merely to transfer the flooding problem to some area downstream that is normally not affected or is affected less seriously.

WILDLIFE

This site presents a diversified habitat for wildlife, ranging from fields to mature forest. Species that would be present in an area of this type would be quail, woodcock, fox, grouse, deer, squirrel, raccoon and duck along with other non-game species. Any development of this area would cause a decrease in those populations by resultant habitat destruction, with the exception of a few species adaptable to the encroachment of man, such as raccoon, opossum and squirrel. Effects of development could be lessened by the establishment of a buffer zone supplemented with food source plantings for wildlife along the eastern side of the railroad track, however it would not replace the habitat loss caused by development of the remainder of the tract.

VEGETATION

Three major vegetation types cover the site. Smaller areas of wetland and gravel excavation also occur. Approximately 60% of the entire parcel is forested. The locations of the following various vegetation forms are indicated on the vegetation map.

(O, P-4, 2) Black oak and scarlet oak of small sawlog size and white pine of pole size occupy 57 acres on droughty, coarse-textured soils. Huckleberry, bracken fern, and club moss are the principal plants found in the herbaceous layer. The forest has an open, park-like appearance with little growth in the shrub stratum. Sawtimber volume averages over three thousand board feet per acre and is of adequate quality to be worth $35 to $65 per thousand board feet. This area would provide substantial revenue, if cleared. Areas which are planned to remain forested should be thinned by removing the poorest third of the trees for fuelwood. This thinning should be supervised by a private forester and may yeild 5 to 10 cords per acre at a value of $5 to $10 per cord.

(P, H-4, 3) Small sawlog sized white pine and pole sized hardwoods (black oaks, red oaks, red maple) occur on approximately 38 acres. The largest white pine were cut about 10 years ago, leaving numerous openings not occupied by dense shrub growth. Ferns are the principal herbaceous cover. The present sawtimber volume is about three thousand board feet per acre. Approximately one half the volume is in white pine. Due to the recent cutting, a thinning is not necessary at the present time to maintain the vigor of the stand. Some revenue may be generated by selling witchhazel if a local market exists.

(RM-3) Red maple swamps occur throughout the pine-hardwoods stand and in low-lying areas east of Reardon Road. Stand densities and consequently the amount and type of understory vegetation are variable. The most crowded stands have sparse herbaceous or shrubby growth, while somewhat thinner stands contain witchhazel clumps and a variety of ferns. A firewood thinning would improve the health and vigor of the red maple if focussed on the poorest trees. Heavy cutting would probably lead to windthrow problems due to shallow rooting of the trees in wet soils. A sudden change in the water table, as a result of filling or drainage alterations, may also kill the red maple.

(Ma) This area contains approximately 10 acres of shallow marsh vegetation. The driest of these were probably farmed at one time and have recently reverted to goldenrod, grasses and sedges. Alder occurs exclusively in some areas, particularly along intermittent stream channels. Pickerel weed and sedges are the principle species growing in standing water.

(F) Open fields occur on approximately 27 acres of the property. Grasses with scattered legumes and composites are the principal species. Fringed gentian was sighted on the date of the field review. Some of the fields are still utilized for hay production, while others have been abandoned.

SOILS

A detailed soils map of this site is 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 probably 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. The soils map, with the publication Soil Interpretations: Windham County, Connecticut, can aid in the identification and interpretation of soils and their uses on this site. Know Your Land: Natural Soil Groups for Connecticut can also give insight to the development potentials of the soils and their relationship to the surficial geology of the site.

Soils most characteristic of the proposed industrial park site include the Charlton-Hollis series, the Hinckley series, the Sudbury series, the Carlisle series, the Canton-Charlton series, the Ondawa series and the Walpone series. Many of these soils are regulated wetland soils under Public Act 155 and are so indicated on the soil limitation chart in the Appendix to this report. Major soil limitations to industrial development on this site are slope, large stones, shallow depth to bedrock, wetness, flooding and susceptibility to frost action.

The Charlton-Hollis series is a gently sloping to sloping unit consisting 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 less than 10 percent of the surface and few to many stones on the surface.

The Hinckley series are excessively drained soils developed in stratified sandy, gravelly and cobbley water deposits. These deposits, normally deeper than 10 feet, are located on undulating to rolling terrace topography above the present overflow of large streams. They have rapid to very rapid permeability in the subsoil. The water table is below 60 inches during most of the year. Most use problems are related to texture, droughtiness and rapid to very rapid permeability.

The Sudbury series are moderately well drained soils developed in sandy deposits, from 18 to 24 inches deep, over coarse-textured stratified sands and gravels. These soils, normally deeper than 10 feet, are located on terraces above the present overflow of large streams. They have moderate permeability in the subsoil. The water table normally rises to within 20 to 30 inches of the surface during the winter and spring months. Most use problems are related to the seasonal high water table.

