

CHESAPEAKE RUBBLE FILL ADDITION

PHASE I REPORT

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JUN 8 1989

SOLID WASTE DIVISION

FOURTH DISTRICT

ANNE ARUNDEL COUNTY, MD

Prepared by:

Leimbach Development Corporation
P. O. Box 364
Millersville, MD 21108
(301) 768-6006

May, 1989

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PROPOSED ACTIVITY

The site is proposed for use as a sand and gravel mine and a rubble landfill. The resources will be recovered from the site as the rubble fill is placed in previously mined areas. The wastes to be disposed of at the rubble fill will be the acceptable wastes as described in COMAR 10.17.11.13E.

The site has a Surface Mining Permit, number 87-SP-0251, with an effective date of 7/15/88 and an expiration date of 7/15/93. The mining is expected to begin in the summer of 1989. The mining plan and restoration plan will be followed as mining proceeds.

If a rubble fill permit is obtained, the excavation of sand and gravel, stockpiling of overburden, rubble fill and cover placement will be coordinated on the site. The rubble fill plan final grades will modify the current surface mining reclamation plans.

This project will provide a comprehensive plan for sand and gravel mining, placing rubble fill and restoration of mined areas. The site is adjacent to the Chesapeake Rubble Fill. A Phase I permit for Chesapeake Rubble Fill was submitted in November 1988. If this Phase I application for Chesapeake Rubble Fill Addition is approved, the projects will continue into Phase II and III as a single Rubble Fill project.

DEPARTMENT OF HEALTH AND MENTAL HYGIENE
OFFICE OF ENVIRONMENTAL PROGRAMS
201 West Preston Street
Baltimore, Maryland 21201

REFUSE DISPOSAL PERMIT APPLICATION

1. Applicant's Name (County, corporation, person):

Chesapeake Terrace, Inc.
 Address: P.O. Box 364, Millersville, Md. 21108
 Telephone Number: 768-6006

2. Type of Facility:

- a. Sanitary Landfill _____ d. Incinerator _____
 b. Processing Facility _____ e. Other Rubble Landfill
 c. Transfer Station _____

3. Location:

- a. County Anne Arundel
 b. Site Size(acres) 110 ac.
 c. Facility Size(acres) 40 ac.
 d. Street(s) or road(s) Patuxent Road

4. Is proposed facility in conformance with:

- a. Approved county solid waste plan Yes x No _____
 b. County zoning and land use requirements. Yes x No _____
 (If yes, attach documentation) Proposed Comprehensive
Rezoning in progress

Mark B. Weber 5/25/89
 Signature of Applicant or Authorized Agent
 Mark B. Weber

5. Attach: a) Table, Types and Quantities of Solid Wastes to be accepted.
 b) Ten(10) copies of USGS 7½ minute quadrangle map with the proposed site outline.
 12 — c) Ten(10) copies of a map which shows the zoning and land use within ¼-mile of the boundaries of the site.
 d) Ten(10) copies of any preliminary information concerning the site which has been gathered.

Upon receipt of a signed Refuse Disposal Permit Application, the Department shall execute the following "right of entry" clause based on COMAR 10.17.11(.09)(D)(2). Agents of the approving authority, after proper identification, shall be allowed entry to all buildings, structures, and premises owned by counties, municipalities, districts, corporations, companies, and persons supplying refuse disposal service, or upon all private properties, for the purpose of collecting samples, records and information and taking photographs, ascertaining whether the regulations and orders of the Secretary of Health and Mental Hygiene are obeyed.

REFUSE DISPOSAL PERMIT APPLICATION

TABLE 1

TYPES AND QUANTITIES OF SOLID WASTES TO BE ACCEPTED
In tons(T), gallons(G) or cubic yards(CY) per year,
as appropriate

