

KING'S MARK ENVIRONMENTAL REVIEW TEAM



REPORT FOR

**FACCHIN STREET AFFORDABLE
HOUSING PROJECT**

CANAAN,
CONNECTICUT

King's Mark Resource Conservation and Development Area, Inc.

FACCHIN STREET AFFORDABLE HOUSING PROJECT

CANAAN, CONNECTICUT

Environmental Review Team Report

Prepared by the King's Mark Environmental Review Team
of the King's Mark Resource Conservation
and Development Area, Inc.

Wallingford, Connecticut

for the

Canaan Housing Commission

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 Housing Commission and the Town. The results of the Team action are oriented toward the development of a better environmental quality and long-term economics of the land use. The opinions contained herein are those of the individual Team members and do not necessarily represent the views of any regulatory agency with which they may be employed.

NOVEMBER 1989

ACKNOWLEDGMENTS

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I would also like to thank Susan Anderson, Secretary of the King's Mark Environmental Review Team for assisting in the completion of this report.

Finally, special thanks to Bishop Cyril Wismer, Chair, Housing Commission and Robin Cockerline, Secretary, Housing Commission, for their cooperation and assistance during this environmental review.

EXECUTIVE SUMMARY

Introduction

The Canaan Housing Commission has requested that an environmental review be conducted on the Facchin Street Affordable Housing Project. The site, which is located in central Falls Village, consists of 10 acres and was donated to the Town for affordable housing. Most of the site is flat and appears to be wet at least some of the year.

The proposal includes 10 single-family homes to be served by a cul-de-sac. Access to the adjoining property is a development constraint. The site is served by municipal water. Each home will have its own septic system. The Town is concerned with the impacts to the apparent wetlands on the site, impacts to the water supply and hydrology, the effects of erosion and sedimentation and design and land use considerations.

The review process consisted of 4 phases: (1) inventory of the site's natural resources; (2) assessment of these resources; (3) identification of resource problem areas; and (4) presentation of planning and land use guidelines. Based on the review process, specific resources, areas of concern, development limitations and development opportunities were identified. The major findings of the ERT are presented below:

Location, Zoning and Land Use

The site is bounded by Facchin Street Extension and private undeveloped land. The vicinity is characterized by single-family houses and farmland. The site is located in a R-Residence zone, which allows single-family homes on 2 acres.

Topography

The site is located on the northern slope of Beebe Hill. Slopes are gentle. Elevations range from 720 to 760 feet above sea level.

Geology

The bedrock underlying the site has been mapped as a Stockbridge Formation subunit, a grey dolomite marble. Bedrock is exposed in the northeast corner. A fault bisects the top of Beebe Hill and infers the boundary between the marble and more resistant rocks such as schist and gneiss. Glacial till overlays the bedrock on the site. The till appears to have a high silt content and a shallow compact zone. Till soils have a seasonally high watertable, shallow soil mottling and moderately slow to slow percolation rates. If not properly addressed, high watertables will pose problems for on-site septic systems, road construction and basements. In the shallow to bedrock areas, the till is relatively sandy and loose. Bedrock may be encountered in places and may require blasting for construction. The shallow bedrock will hinder sewage disposal.

Water Supply

Public water facilities are available to the site. If on-site wells are desired, the bedrock will have to be tapped. A well drilled into this type of bedrock should produce 2 to 5 gallons per minute. The natural water quality should be adequate, but the water may have elevated hardness, manganese and iron levels. Treatments are available. Some treatments for hardness which use sodium are prohibited in places with private septic systems.

Sewage Disposal

Based on soils data and visual observance, on-site sewage disposal will not be easily accomplished. Detailed subsurface exploration will be needed to verify conditions. The major constraints are the seasonal high watertable and the shallow bedrock in the northeast corner. There is also a high percentage of wetland soils on the site. These conditions will require engineered septic systems and groundwater controls. Individual lot testing will provide information to determine the potential to handle wastewater. The hostile physical constraints suggest that septic system installation will be expensive.

Hydrology

Drainage from the site flows into Kellogg Pond and eventually into the Hollenbeck River. No major perennial watercourses were observed, but there are numerous intermittent streamcourses. The surface waters have not been classified by the DEP and are assumed to be Class A. Groundwater is Class GA. Development of the property will cause increases in runoff. Because the amount of development is small, the increases are not expected to be high. Because of the wet conditions and the unsophisticated road drainage, a drainage plan should be prepared for the development. The concern is to avoid creating or aggravating existing flooding problems. The till on the site is susceptible to erosion. Proper erosion and sediment controls will be needed for any development.

Soil Resources

The major soil limitations on the site are seasonal high watertables, slow percolation rates and depth to bedrock. Seasonal high watertables will limit septic systems and basements. Slow percolation rates and shallow bedrock will also limit septic systems. Significant fill may be needed for development of this site.

Soil Constraints for Development

Development on the site is limited due to soil wetness. This limitation can be overcome by engineering, but this will increase the cost of development. Draining or altering of wetlands is generally considered unacceptable for environmental reasons. Allowing the Town to drain wetlands sets a precedent which other developers may follow.

Extensive drainage will be needed for development. Surface water diversions and subsurface drainage are recommended for any home constructed. Erosion and sediment control should not be a severe limitation, but will be needed where water flow concentrates. The increase in impermeable surfaces will increase the stormwater runoff. Reducing the development will reduce the runoff increases. The road right-of-way should be planned carefully to minimize the impacts to the wetlands. It is strongly suggested that wetlands which are not disturbed by construction or the right-of-way be protected by a conservation easement. Because the site is difficult to develop, alternatives might be considered.

Planning Alternatives and Guidelines

The suitability of the site for 10 homes is questionable. Site development costs will be extensive due to wetlands and high watertables. The State Plan designates the area as a Conservation Area because of the Prime and Important Farmland. Both the State Plan and the Regional Plan support the reservation of Prime and Important Farmland for farming. The Regional Plan's housing policy supports development in character with the surrounding land uses. The buildings should be designed to be compatible with the existing housing. The density of the plan is in harmony with the surrounding land uses, but a zone change will be required. Road conditions are also a consideration. The proposed homes will double the traffic on Facchin Street Extension, a road that is considered substandard. State and Federal assistance may not be available unless the Town upgrades the road. The Team reviewed the alternative plans presented. Other alternatives include limiting the number of homes or concentrating the units on the uplands if the conditions permit septic systems. Issues that face the Town include a State Plan that does not support development on Prime Farmland, inland wetlands, a zone change, extensive site development costs and costs to upgrade the roads. Alternatives include reducing the number of homes, hiring a soil scientist, selling the land to purchase a site more conducive to development, swapping the land with another land owning agency and developing the land for more compatible uses.