The Carlisle series are deposits of plant material, exceeding 52 inches in depth, found in very poorly drained areas. They are the remains of reeds and sedges, sphagnum moss, or trees and shrubs, which grow in the wet areas. Mucks are materials which have decomposed and can no longer be identified as to the type of plant from which they are derived. Peats are materials which have decomposed but can be still identified to the type of plant from which they are derived. Some deposits have high organic matter contents; others are mixed with inorganic sand, silt and clay.

The Canton-Charlton series is a gently sloping to sloping unit consisting of two soils, Canton and Charlton, which occur in patterns too intricate to separate in mapping. About 50 percent of the unit is similar to the soil described for the Canton series. Canton are well drained soils developed in upland till 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 soils are naturally stony and contain few to many stones through the soil. Gravel size rock fragments generally make up to 10 to 30 percent of the surface and subsoil. Most use problems are related to slope and stoniness.

The Ondawa series are well drained soils developed in recent floodplain sediments. These sediments, normally deeper than 10 feet, are fine sandy loam to sands. Stratified sands and gravel may occur below 20 inches. These soils flood occasionally and have moderately rapidly permeable subsoils. The water table is normally below 40 inches during most of the year. Most use problems are related to flooding.

The Walpole series are somewhat poorly to poorly drained soils developed in sandy water deposits, from 18 to 24 inches deep, over coarse textured stratified sands and

gravels. These deposits, normally deeper than 10 feet, occupy low-lying terraces above the present overflow of large streams. These soils are moderately permeable in the subsoil. The water table normally is near the surface from late fall through early spring. Most use problems are related to the long seasonal high water table.

Without doubt, there are several locations within this site which are suitable for industrial development; however, the following comments should be carefully considered should any development take place on this site. See the accompanying illustration for parcel locations.

Parcel One: Approximately twenty-one percent of this parcel is made up of wetland soils. Development designs for this area should take into account the limiting factors associated with these soils, such as high water table and susceptibility to frost action. If proper crossings are engineered, development could have little effect on the drainage patterns on this portion of the site. It is strongly recommended that excessive filling of wetland areas be avoided and that water continue to leave this site at its present point of discharge. In places, slopes on this parcel are steep, (greater than 10%). These areas would require careful examination and design for road construction and building placement. At present, it appears that only a few sites for buildings of the 100,000 square foot type could be located without extensive cut and fill operations.

Due to the nature of the slopes in this area, a planned schedule of development and an erosion and sediment control plan should be included on final plans. Such measures as minimal land disturbance, stabilization of cut and fill slopes, temporary and permanent vegetative cover, diversion of runoff water, storm water management, may be included in an overall development plan. Assistance for developing such a plan can be obtained from the Windham County Soil and Water Conservation District. A site for a storm water retention basin appears to be available within 300 feet of Reardon Road in the southern half of this parcel. It is recommended that inclusion of this structure be considered and placed before building commences. Since a major portion of this site is woodland or over-grown fields, buffer strips for visual barriers and wildlife cover should be included in the final design.

Parcel Two: This parcel is composed of approximately 19% designated wetland soils. To accommodate a building of 500,000 square feet it is assumed that the 40 acre section mentioned by the developer will be located in the northern half of this parcel. In this section there is a substantial amount of 93 (Carlisle Muck) soil. Development of this soil type is generally feasible only if the extensive organic deposits associated with it are removed and replaced with clean, firm fill material. It is doubtful that a 500,000 square foot building with its associated parking area would fit in this 40 acre area without extensive land grading and extremely high development costs. The massive amounts of impervious surface created by this portion of the proposal will significantly increase the amount of surface water runoff. In developing this area, special attention will have to be given to redirecting surface drainage water to a point where it can be discharged without excessive disturbance. Also subsurface drainage may be needed in places to assure stable foundation footings. With some engineering additions, a few existing wetland pockets may be natural sites for storm water retention. Steep slopes are again a concern in the southern half of this parcel. Development should be done carefully to avoid excessive sediment discharge. Need for a development schedule and sediment and erosion control plan is evident. This wooded southern section also affords the

possibility of using native trees as visual barriers to enhance the asthetic appeal of the area and provide pleasant picnic spots or recreation areas for industrial employees.

Parcel Three: A major portion of this parcel is shown as a special flood hazard area on the Flood Hazard Boundary Map for the Town of Thompson (prepared by the U.S. Department of Housing and Urban Development Federal Insurance Administration). This parcel is comprised of approximately 90% designated wetland soils. Consequently, any filling work to be done would require an Army Corps of Engineers 404 permit. Since a large portion of this parcel is within the 100 year flood zone (has a 1% chance of flooding in any given year) it may be required that a potential occupant locate his building above the flood encroachment lines or water-proof it to withstand a possible flood. Either of these situations would necessitate the 404 application procedure. Although it is possible to construct in this flood prone area with proper and extensive engineering, the Team strongly discourages any construction within the Flood Hazard zone as even damage resistant uses such as parking lots may interfere with important hydrologic functions such as acquifer recharge and flood water retention.