<u>TYPE</u>	<u>FIRST YEAR</u>	<u>SECOND YEAR</u>	<u>FIFTH YEAR</u>
Appliances & White Goods			
a. Residential (household, domestic)	<u>4000 T</u>	<u>4400 T</u>	<u>5700 T</u>
b. Commercial	<u>NA</u>	<u>NA</u>	<u>NA</u>
c. Industrial (non-hazardous)	<u>NA</u>	<u>NA</u>	<u>NA</u>
d. Institutional (schools, hospitals, etc.)	<u>NA</u>	<u>NA</u>	<u>NA</u>
e. Land Clearing (tree stumps, brush, leaves, etc.)	<u>140,000 CY</u>	<u>154,000 CY</u>	<u>200,000 CY</u>
f. Demolition Debris	<u>10,000 CY</u>	<u>11,000 CY</u>	<u>14,000 CY</u>
g. Controlled Hazardous Substances (CHS)	<u>NA</u>	<u>NA</u>	<u>NA</u>
h. Agricultural (crop residues and animal manures)	<u>NA</u>	<u>NA</u>	<u>NA</u>
i. Dead Animals	<u>NA</u>	<u>NA</u>	<u>NA</u>
j. Bulky or "special" (automobiles, large appliances, etc.)	<u>NA</u>	<u>NA</u>	<u>NA</u>
k. Tires	<u>10,000 T</u>	<u>11,000 T</u>	<u>14,000 T</u>
l. Recreational (from parks, boat landings, etc.)	<u>NA</u>	<u>NA</u>	<u>NA</u>
m. Wastewater treatment plant sludge	<u>NA</u>	<u>NA</u>	<u>NA</u>
n. Water treatment plant sludge	<u>NA</u>	<u>NA</u>	<u>NA</u>
o. Residues collected by air pollution control devices	<u>NA</u>	<u>NA</u>	<u>NA</u>
p. Litter	<u>NA</u>	<u>NA</u>	<u>NA</u>
q. Other (specify each type)	<u>16,000 CY</u>	<u>17,000 cy</u>	<u>23,000 cy</u>
Construction Debris			
Asbestos Waste	<u>2500T</u>	<u>2700T</u>	<u>3500T</u>

MARYLAND GROUNDWATER POLLUTION CONTROL AND PREVENTION SYSTEM

APPLICATION FOR PERMIT TO DISCHARGE* TO UNDERGROUND WATERS
AND FOR APPROVAL OF PLANS AND SPECIFICATIONS
FOR A FACILITY WHICH MAY DISCHARGE

LOCATION: (name and address of facility producing discharge or potential discharge)

NAME Chesapeake Rubble Landfill Addition

ADDRESS Patuxent Road, Tax Map 36, Block 8, Parcels 20 & 117

COUNTY/CITY Anne Arundel

ZIP CODE

*Include a copy of a U.S.G.S. 7.5 minute quadrangle map showing the exact location of discharge or facility.

TYPE OF DISCHARGE OR FACILITY (check all appropriate boxes)

DISCHARGES

(DISCHARGE PERMIT REQUIRED)

LAND APPLICATION OF WASTEWATER

IRRIGATION (spray or other)

OVERLAND FLOW

INFILTRATION-PERCOLATION BASIN

OTHER, DESCRIBE

UNDERGROUND WASTE INJECTION WELLS

RECHARGE WELLS

SUB-SURFACE SOIL ABSORPTION SYSTEM (drainfield, seepage pit, etc.; industrial only)

LANDFILLS

LANDFILLS FOR INDUSTRIAL WASTES AND SLUDGES

LANDFILLS FOR MUNICIPAL WASTEWATER TREATMENT PLANT SLUDGES

SANITARY LANDFILLS FOR MUNICIPAL AND COMMERCIAL WASTES

OTHER, DESCRIBE Rubble Landfill

FACILITIES WHICH MAY DISCHARGE

(APPROVAL OF PLANS AND SPECIFICATIONS REQUIRED)

HOLDING PONDS AND LAGOONS FOR CHEMICALS, WASTES OR OTHER MATERIALS

WASTEPILES AND STOCKPILES

STRIP MINE SPOILPILES

CHEMICAL STOCKPILES

SALT STOCKPILES

OTHER, DESCRIBE

NATURE OF WASTE, WASTEWATER, OR POTENTIAL POLLUTANT (check all appropriate boxes)

SANITARY

INDUSTRIAL

COOLING WATER

SOLID WASTES

SLUDGES

LIQUID WASTES

DESCRIBE Land clearing debris, demolition debris, construction debris, tires, asbestos waste packaged per COMAR 10,18,15,04, household appliances and white goods.