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INTRODUCTION



INTRODUCTION

The Canaan Housing Commission has requested that an environmental review be conducted on the Facchin Street Affordable Housing Project. The site, which is located in central Falls Village, consists of 10 acres and was donated to the Town for affordable housing. When entering the site for deep hole soil testing, the machinery was bogged down in wet soils. Most of the site is flat and appears to be wet at least some of the year. Access is provided by Facchin Street and Facchin Street Extension.

The proposal includes 10 single-family homes to be served by a cul-de-sac. Access to the adjoining property is a constraint for this development. The site is served by municipal water. Municipal wells or water towers are located across the street from the site. Each home will have its own septic system. The Town is concerned with the impacts to the apparent wetlands on the site, impacts to the water supply and hydrology, the effects of erosion and sedimentation and design and land use considerations.

The primary goal of this ERT is to inventory the natural resources of the site and provide planning information. Specific objectives include:

- 1) Assess the hydrologic and geologic characteristics of the site, including development limitations and opportunities;
- 2) Assess the impact of stormwater runoff;
- 3) Determine the suitability of existing soils to support the proposed development;
- 4) Discuss soil erosion and sedimentation concerns;
- 5) Discuss wetland concerns; and
- 6) Assess planning and land use issues.

THE ERT PROCESS

Through the efforts of the Canaan Housing Commission and the King's Mark ERT, this environmental review and report was prepared for the Town. This report primarily provides a description of on-site natural resources and presents planning and land use guidelines. The review process consisted of 4 phases:

- 1) Inventory of the site's natural resources (collection of data);
- 2) Assessment of these resources (analysis of data);
- 3) Identification of resource problem areas; and
- 4) Presentation of planning and land use guidelines.

The data collection phase involved both literature and field research. The ERT field review took place on September 27, 1989. Field review and inspection of the proposed development site proved to be a most valuable component of this phase. The emphasis of the field review was on the exchange of ideas, concerns or alternatives. Mapped data or technical reports were also perused, and specific information concerning the site was collected. Being on-site also allowed Team members to check and confirm mapped information and identify other resources.

Once Team members had assimilated an adequate data base, they were able to analyze and interpret their findings. The results of this analysis enabled the Team members to arrive at an informed assessment of the site's natural resource development opportunities and limitations. Individual Team members then prepared and submitted their reports to the ERT Coordinator for compilation into the final ERT report.

Figure 1

LOCATION OF STUDY SITE

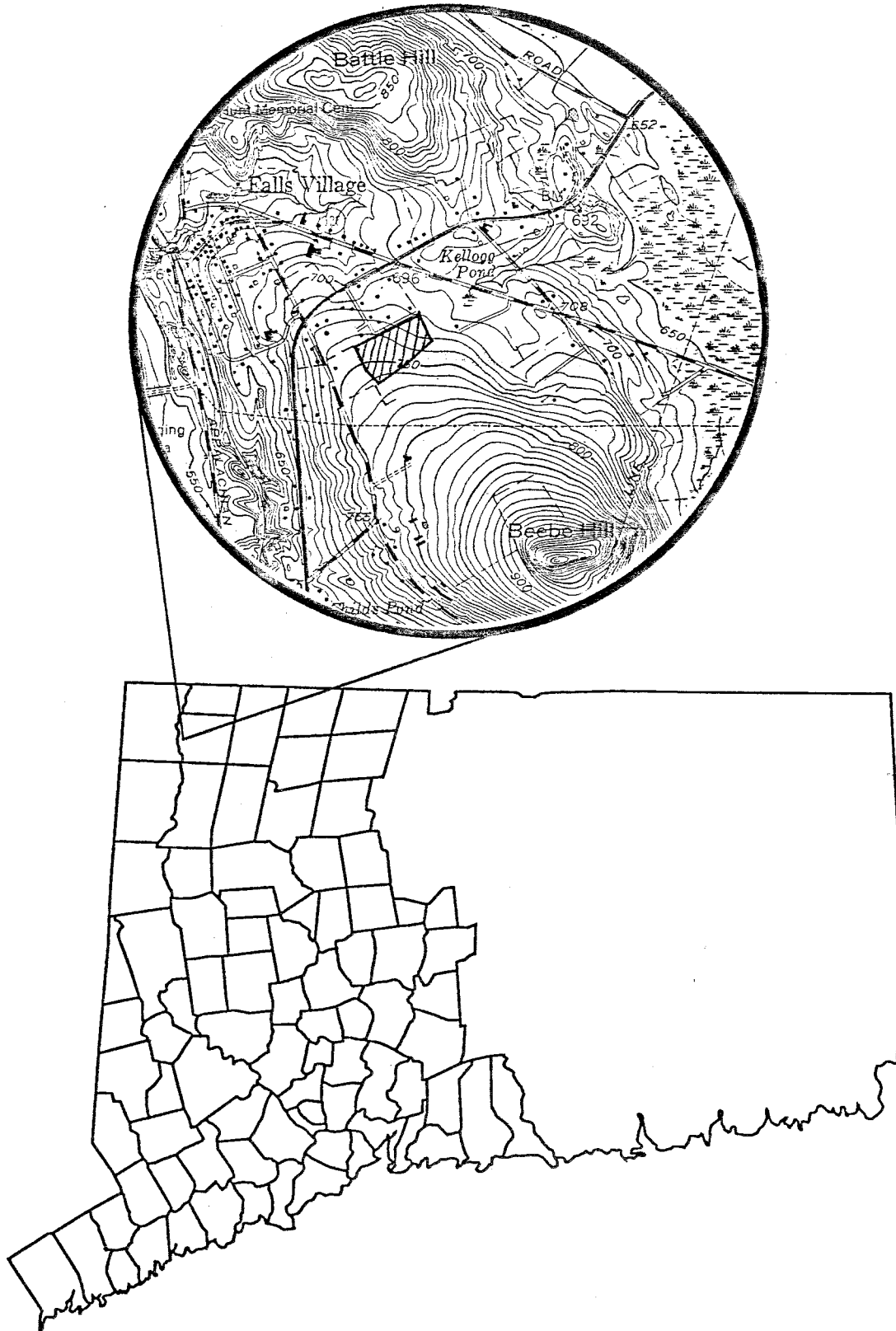
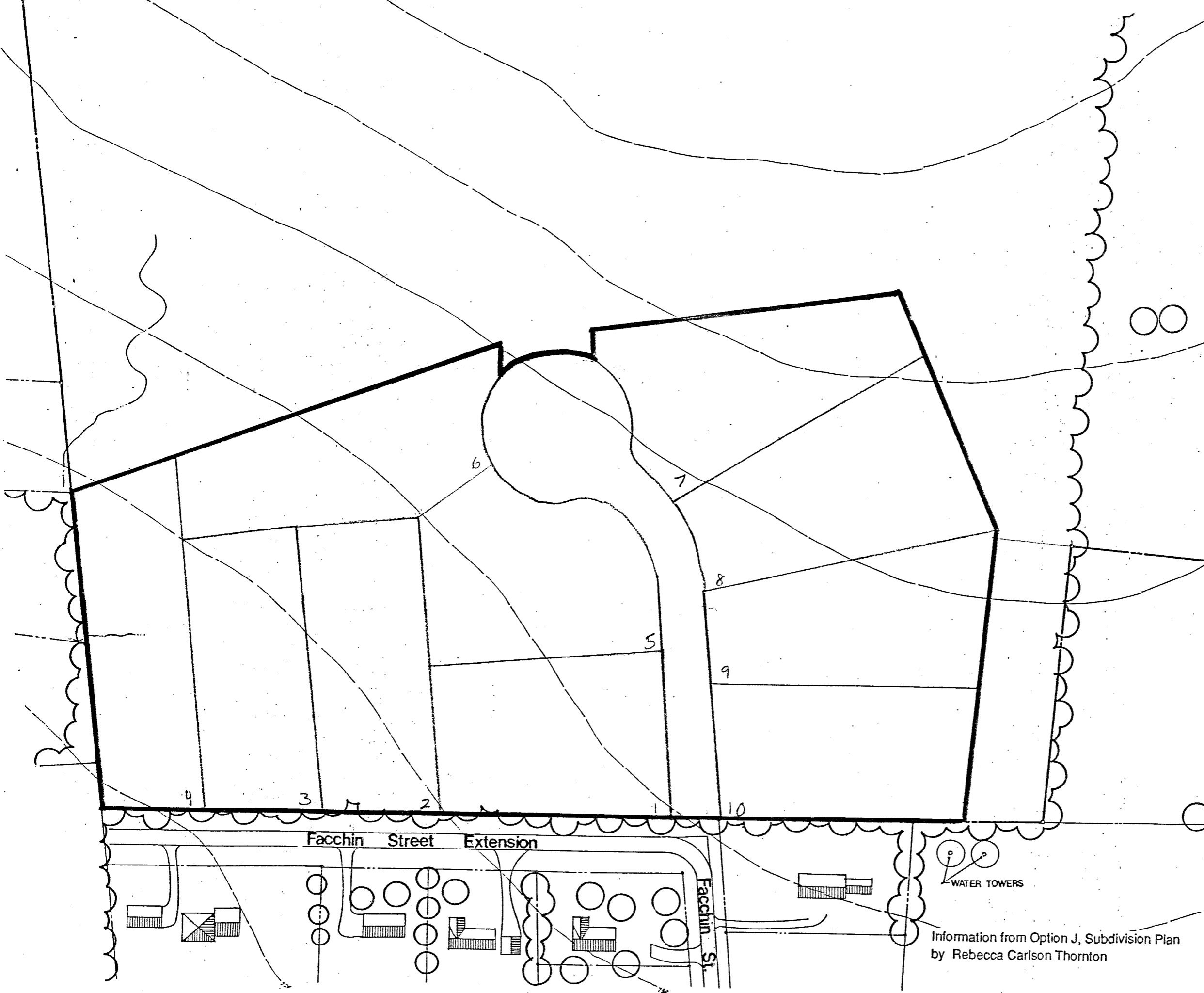