WATER SUPPLY

The developer has proposed to locate water-supply wells for the development in the sand and gravel deposits adjacent to French River. Such wells should be able to yield a more than adequate volume of groundwater. Water quality, however, may be a crucial factor. French River, as Town residents well know, is badly polluted and it may, during certain times of the year and under certain pumping conditions, become a source of water to such wells. The sand and gravel should be able to filter out most of the bacterial constituents and suspended solids, but other dissolved materials may pass through. A gravel-based well located slightly upstream from the proposed well site produced water that contained relatively high concentrations of iron, manganese, sodium, and sulfate (source: Conn. Water Resources Bulletin No. 9).

Recent water-quality data from a site on French River at Mechanicsville may be obtained from the U.S. Geological Survey in Hartford or from the Water Compliance Unit of the Conn. Dept. of Environmental Protection, also in Hartford. These data may be compared to the required industrial and drinking-water standards. A much more accurate and strongly recommended analysis may be performed by drilling a test well at the proposed site, pumping it at a rate comparable to that expected after development, and monitoring the groundwater quality for at least a year prior to development.

WASTE DISPOSAL

Primary concerns of the State Department of Health would normally be the supply of an adequate quantity and quality of water and the proper disposal of sewage wastes. The property is accessible to a 36" diameter municipal sewage interceptor line at two points: the bridge crossings of the French River at Blain Road and West Thompson Road. The Municipal Sewage Treatment Plant is designed to accommodate 1,500,000 gallons per day and is currently operating at an estimated maximum of 20% of capacity. The interceptor line is similarly 20% used.

Concern should be given at this time to the quality of effluent produced by the industrial park. Future disposal or use of sludge accumulated by the treatment plant could be adversely affected by undesirable components, such as carcinogenic compounds, toxic heavy metals, which might be produced as waste or by-products by certain industries. A model ordinance for towns on maintenance of sewage effluent quality is being formulated by the Sewage Facilities Section of the Division of Environmental Quality, Department of Environmental Protection.

LAND USE CONSIDERATIONS

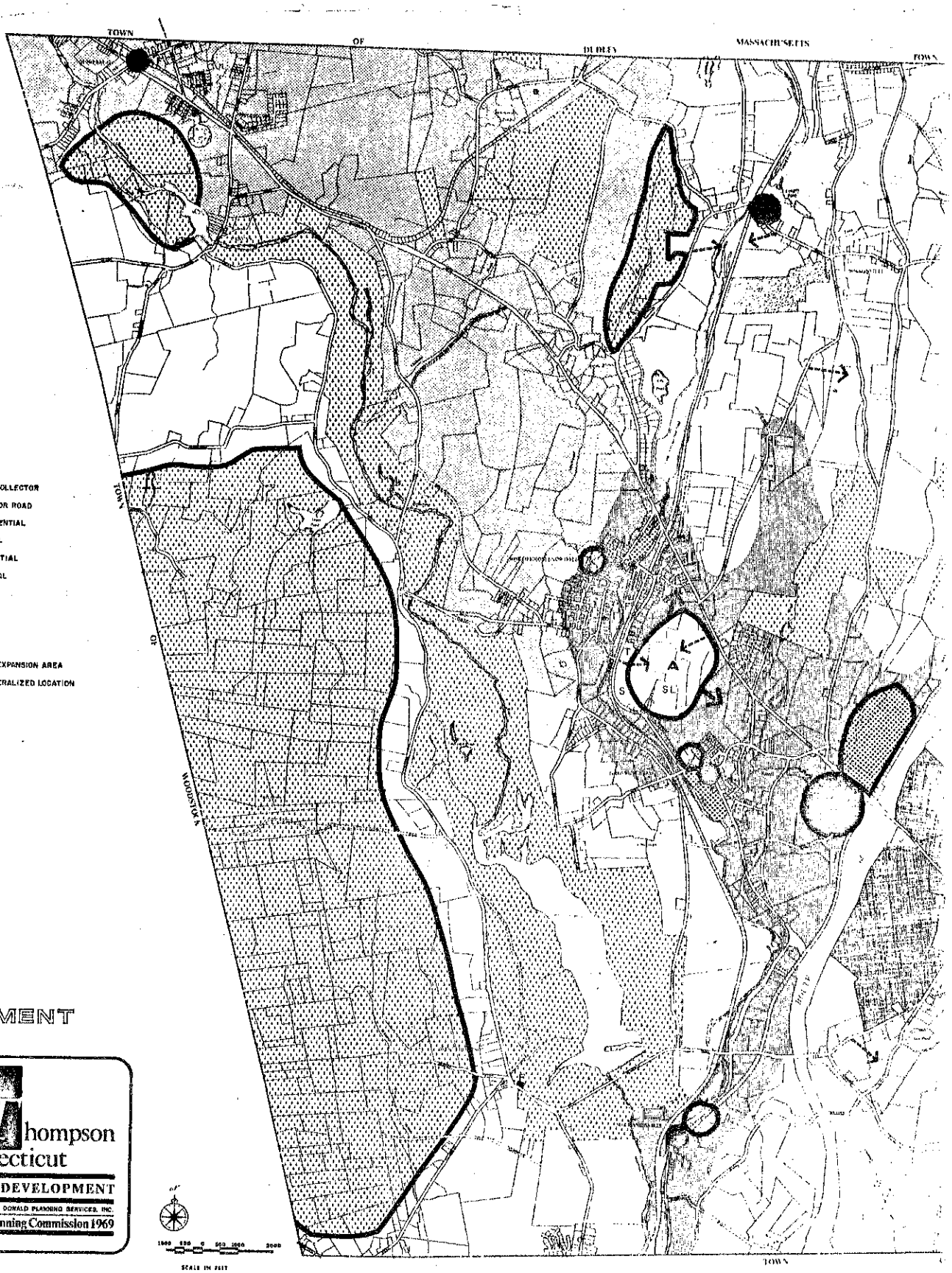
The building of an industrial zone on Reardon Road creates conflicts among land uses that were carefully avoided in the preparation of the original Thompson Plan of Development and the existing zoning map. In the Plan of Development all land west of the French River was designated as either low-density residential, very low-density residential, or open space. On the zoning map all land west of the French River is zoned for low density residential. In both documents the river was intended to serve as a natural physical barrier between low intensity land uses west of the river and high intensity land uses east of the river. East of the river there are existing industrial, commercial, and high density residential land uses. Land use west of the river is predominantly rural. To create a new industrial zone east of the river would violate an accepted planning principle of separating high intensity and low intensity land uses by natural physical barriers wherever possible. Two specific cases of conflicts in land use can be cited. First, the land use along Reardon Road north of the site (but south of Blain Road) is predominantly residential. This land would become exposed to an extremely large increase in traffic from Reardon Road making it an undesirable residential location and undoubtedly lowering the value of the land for residential purposes. Second, the land along Reardon Road south of the site is part of the West Thompson Flood Control Reservoir lands which are publicly owned. The land, which borders both sides of the road and abuts the site of the proposed industrial park, is open space already in public ownership. An industrial park on Reardon Road would be detrimental to the function of these public lands as recreational and open space.