QUANTITY OF WASTE, WASTEWATER, OR POTENTIAL POLLUTANT:

LIQUIDS: AVG. GAL/DAY variable

MAX. GAL/DAY variable

SOLIDS OR SLUDGES: AVG. TONS/DAY

MAX. TONS/DAY

PERIOD OF DISCHARGE OR OPERATION OF FACILITY:

FROM June 1991 TO June 1999

DISCHARGES TO PLACES OTHER THAN GROUNDWATER

SURFACE WATERS, NAME OF RECEIVING WATER _____
 MUNICIPAL SEWER SYSTEM OTHER _____

SOURCE OF WATER SUPPLY

GROUNDWATER (wells) PUBLIC WATER SUPPLY, NAME _____
 SURFACE WATER NO WATER USED IN OPERATION

OTHER ADMINISTRATION PERMITS APPLIED FOR

NO YES, KIND OF PERMIT Refuse Disposal Permit

APPLICANT

NAME Chesapeake Terrace, Inc.
ADDRESS P.O. Box 364
COUNTY/CITY Millersville Md ZIP CODE 21108 PHONE 768-6006

OWNER (if different from above)

NAME Chesapeake Terrace, Inc.
ADDRESS P.O. Box 364
COUNTY/CITY Millersville, Md. ZIP CODE 21108 PHONE 768-6006

OPERATOR (if different from above)

NAME Chesapeake Terrace, Inc.
ADDRESS P.O. box 364
COUNTY/CITY Millersville, Md. ZIP CODE 21108 PHONE 768-6006

SIGNATURE OF APPLICANT OR AGENT

Mark B. Weber 5/25/89
Mark B. SIGNATURE Weber DATE

NOTICE: UPON RECEIPT, THE WASTE MANAGEMENT ADMINISTRATION WILL EVALUATE THIS APPLICATION AND NOTIFY THE APPLICANT OF REQUIREMENTS, IF ANY, FOR ADDITIONAL INFORMATION AND WHETHER OR NOT A DISCHARGE PERMIT WILL BE REQUIRED FOR A FACILITY WHICH MAY DISCHARGE.

*Section 3-141J of the Natural Resources Article requires that a permit be obtained to discharge any pollutant into surface or underground waters of the State. "Discharge" means the addition, introduction, leaking, spilling, or emitting any pollutant to State waters or the placing of any pollutant in a location where it is likely to pollute.

SEND TO:
WASTE MANAGEMENT ADMINISTRATION
OFFICE OF ENVIRONMENTAL PROGRAMS
201 WEST PRESTON STREET
BALTIMORE, MARYLAND 21202

If there are any questions, telephone (301) 383-5670

LOCATION, ACCESS AND ZONING DESCRIPTION

The site is 110 acres known as Plummer Property in Odenton, Anne Arundel County, MD. The site consists of Parcel 20 and Parcel 117 as shown on Tax Map 36, Block 8. The site is bounded on the North by the proposed Chesapeake Rubble Fill. This project will be owned and operated as a part of the Chesapeake Rubble Fill.

The East boundary of the site is the Anne Arundel County Patuxent River Park and the Barton Mitchell property. To the south is the 28 acre Minder parcel. The West boundary of the site consists of several residential parcels with access from Collins Avenue.

Access to the site will be from Patuxent River Road. Sight distance will be improved at two sharp curves in Patuxent River Road. Traffic will approach the site from the North and West via MD 32, MD 175, Waugh Chapel Road and Patuxent River Road.

Traffic will approach the site from the South, East and Northeast via I97 or MD 3, MD 424 (Conway Road), and Patuxent River Road.