Figure 2



FACCHIN STREET AFFORDABLE HOUSING PROJECT CANAAN, CONNECTICUT	
King's Mark Environmental Review Team	
Scale: 1" = 100'	North 
Conceptual Site Plan	

WATER TOWERS

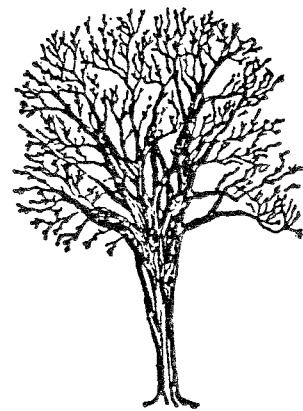
Information from Option J, Subdivision Plan
by Rebecca Carlson Thornton

Beebe Hill Road

Facchin Street Extension

Facchin St.

NATURAL RESOURCE CHARACTERISTICS



LOCATION, ZONING AND LAND USE

The approximately 10-acre wooded site is located southeast of Falls Village in westcentral Canaan. It is bounded by Facchin Street Extension on the northwest and private, undeveloped land on the west, east and south. Facchin Street and Facchin Street Extension will provide access to the development. Several residential properties are located on Facchin Street and Facchin Street Extension. Open farm fields also occur near the site.

The property is zoned R-Residence, which allows single-family homes on 2-acre or 80,000 square foot lots. The Town plans to develop the site for affordable housing, possibly dividing the site into 10 1-acre building lots. Each lot would be served by an individual on-site septic system and public water made available by the Canaan Water Department. Lots will be accessed via a 475-foot cul-de-sac and by Facchin Street Extension.

TOPOGRAPHY

The site is located on the northern slope of Beebe Hill, a rock cored hill that is orientated in a northwest-southeast direction. The land surface is characterized by gentle grades that slope approximately 5% northeast to Facchin Street Extension. Maximum and minimum elevations are 760 feet and 720 feet above mean sea level, respectively (see Figure 3).

GEOLOGY

Subsurface exploration for determination of the bedrock surface on the site has not been conducted to date. However, geologic mapping and visual observations

made during the field review indicate that bedrock is exposed in a few areas at the site's northeast corner. Published bedrock geologic data indicates that the site is underlain by a Stockbridge Formation subunit which consists of a gray dolomite marble (see Figure 4). Because marble rocks are composed of minerals that are soft and susceptible to erosion, they do not form abundant and continuous bedrock ledges as do the more resistant bedrock types (gneiss, quartzite and schist) that occur to the south. A concealed fault bisects the top of Beebe Hill generally in a east-west direction. This fault infers the boundary between the marble rock and the more resistant rocks (gneiss, quartzite and schist). The fault line represents a zone where the earth was pushed together several hundred million years ago. It is a structural feature and is no longer experiencing active movement. Because of the site's proximity to the fault, the upper few hundred feet of the bedrock surface may be fractured and slightly to moderately weathered.

According to soil mapping data and the unpublished Surficial Materials Map of Connecticut (1985 Stone et al.), bedrock is covered by glacial till (see Figure 5). Generally speaking, till consists of an unstratified, unsorted mixture of clay, silt, sand, gravel, pebbles, cobbles and boulders. The larger fragments in the till are subangular to angular. These sediments were transported and deposited by glacial ice as it moved northwest to southeast across the region. The till was derived from carbonate rocks, gneisses, quartzites and schists that underlie the region.