If a zone change to industrial use is allowed, an open space buffer of 100 or more feet should be required along all property lines to minimize conflict with neighboring uses. Special consideration should also be given to properties along Reardon Road north of the site. Compensation to the owners or change of zone to commercial or industrial are alternatives that should be considered.

ROADS/TRAFFIC CONSIDERATIONS

Three types of traffic and road design considerations must be addressed at the proposed industrial park site: 1) access to Route 52, 2) traffic circulation in the area immediately around the site, and 3) circulation on the site itself.

There are two routes by which traffic from the proposed industrial park would reach Route 52. The first route is via Route 200 which intersects with Route 12 in Grosvenordale. The second route is via Route 12 to its junction with Route 52 about one mile south of Grosvenordale. However, at the Route 12 interchange there is no access to the northbound lane of Route 52, only southbound. Route 200,



PLAN OF DEVELOPMENT

Thompson Connecticut

PLAN OF DEVELOPMENT

BROWN, DONALD AND DONALD PLANNING SERVICES, INC.

Thompson Planning Commission 1969

therefore, would be the primary access route to Route 52 North. In its current condition Route 200 is not a suitable road to serve large volumes of truck traffic. The roadway is narrow, grades are steep, curves are relatively sharp and sight distances are inadequate. ConnDOT has evaluated State routes for their adequacy with regard to roadway width, horizontal curvature, and sight distance. The ratings range from 0 to 100. A score of 50 is considered adequate. A score above 50 indicates better than adequate conditions. A score less than 50 indicates inadequate conditions. Very low scores indicate severe problems. For Route 200 from Route 12 to Route 131 the roadway width rating is between 26 and 50; the horizontal curvature rating is less than 25; and the sight distance rating is less than 25. A great deal of reconstruction would be necessary to bring it up to adequate standards for large truck traffic. Reconstruction would be costly given existing grades, curves and property lines.

The proposed industrial park would be a major traffic generator. Employee trips to and from work would generate close to 4,000 trips per day. Most of these trips would be made during a one to two hour peak period in the morning and during a similar peak period in the afternoon. All roads near the site would receive substantial increases in daily traffic volumes. Circulation patterns around the site would be drastically altered and major reconstruction would be necessary to accommodate the increased traffic volumes. The full length of Reardon Road from Blain Road to West Thompson Road would have to be upgraded to industrial access road standards (minimum 32 foot roadway width with adequate base and pavement to support heavy truck traffic). Major reconstruction would be necessary at the intersections of Reardon Road and Blain Road, and Reardon Road and West Thompson Road. Roadway reconstruction to meet industrial access road standards would also be necessary on Blain Road from the Reardon Road intersection to its intersection with Route 12. Similar upgrading would be necessary for West Thompson Road from the Reardon Road intersection to its intersection with Route 12.