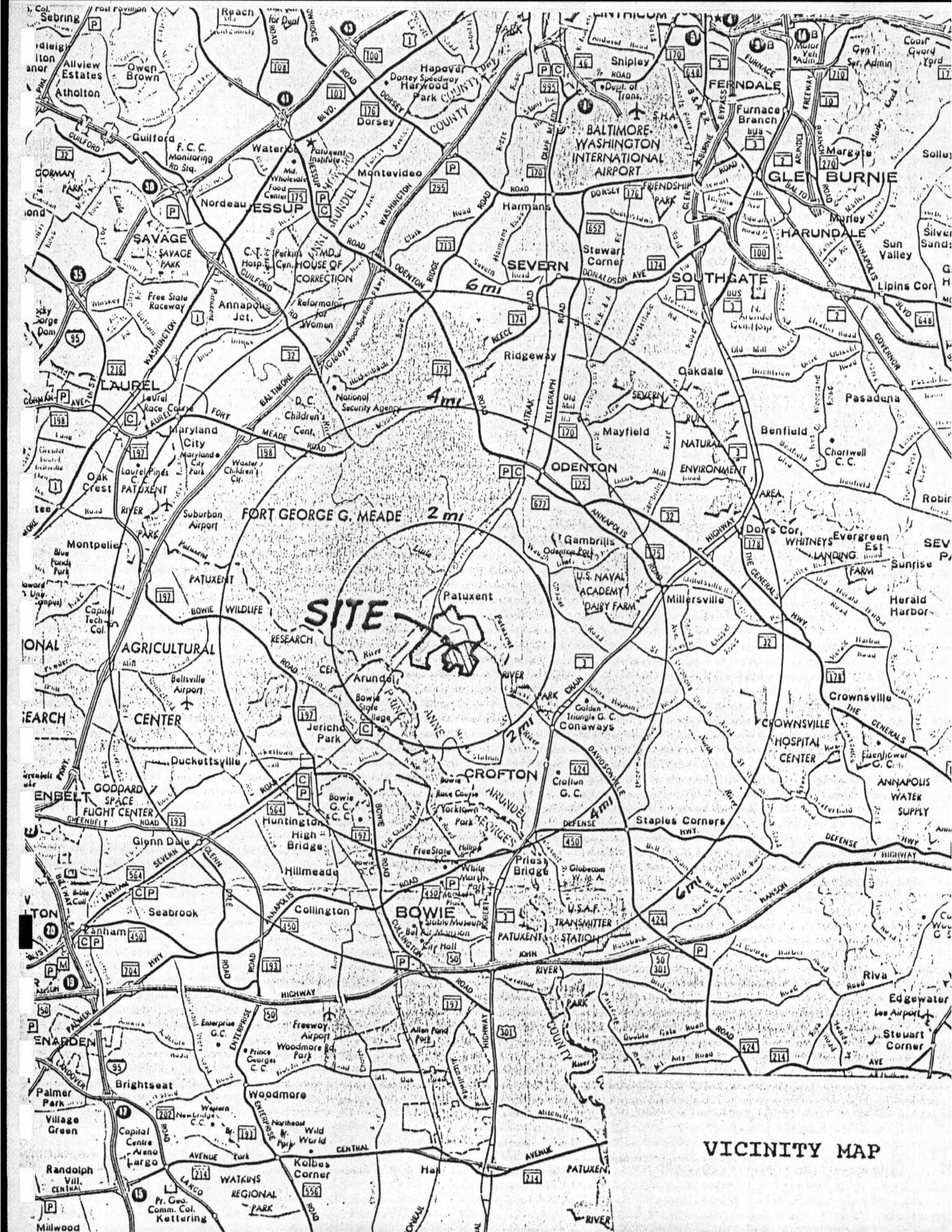
Access to the site will not be provided from Conway Road.

The site consists of about 110 acres. About 85 acres are zoned Residential Agricultural (RA). Sand and gravel mining and landfills are permitted under RA zoning as a special exception use. The remaining 25 acres of the site are zoned Open Space (OS). The OS zone protects natural features including wetlands and intermittent streams draining to the Little Patuxent River.

A stormwater drainage collection system will convey runoff from active mining and filling areas to sediment control devices. The project will be divided into operation phases so that completed areas can be restored and stabilized.

The rubble fill project will receive wastes generated by land clearing, construction, demolition, and rehabilitation projects. The site is estimated to hold 2,200,000 cy of rubble fill. The rubble fill capacity will depend upon the amount of sand and gravel removed and the final site contours.

The site will mainly serve the portions of Anne Arundel, Howard, Montgomery and Prince Georges Counties in the vicinity of the site. However, as the capacity of existing sanitary landfills begins to wane, rubble fill from a larger region may be directed to the Chesapeake Rubble Fill. The rubble fill life of the site is estimated to be eight years with mining continuing for about seven years.