The majority of the till on the site appears to have a high silt content and a shallow compact soil zone. Till soils are characterized by seasonally high watertables, shallow soil mottling (an indicator of high groundwater tables) and moderately slow to very slow percolation rates. Above the compact soil zone, the texture of the soil is more permeable. During wet periods, the top 1-1.5 feet of the soil surface becomes saturated with groundwater because of the slowly permeable compact zone resulting in a seasonally high watertable. If not properly addressed,

Figure 3

Falls Village

126


Kellogg Pond

700

696

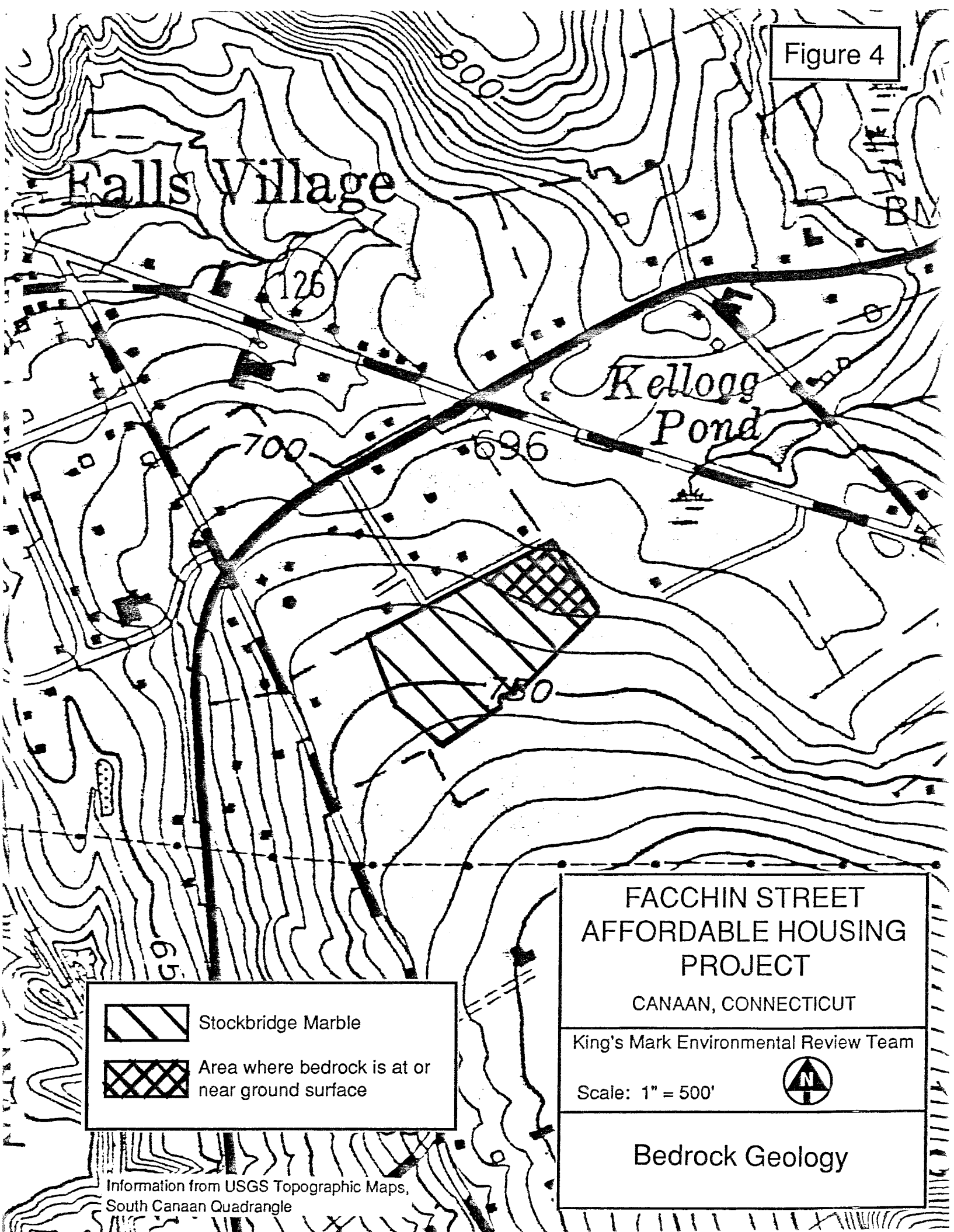
750

650

<p>FACCHIN STREET AFFORDABLE HOUSING PROJECT</p> <p>CANAAN, CONNECTICUT</p>	
<p>King's Mark Environmental Review Team</p>	
<p>Scale: 1" = 500'</p>	
<p>Topography</p>	

Information from USGS Topographic Maps, South Canaan Quadrangle

Figure 4



Falls Village

Kellogg Pond



Stockbridge Marble



Area where bedrock is at or near ground surface

FACCHIN STREET
AFFORDABLE HOUSING
PROJECT

CANAAN, CONNECTICUT

King's Mark Environmental Review Team

Scale: 1" = 500'