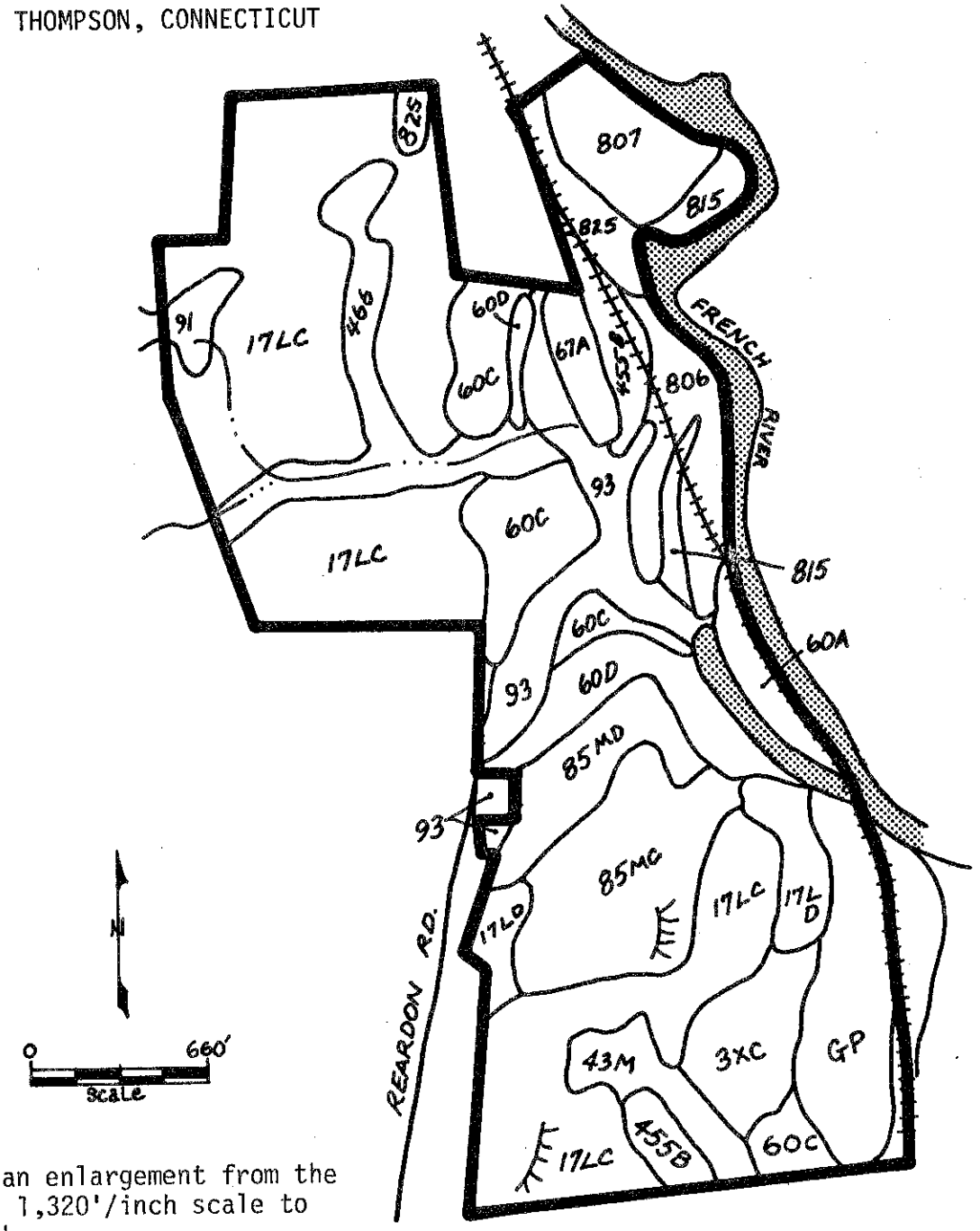
The design of the internal circulation system for the industrial park may prove a difficult task due to topography and extensive wetlands. For example, there are steep grades along some sections of the parcel west of Reardon Road. These grades would limit the possible locations for an access road to that part of the site. If possible the access roads to the western and eastern portions of the site should intersect with Reardon Road at the same point.

Appendix

SOILS

PROPOSED INDUSTRIAL PARK

THOMPSON, CONNECTICUT



This is an enlargement from the original 1,320'/inch scale to 660'/inch.

Information taken from: Soil Interpretations, Windham County, Connecticut, 1975; Soil Survey Sheet No. 8-2mm-54 and 14-2mm-53; prepared by the United States Department of Agriculture, Soil Conservation Service; advance copy, subject to change.

CN-CONS-7
3-73
(File Code CONS-14-5)

SOIL AND NATURAL SOIL GROUPS MAP
Prepared by
U. S. DEPARTMENT OF AGRICULTURE . SOIL CONSERVATION SERVICE
Cooperating with
CONNECTICUT AGRICULTUREAL EXPERIMENT STATION,
STORRS AGRICULTURAL EXPERIMENT STATION, AND
Windham County SOIL AND WATER CONSERVATION DISTRICT