SITE



VICINITY MAP



21113

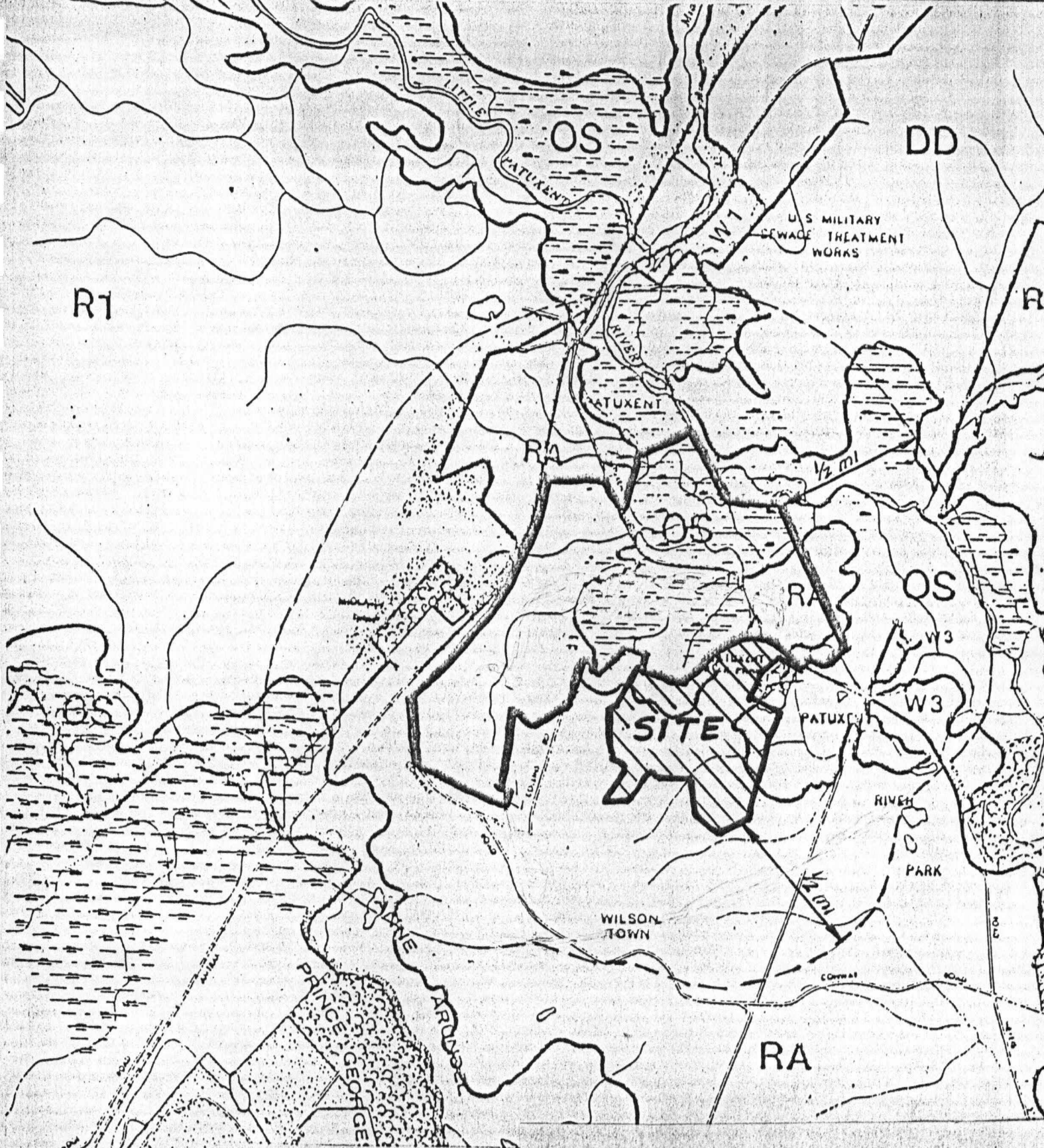
SITE

WILSON TOWN

21112