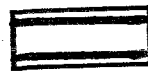
Bedrock Geology

Information from USGS Topographic Maps,
South Canaan Quadrangle

Figure 5


Falls Village

Kellogg Pond

 Glacial till

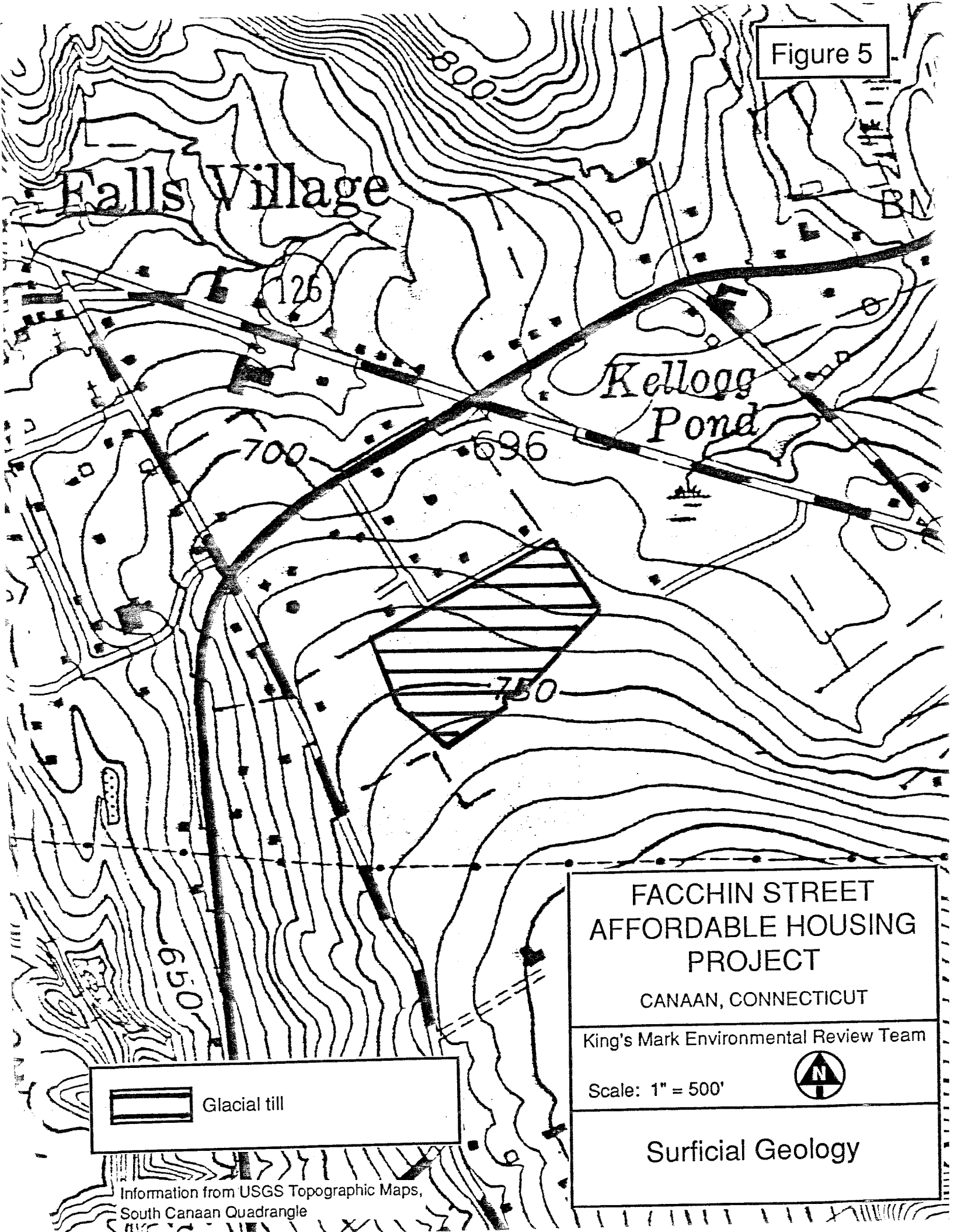
FACCHIN STREET
AFFORDABLE HOUSING
PROJECT
CANAAN, CONNECTICUT

King's Mark Environmental Review Team

Scale: 1" = 500' 

Surficial Geology

Information from USGS Topographic Maps, South Canaan Quadrangle



the seasonally high watertables will pose problems with the development of on-site sewage disposal, construction of roads and driveways, especially where deep cuts are required, and wet basements.

In the shallow to bedrock areas (northeast corner), the texture of the till is sandy and relatively loose. The shallow bedrock will be a major hindrance in terms of on-site sewage disposal. Also, the bedrock may be encountered in places during construction and may require blasting. The exact thickness of the till is unknown, but it becomes thicker moving east to west. Except for the shallow to bedrock areas in the northeast corner, the till soils probably exceed 10 feet in most places.

WATER SUPPLY

Public water facilities of the Canaan Water Company are accessible to this site. If an on-site well is desired, the marble (carbonate) bedrock would probably have to be tapped. Depending on the location of the well, several tens of feet of till may need to be penetrated before bedrock is reached. A well drilled no more than a couple of hundred feet into the bedrock should be capable of yielding 2 to 5 gallons per minute. Wells drilled into carbonate rock tend to be more productive than wells drilled into non-carbonate rock (granular and schistose type).

The natural water quality should be generally adequate, but, because of the particular mineralogy of the bedrock underlying the site, there is a chance that the water may have elevated hardness levels. Additionally, iron and manganese levels may be elevated. Elevated iron and manganese levels may discolor and impart a metallic taste to water. Hard water does not lather soap and leaves insoluble residues in bathtubs, sinks and clothing. Hard water also causes scale that encrusts water heaters, boilers and pipes, thereby reducing their capacity and heat-transfer properties. Treatment of hard water may contaminate groundwater by sodium that

is backwashed by the water softener into home septic systems. State regulations prohibit the use of these type of water softeners in homes where private septic systems are utilized.

SEWAGE DISPOSAL

Based on soil mapping data and visual observations made during the field review, on-site sewage disposal will not be easily accomplishable on the site. Only 3 or 4 building lots may be feasible on the site, but detailed subsurface exploration should be conducted to verify conditions. The major constraints are a seasonally high watertable condition on the majority of the site and the shallow to bedrock soils that occur in the northeast corner. Additionally, there is a high percentage of wetland soils on the site, but this should be verified by a certified soil scientist. These conditions will require special designed (engineered) septic systems, which will be large and constructed with well-drained fill material. In addition, groundwater control drains are needed to protect septic systems. If topographic conditions permit, these drains may be tied into the building footing drains which will protect basements from becoming wet. An alternative to the installation of building footing drains is the construction of the homes slab on grade.

Individual lot soil testing will provide the Town sanitarian with the necessary information to determine the site's ability to handle domestic wastewater discharges. This testing will also provide information concerning the size and cost of septic system installation on the site. The hostile physical constraints of the site suggest that septic system installation will be expensive due to engineering costs, fill material, groundwater control drains, etc.

The availability of public water decreases the potential for groundwater pollution and the detrimental effects of any such pollution that does occur.

HYDROLOGY

The entire site is located in the Hollenbeck River drainage basin. For the most part, surface water on the site flows downslope to Facchin Street Extension, where it is intercepted by road drainage (open channel along the north side of the street). The water is then routed northeastward through a wetland and ultimately to Kellogg Pond (see Figure 6). The outlet stream for Kellogg Pond is tributary to Hollenbeck River. Except for a few single-family homes, the drainage area above the site is largely undeveloped. Active farm fields characterize the upper parts of the drainage area.

No major perennial watercourses were observed, but there are numerous intermittent streamcourses visible on the site. The most notable is located in the northeast corner. The watercourses have not been classified by the Connecticut Department of Environmental Protection (DEP) and are considered Class A water resources. Class A waters may be suitable for drinking, recreational or other use and may be subject to absolute restrictions on the discharge of pollutants, although certain discharges may be allowed. Groundwater in the area is classified by the DEP as GA, which means that it is suitable for private drinking water supplies without treatment.

Residential development of the site will increase the amount of runoff during periods of rainfall. These increases result from soil compaction, removal of vegetation and placement of impervious surfaces (roofs, driveways, roads) over the soil. Because only a few homes are planned for the site, the runoff increases are not expected to be high. However, the existing wet conditions on the site and the unsophisticated road drainage on Facchin Street Extension emphasize that any development on the site should be accompanied by a drainage plan. The extent of the plan will depend upon the final number of houses and driveway locations. The main

concern is to avoid creating and/or aggravating existing drainage problems on Facchin Street Extension.

The till on the site may have a high silt and clay content which makes soil susceptible to erosion. The extremely wet conditions that prevail on the site will undoubtedly increase the potential for erosion and siltation problems. Therefore, if any development takes place on the site, proper erosion and sediment control measures must be implemented and checked on a regular basis.