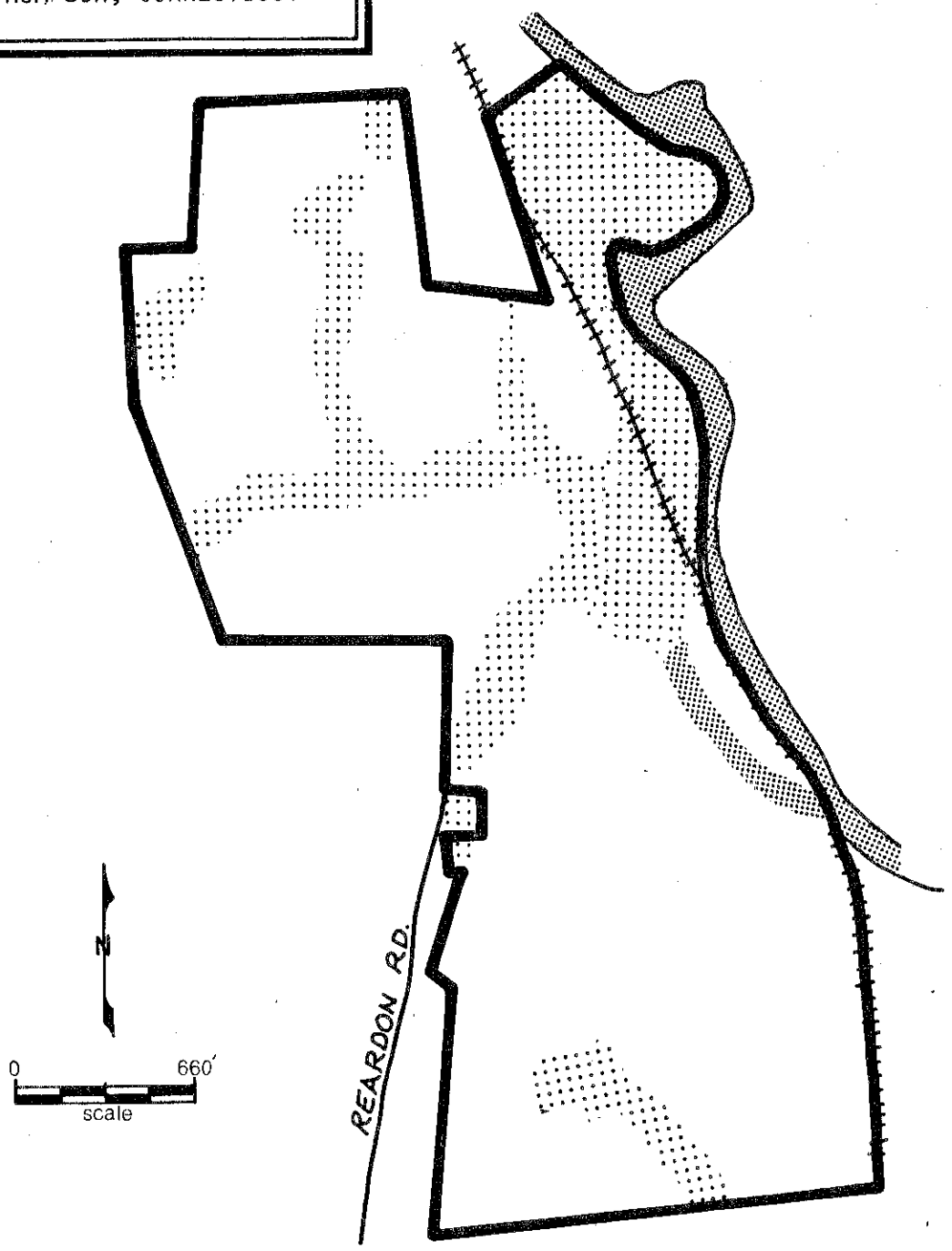
COOPERATOR Thompson Industrial Park (Gobeil Property) DATE 8/25/78
COUNTY Windham STATE Connecticut
APPROX. SCALE _____ SOIL MAP NUMBER _____

SYMBOLS
324-B-1 or CaB = DETAILED SOIL SURVEY
A-1a, B-2a, etc. = NATURAL SOIL GROUP

Soil Map Symbol	SOIL NAME	N.S. Group	Sheet No.
3XC	Canton & Charlton very stony fine sandy loams, 8 to 15% slopes.		
17LC	Charlton-Hollis fine sandy loams, very rocky, 3 to 15% slopes.		
17LD	Charlton-Hollis fine sandy loams, very rocky, 15 to 35% slopes.		
60A	Hinckley gravelly sandy loam, 0 to 3% slopes.		
60C	Hinckley gravelly sandy loam, 3 to 15% slopes.		
60D	Hinckley gravelly sandy loam, 15 to 35% slopes.		
67A	Windsor loamy sand, 0 to 3% slopes.		
85MC	Canton & Charlton extremely stony fine sandy loam, 3 to 15% slopes.		
85MD	Canton & Charlton extremely stony fine sandy loam, 15 to 35% slopes.		
455B	Sudbury sandy loam, 3 to 8% slopes.		
GP	Gravel Pit		
	WETLAND SOILS		
* 43M	Ridgebury, Leicester, & Whitman extremely stony fine sandy loams.		
* 93	Carlisle Muck.		
* 466	Walpole sandy loam.		
* 806	Ondawa fine sandy loam.		
* 807	Suncook loamy fine sand.		
* 815	Podunk fine sandy loam.		
* 825	Rumney fine sandy loam.		
**	Inland Wetland Soils as defined by Public Act 155, as amended.		