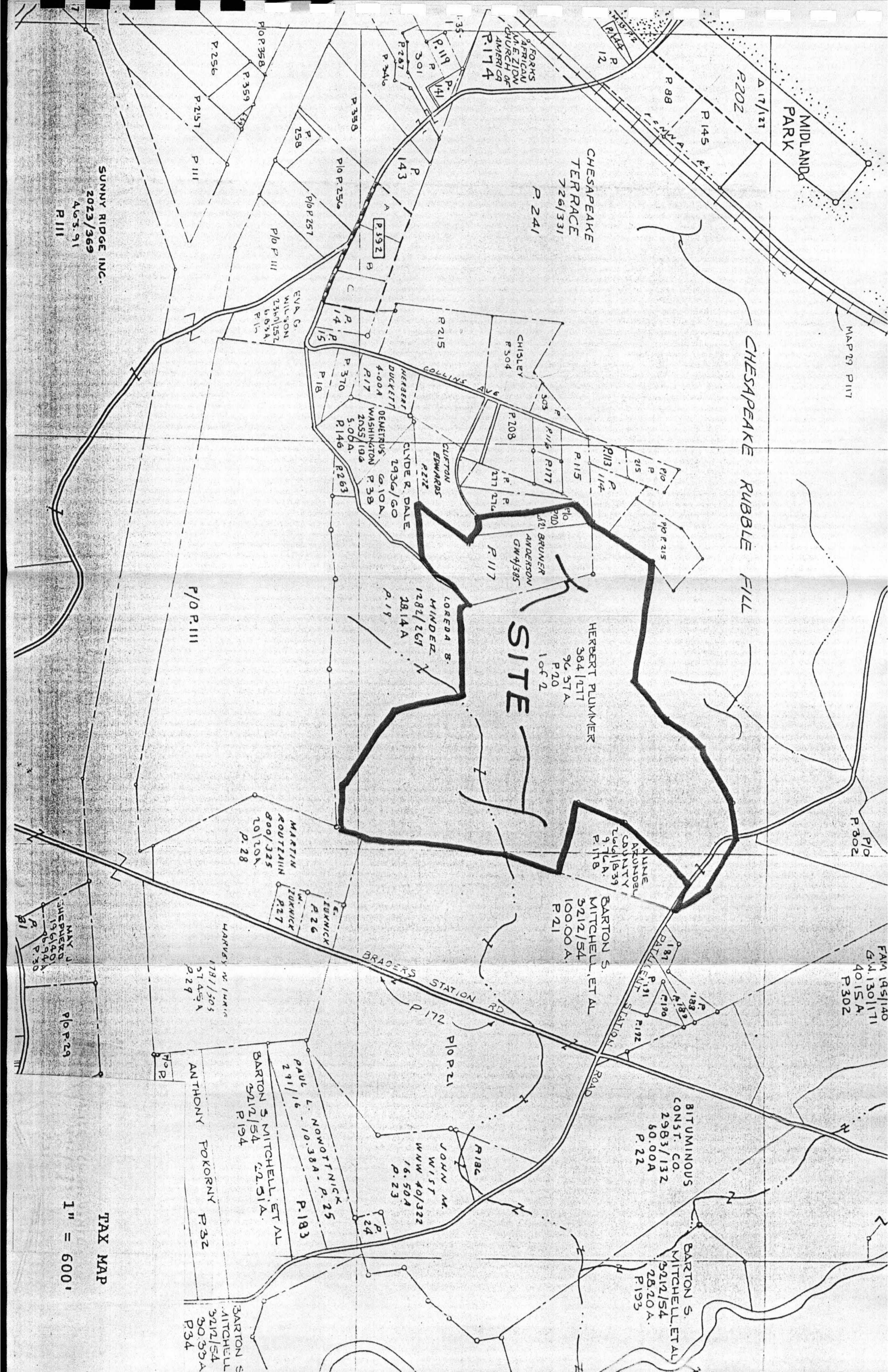
LOCATION MAP

1" = 2000'



**EXISTING ZONING
FOURTH DISTRICT**

1" = 2000'