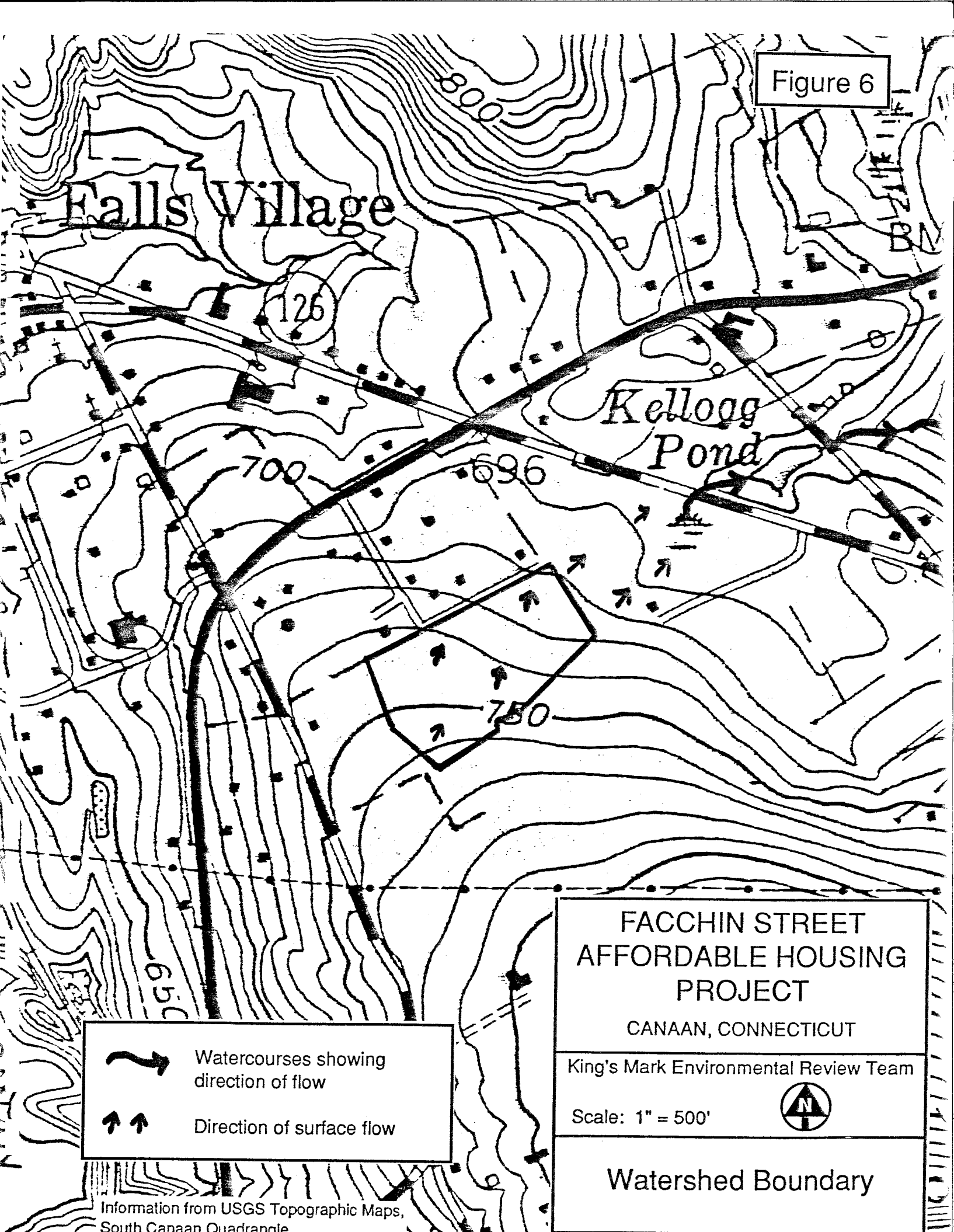
SOIL RESOURCES

The landscapes of the Facchin Street site are dominated by deep, gently sloping to nearly level glacial till soils with a firm dense substratum (hardpan) at a depth of approximately 2 feet. The dense till soils range from moderately well drained to poorly drained. A small area of soils that are a complex of deep (>40 inches) to shallow (<20 inches) soils over bedrock are present in the northeast corner of the site. The soils in this bedrock controlled area are excessively drained to moderately well drained.

The soil map (Figure 7) has been created from the on-site investigation during the field review, air photo interpretation and information in the Litchfield County Soil Survey (1970). Map unit descriptions have been modified from the Litchfield Soil Survey to more accurately reflect site conditions. Soil interpretations have been included in the map unit descriptions:

AnB - Amenia silt loam, 3 to 8% slopes: This map unit is dominated by deep, loamy, moderately well drained soils formed in dense glacial till. Included in this unit are areas of somewhat poorly drained and poorly drained soils and intermittent watercourses.

Figure 6



Falls Village

126



Kellogg Pond

700

696

750

650

 Watercourses showing direction of flow
 Direction of surface flow

FACCHIN STREET
 AFFORDABLE HOUSING
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 CANAAN, CONNECTICUT

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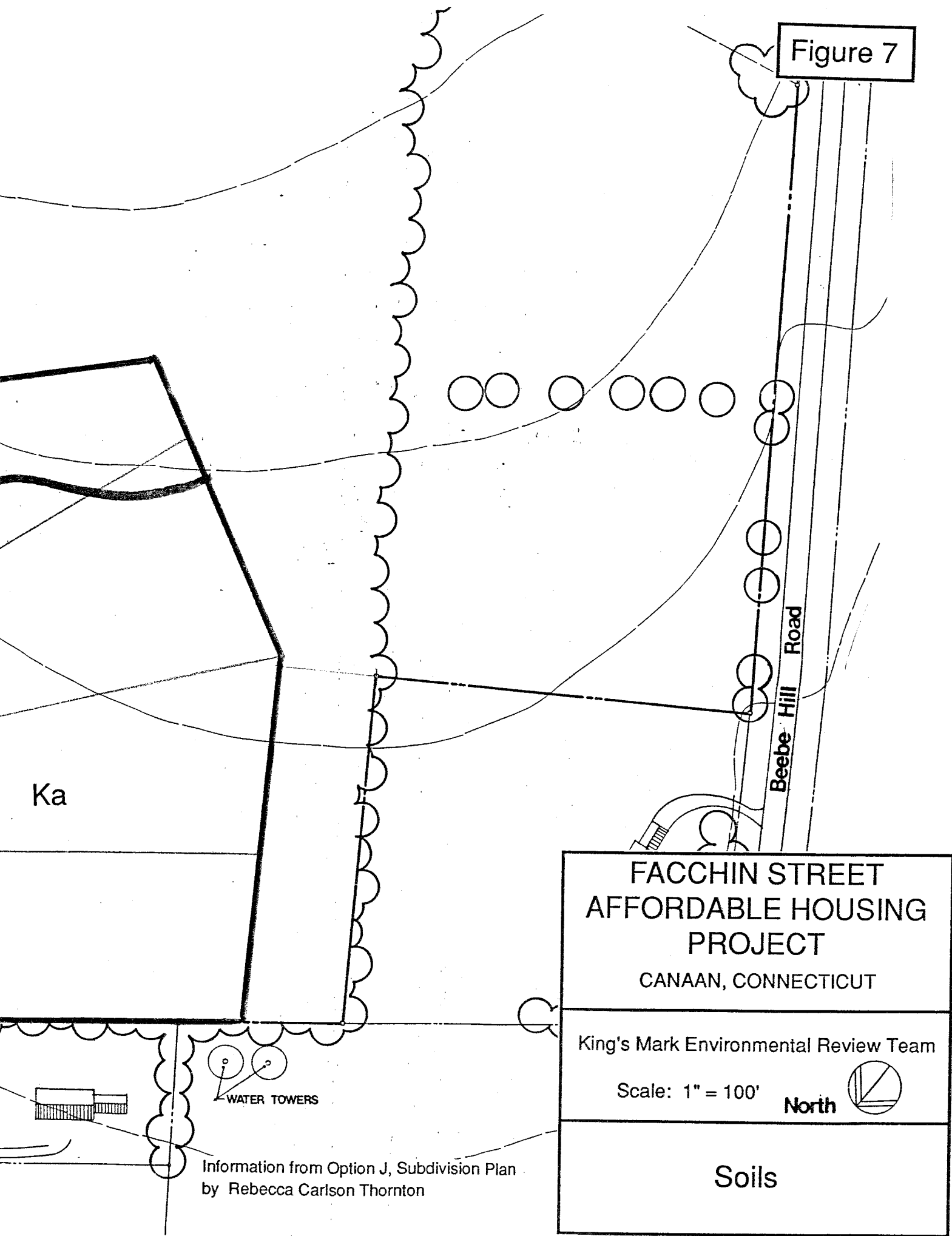
Scale: 1" = 500'