Wetland Soils

PROPOSED INDUSTRIAL PARK
THOMPSON, CONNECTICUT



THOMPSON INDUSTRIAL PARK

GOBEIL PROPERTY

PROPORTIONAL EXTENT OF SOILS AND THEIR LIMITATIONS FOR CERTAIN LAND USES

Soil Series	Soil Symbol	Principal Limiting Factor	Building Site Development Limitations					
			Shallow Excavations	Dwellings without Basements	Dwellings with Basements	Small Commerical Buildings	Local Roads and Streets	Lawns and Landscaping
Canton & Charlton	3XC	Cutbanks cave, slope, large stones	3	2	2	3	2	2
# Charlton & Hollis	17LC	Slope Shallow to bedrock	2	2	2	3	2	2
# Charlton & Hollis	17LD	Slope Shallow to bedrock	3	3	3	3	3	3
Hinckley	60A	Small stones, cutbanks cave, too sandy	3	1	1	1	1	2
Hinckley	60C	Small stones, cutbanks cave, slope, too sandy	3	2	2	3	2	2
Hinckley	60D	Slope,small stones, cutbanks cave	3	3	3	3	3	3
Windsor	67A	Cutbanks cave,too sandy, droughty	3	1	1	1	1	3

THOMPSON INDUSTRIAL PARK

GOBEIL PROPERTY

PROPORTIONAL EXTENT OF SOILS AND THEIR LIMITATIONS FOR CERTAIN LAND USES

Soil Series	Soil Symbol	Principal Limiting Factor	Building Site Development Limitations: Shallow Excavations	Dwellings without Basements	Dwellings with Basements	Small Commerical Buildings	Local Roads and Streets	Lawns and Landscaping
Canton & Charlton	85MC	Cutbanks cave, large stones, slope	3	3	3	3	3	3
Canton & Charlton	85MD	Slope, large stones, cut-banks cave	3	3	3	3	3	3
Sudbury	455B	Wetness, cut-banks cave, small stones, frost action	3	3	3	3	2	1
		WETLAND SOILS						
* Ridgebury, Leicester & Whitman	43M	Wetness, frost action, large stones	3	3	3	3	3	3
* Carlisle Muck	93	Floods, excess humus, wetness, low strength	3	3	3	3	3	3
* Walpole	466	Wetness, frost Action	3	3	3	3	3	3

THOMPSON INDUSTRIAL PARK

GOBEIL PROPERTY

PROPORTIONAL EXTENT OF SOILS AND THEIR LIMITATIONS FOR CERTAIN LAND USES

Soil Series	Soil Symbol	Principal Limiting Factor	Builing Site Dvelopment Limitations: Shallow Excavations	Dwellings without Basements	Dwellings with Basements	Small Commerical Buildings	Local Roads and Streets	Lawns and Landscaping
			WETLAND SOILS					
* Ondawa	806	Floods	3	3	3	3	3	3
* Suncook	807	Floods,cut-banks cave	3	3	3	3	3	2
* Podunk	815	Floods,wetness	3	3	3	3	3	3
* Rumney	825	Floods,wetness, cutbanks cave, frost action	3	3	3	3	3	3

Limitations = 1 = slight; 2 = moderate; 3 = severe

* Inland Wetland Soils as defined by Public Act 155, as amended.

In some areas of this delination depth to rock may change the interpretations.

THOMPSON INDUSTRIAL PARK

GOBEIL PROPERTY

PROPORTIONAL EXTENT OF SOILS AND THEIR LIMITATIONS FOR CERTAIN LAND USES

Soil Series	Soil Symbol	Construction Material		
		Roadfill	Gravel	Drainage
Canton & Charlton	3XC	Good	Unsuited, excess fines	Not needed
Charlton & Hollis	17LC	Good	Poor, excess fines	Not needed
Charlton & Hollis	17LD	Fair	Poor, excess fines	Not Needed
Hinckley	60A	Good	Good	Not needed
Hinckley	60C	Good	Good	Not needed
Hinckley	60D	Fair	Good	Not needed
Windsor	67A	Good	Unsuited	Not needed
Canton & Charlton	85MC	Fair	Unsuited, excess fines	Not needed
Canton & Charlton	85MD	Fair	Unsuited, excess fines	Not needed
Sudbury	455B	Fair	Good	Favorable

THOMPSON INDUSTRIAL PARK

GOBEIL PROPERTY

PROPORTIONAL EXTENT OF SOILS AND THEIR LIMITATIONS FOR CERTAIN LAND USES

Soil Series	Soil Symbol	Construction Material		
		Roadfill	Gravel	Drainage
		WETLAND SOILS		
Ridgebury, Leicester & Whitman	43M	Poor	Unsuited, excess fines	poor outlets, percs. slowly
Carlisle Muck	93	Poor	Unsuited, excess fines	Excess humus, frost action, floods
Walpole	466	Poor, wetness	Fair, excess fines	Wetness
Ondawa	806	Fair, low strength	Unsuited	Not needed
Suncook	807	Good	Unsuited, excess fines	Not needed
Podunk	815	Moderate, frost action	Unsuited	Poor outlets, floods
Rumney	825	Poor, wetness	Unsuited, excess fines	Wetness, floods, poor outlets