MIDLAND PARK

CHESAPEAKE RUBBLE FILL

CHESAPEAKE TERRACE
726/331
P. 241

FORKS AFRICAN M.E. ZION CHURCH OF AMERICA
P. 174

SITE

HERBERT PLUMMER
384/1217
96.37 A.
P. 20
1 of 2

LOREDA B. MINDER
1282/261
28.14 A.
P. 19

BARTON S. MITCHELL, ET AL
3212/54
100.00 A.
P. 21

BITUMINOUS CONST. CO.
2983/132
60.00 A.
P. 22

BARTON S. MITCHELL, ET AL
3212/54
28.20 A.
P. 193

ANTHONY FOKORNY P. 32

BARTON S. MITCHELL, ET AL
3212/54
P. 194

PAUL L. NOWOTNICK
291/16 - 10.38 A. - P. 25

JOHN M. WIST
16.50 A.
P. 23

MARTIN ROUTZAIN
800/325
20/20 A.
P. 28

HARVEY W. LUKIN
1781/503
37.45 A.
P. 29

P/O P. 1111

SUNNY RIDGE INC.
2023/369
463.91
P. 111

TAX MAP

1" = 600'

DESCRIPTION OF FEATURES

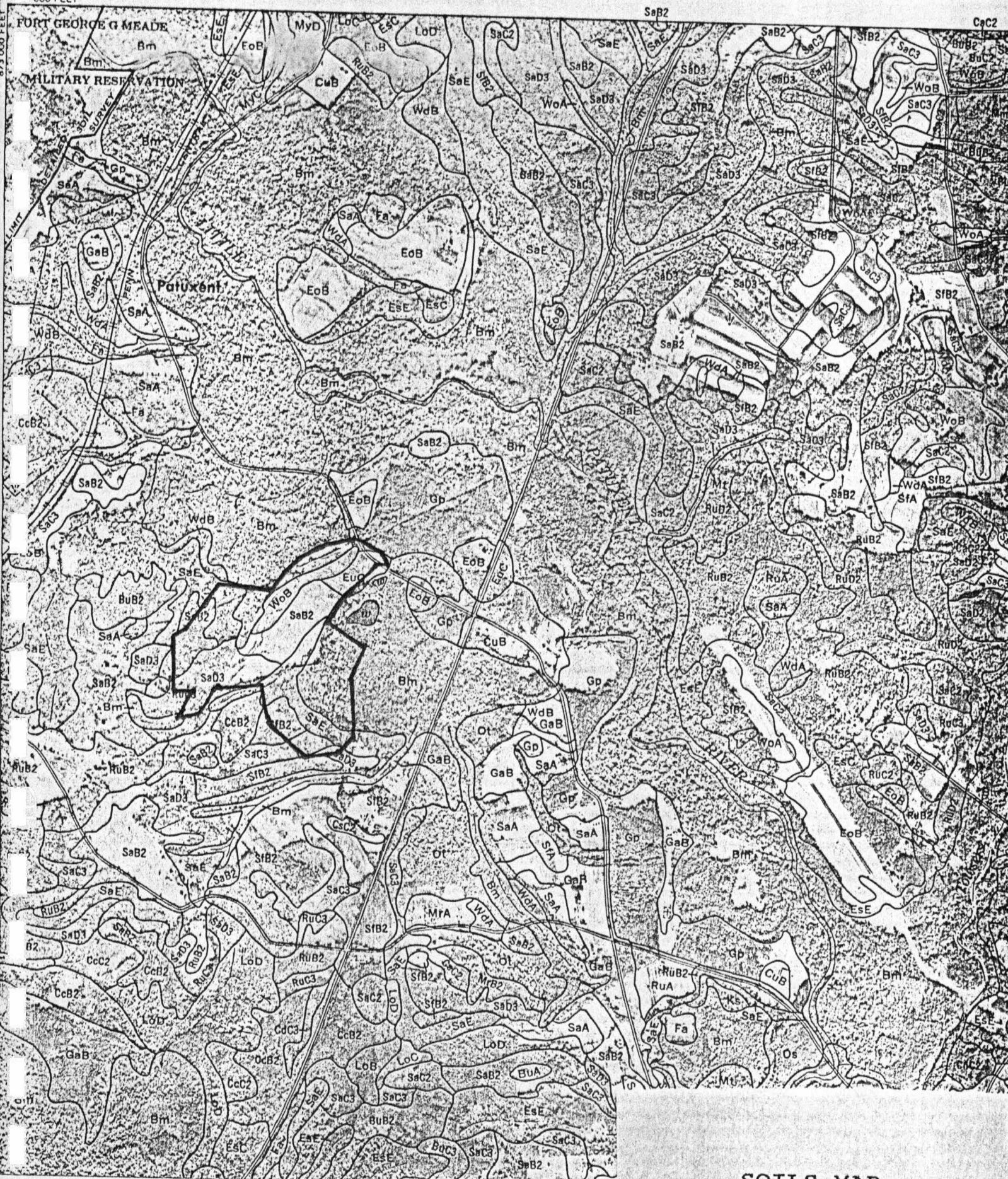
The central portion of the site, about 30 acres is a field used for farming. The remainder of the site is wooded. The soils map shows predominantly Sassafras fine sandy loam in the area to be mined and rubble filled. The floodplain areas are indicated as Bibb silt loam.