Watershed Boundary

Information from USGS Topographic Maps, South Canaan Quadrangle

Figure 7



Ka

Beebe Hill Road

FACCHIN STREET
AFFORDABLE HOUSING
PROJECT
CANAAN, CONNECTICUT

King's Mark Environmental Review Team
Scale: 1" = 100' North

Soils

WATER TOWERS

Information from Option J, Subdivision Plan
by Rebecca Carlson Thornton

Seasonal high watertable: 1.5 - 2.5 feet, because of perched watertable.

Permeability: Moderate in the subsoil and slow in the substratum.

Major limitations for development: The seasonal high watertable is the major limitation to homes with basements. Filling and installing foundation footing drains should prevent wet basements.

The seasonal high watertable and slow permeability and percolation rates of the substratum are the major limitations to the development of septic systems. Fill and subsurface and surface drainage are necessary to overcome these limitations.

Ka - Kendaia silt loam, 0 to 5% slopes: This map unit is dominated by deep, loamy, somewhat poorly drained to poorly drained soils formed in dense glacial till. Included in this unit are small areas of moderately well drained soils, intermittent watercourses and soils that lack a firm dense substratum. This map unit is dominated by **wetland soils**.

Seasonal high watertable: 0.5 - 1.5 feet, because of perched watertable.

Permeability: Moderate in the subsoil and slow in the substratum.

Major limitations to development: The seasonal high watertable is a major limitation for buildings with or without basements. Significant fill is necessary for development.

The seasonal high watertable and high susceptibility to frost heaving are major limitations to the development of local roads and streets. Significant fill, coarse subgrade and drainage may prevent damage.

The seasonal high watertable and slow percolation rate of the substratum are major limitations to the development of septic systems. Substantial fill and surface and subsurface drainage are required to overcome these limitations.

FaC - Farmington very rocky silt loam, 3 to 15% slopes: This map unit consists of a complex of shallow (< 20 inches) and moderately deep (20-40 inches) loamy glacial till soils over undulating bedrock. The soils are excessively drained to moderately well drained. Included in this unit are small areas of deep soils, poorly drained soils and exposed bedrock.

Seasonal high watertable: Variable, but generally 1.5 feet to >4 feet.

Permeability: Moderate in the subsoil and substratum.

Major limitations for development: The depth to bedrock is the major limitation to the development of homes with basements and on-site septic systems. By performing additional investigations with deep test pits, the

small areas of deep soils more suitable for development may be located. Blasting of bedrock and use of extensive fill may also be needed.

In summary, the soils and landscape position of the parcel have major limitations to the development of homes with septic systems. The parcel is at the base of a long sloping landform, with a great deal of surface and subsurface water flowing over the site. Numerous intermittent watercourses (regulated areas) crisscross the parcel in a complex pattern. A large percentage of the center of the parcel contains poorly drained soils (wetland soils) and somewhat poorly drained soils. Non-wetland soil areas have a seasonal high watertable and slow percolation rates or have a variable depth to bedrock. If more detailed information is needed on the location of the inland wetland soils and watercourses, a consulting soil scientist should be hired.

SOIL CONSTRAINTS FOR DEVELOPMENT

Development on the site is very limited due to soil wetness. This limitation can be overcome by engineering which increases the cost of development. High costs should be avoided for a low cost housing venture. Draining or altering of inland wetland areas is generally considered unacceptable for environmental reasons. Allowing the Town to drain wetlands sets a precedent which other developers may follow.

Because of the soil wetness, the construction of 10 homes with on-site septic systems is not recommended. Realistically, 1 or 2 homes could be constructed. Road construction would not be required for 2 homes, and the cost of development would be greatly reduced.

Extensive land drainage is needed for any home constructed on this site. Sheet flow of water is evident in numerous areas of the parcel. This water can cause

problems for septic systems, driveways and landscaping. If any homes are constructed on the site, a water diversion is recommended above each home site. The water diversion could empty into a waterway leading downslope. These water control structures should be sized and designed by an engineer.

Subsurface drainage systems are also recommended for any home constructed. The purpose of the subsurface drainage system is to dry out the yard and septic system areas. It is not likely that the surface water diversion will adequately dry any house lots without the additional subsurface drainage system. The subsurface drainage for the septic system should be designed by an engineer.

Because of the flat to gently sloping topography of the site, erosion control during construction should not be a severe limitation. The exception to this is in areas where water flow concentrates such as a water diversion, waterway or subsurface drain outlet. The adjacent woodland areas show signs of gully erosion in intermittent watercourses.

Building impermeable structures such as roads, driveways and roofs causes increased stormwater runoff. Reducing the number of homes on this site from 10 to 1 or 2 greatly reduces this negative effect. Downstream culverts and drainageways should be checked by the Public Works Department or other suitable group during storm events to ensure that they have room for more water.

The future road right-of-way through the site should be planned carefully to minimize impacts to inland wetlands. The right-of-way should be planned after the inland wetlands have been flagged by a soil scientist. The Falls Village Inland Wetland Commission may have valuable input on this matter.