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

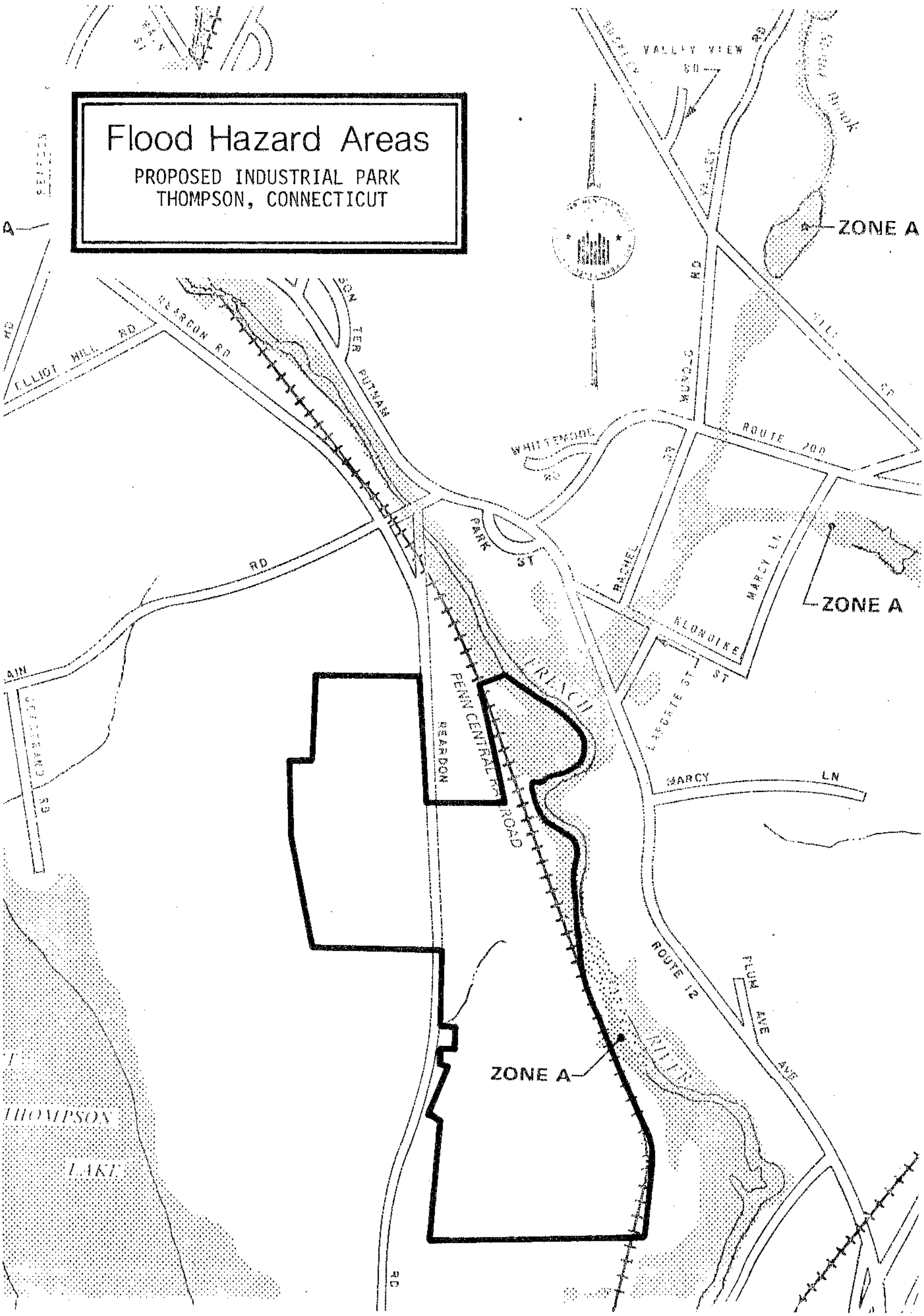
Areas rated as slight have relatively few limitations in terms of soil suitability for a particular use. The degree of suitability is such that a minimum of time or cost would be needed to overcome relatively minor soil limitations.

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.


Flood Hazard Areas
PROPOSED INDUSTRIAL PARK
THOMPSON, CONNECTICUT
ZONE A
ZONE A
ZONE A
VALLEY VIEW RD
ELLIOT HILL RD
REARDON RD
PUTNAM
WHITTEMORE RD
ROUTE 200
PARK ST
RACHEL
MARCY LN
KLONDIKE ST
PENN CENTRAL RAILROAD
REARDON
FRENCH RIVER
MARCY LN
ROUTE 12
PLUM AVE
THOMPSON LAKE

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.