It is strongly recommended that all inland wetlands on the site which are not disturbed by construction or the right-of-way to the adjoining property be protected with a conservation easement. The conservation easement could further restrict disturbance of the wetland areas beyond what is feasible by the Inland Wetlands and

Watercourses Act. A local land trust or other suitable group could hold the conservation easement.

Because the site is difficult to develop due to the soil wetness, alternative land uses might be investigated. The Soil Conservation Service staff is available to assist the Town with alternative land uses.

LAND USE AND PLANNING CONSIDERATIONS



farmlands for agriculture. LAND USE: RURAL AREAS Policy 1.8 states:

"Critical Farmlands

The Northwestern Connecticut Council of Governments recommends that each town Planning...Commission identify critical farmlands to be preserved.... NWCCOG further recommends that towns study a variety of means for agriculture preservation." (p. 19).

If the Town decides not to preserve this particular site for agriculture, the Regional Plan implies that the Northwestern Connecticut Council of Governments (NWCCOG) would not strongly object, since "The Council of Governments tries to foster cooperation in areas needed by all towns, while respecting individual towns' control over local decision-making." (p. 2)

The Regional Plan also has the following HOUSING GOAL:

"To conserve the region's existing housing and to attain residential development that is consistent with the region's housing needs, rural character, and environmental quality." (p. 23)

The single-family homes on Facchin Street Extension directly face the front of future buildings to be constructed on the site. Therefore, designing the buildings and layout for compatibility with existing homes should be considered. Landscape buffers using existing tree cover can provide privacy, both for the new development and for the homes across the street.

Another planning consideration is the density of proposed dwelling units. The density of the proposed site plan is in harmony with the surrounding developed area. However, a zone change from R-Residence to A-Residence is required to meet minimum lot size requirements. The site is in R-Residence Zone, which permit single-family homes on 80,000 square feet (2 acres) and two-family homes on 120,000 square feet (3 acres). Existing homes facing the site are in A-Residence Zone, allowing single-family homes on 20,000 square feet (1/2 acre), two-family homes on

30,000 square feet (3/4 acre) and multiple-family dwellings by special exception subject to certain conditions, including public water supply and a common sewage system.

Road conditions and traffic are also a planning consideration. Since Facchin Street and Facchin Street Extension dead end off State Route 7, they serve only the 9 (estimated) existing homes with access on those streets. Using the standard trip generation rate of 10 vehicle trips per single-family dwelling per day, these streets currently carry a maximum of 90 vehicle trips per day. The proposed site plan would effectively double the traffic volume on Facchin Street Extension, a road that is considered substandard, given current travel width, rudimentary drainage and lack of pavement. It is not likely that State or Federal financial assistance for the development would be granted without a Town commitment to make substantial improvements to Facchin Street and Facchin Street Extension.

Alternative Site Plans

The Team had the opportunity to briefly review various site plans prepared for the Housing Commission. Team members agreed the final plan selected appeared to be the most viable. However, this conclusion preceded the actual site visit.

The field review suggested 2 further alternatives: severely limiting the number of homes (2 were suggested) or concentrating units (as in apartments or condominiums) in the single well-drained area and leaving the rest of the site undeveloped. Only a detailed soils map can determine the feasibility of the latter option, which would require a small community septic system, a zone change and a special exception.

Issues

If the Town's overriding goal is to promote affordable housing on this property, the Town will have to confront:

- 1) A State Plan that does not appear to support housing on Prime Farmland soils;
- 2) Town Inland Wetland regulations governing much of the site (if the Inland Wetlands Commission is flexible in granting permits in this instance, private developer applicants could exert similar pressure);
- 3) A zone change and special exception to permit multi-family units, if such an option proves environmentally feasible;
- 4) Extensive engineering and site development costs to address the numerous limitations noted by the soil and hydrology experts. (although costs may be financed through loans or grants from the State Housing Department, the presence of Prime Farmland soils may result in denial); and
- 5) Costs to upgrade Facchin Street and Facchin Street Extension to accommodate increased traffic (assuming more than 2 housing units are approved).

Alternatives

- 1) Reduce the number of homes to 2. The drainage, septic and inland wetland concerns will still have to be confronted and paid for, but at least the Town will achieve a housing construction goal. The site development costs will be offset somewhat by the fact that the Town did not have to pay for the land. If practical, the undeveloped portion of the land could be leased for farming and/or placed in a permanent conservation easement.
- 2) Hire a soil scientist to map the area. The cost of this service should range from \$1000-2000 and will enable a more definitive answer to the questions of:
 - a) Suitability of the existing 10-home site plan and
 - b) Suitability of a multi-family concept and its preferred size.
- 3) Sell the land and use the proceeds for land and/or housing construction costs on a more developable site.
- 4) Seek a land swap with a public agency such as the DEP, or with a land trust or similar land-owning institution. The goal would be to obtain a site for affordable housing with fewer development limitations. The State Housing Department contact person assigned to the Town's Housing Partnership Committee should be able to assist in this effort.
- 5) Develop the land for compatible uses such as an outdoor nature study area, a skating pond, a fire pond or a community water supply. There may be limitations to use for water supply, as noted in the Water Supply section.

NOTES

ABOUT THE TEAM

The King's Mark Environmental Review Team (ERT) is a group of environmental professionals drawn together from a variety of federal, state and regional agencies. Specialists on the Team include geologists, biologists, soil scientists, foresters, climatologists, landscape architects, recreational specialists, engineers and planners. The ERT operates with state funding under the aegis of the King's Mark Resource Conservation and Development (RC&D) Area - an 83-town area serving western Connecticut.

As a public service activity, the Team is available to serve towns and/or developers within the King's Mark RC&D Area - free of charge.

Purpose of the Environmental Review Team

The Environmental Review Team is available to assist towns and/or developers in the review of sites proposed for major land use activities. For example, the ERT has been involved in the review of a wide range of significant land use activities including subdivisions, sanitary landfills, commercial and industrial developments and recreational/open space projects.

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

Requesting an Environmental Review

Environmental Reviews may be requested by the chief elected official of a municipality or the chairman of an administrative agency such as planning and zoning, conservation or inland wetlands. Environmental Review Request Forms are available at your local Soil and Water Conservation District and through the King's Mark ERT Coordinator. This request form must include a summary of the proposed project, a location map of the project site, written permission from the land owner/developer allowing the Team to enter the property for purposes of review and a statement identifying the specific areas of concern the Team should investigate. When this request is approved by the local Soil and Water Conservation District and King's Mark RC&D Executive Committee, the Team will undertake the review. At present, the ERT can undertake approximately two (2) reviews per month.

For additional information regarding the Environmental Review Team, please contact your local Soil and Water Conservation District or Nancy Ferlow, ERT Coordinator, King's Mark Environmental Review Team, King's Mark RC&D Area, 322 North Main Street, Wallingford, Connecticut 06492. King's Mark ERT phone number is 265-6695.