The National Wetlands Inventory Map shows wetlands in the floodplain areas and in contributing streams. These areas are outside of the proposed rubble fill activity.

The 1986 Anne Arundel County Land Use Map shows the site as rural and natural features in the floodplain area. In addition, the site is indicated as a mineral resource area.

The existing land uses are shown on the 7.5 minute quadrangle map. Residential dwellings are shown as dots and uses other than residential have been indicated on the map.

000 FEET



SOILS MAP

SaB2 EsE BeB2 CpB2 CoD3

GUIDE TO MAPPING UNITS

For a full description of a mapping unit, read both the description of the mapping unit and that of the soil series to which the mapping unit belongs. In referring to a capability unit or a woodland suitability group, read the introduction to the section it is in for general information about its management. Other information is given in tables as follows:

Acres and extent, table 3, page 10.
 Use of soils for community development,
 table 4, page 50.
 Use of soils for recreation, table 5, page 58.

Use of the soils in engineering,
 tables 6 and 7, pages 70 through 87.
 Estimated yields of crops, table 8,
 page 100.

Map symbol	Mapping unit	De-scribed on page	Capability unit		Woodland suitability group	
			Symbol	Page	Number	1
AdA	Adelphia sandy loam, 0 to 2 percent slopes-----	12	IIw-5	93	2w3	
AdB	Adelphia sandy loam, 2 to 5 percent slopes-----	12	IIE-36	91	2w3	
AsA	Adelphia silt loam, 0 to 2 percent slopes-----	12	IIw-1	92	2w3	
AsB	Adelphia silt loam, 2 to 5 percent slopes-----	13	IIE-16	91	2w3	
Beb2	Beltsville silt loam, 2 to 5 percent slopes, moderately eroded--	13	IIE-13	91	3w2	
B1B	Beltsville-Urban land complex, 0 to 5 percent slopes-----	13	-----	--	---	
Bm	Bibb silt loam-----	14	IIIw-7	96	2w2	
BuA	Butlertown silt loam, 0 to 2 percent slopes-----	15	IIw-1	92	2o1	
BuB2	Butlertown silt loam, 2 to 5 percent slopes, moderately eroded--	16	IIE-16	91	2o1	
BuC2	Butlertown silt loam, 5 to 10 percent slopes, moderately eroded-----	16	IIIe-16	95	2o1	
BuC3	Butlertown silt loam, 5 to 10 percent slopes, severely eroded---	16	IVe-9	97	2o1	
BuD3	Butlertown silt loam, 10 to 15 percent slopes, severely eroded--	16	VIe-2	97	2r1	
CaB2	Chillum silt loam, 2 to 6 percent slopes, moderately eroded-----	16	IIS-7	94	3o1	
CaC2	Chillum silt loam, 6 to 12 percent slopes, moderately eroded---	16	IIIe-7	94	3o1	
CbB	Chillum-Urban land complex, 0 to 6 percent slopes-----	17	-----	--	---	
CcB2	Christiana silt loam, 2 to 5 percent slopes, moderately eroded--	17	IIE-42	92	3c1	
CcC2	Christiana silt loam, 5 to 10 percent slopes, moderately eroded-----	17	IIIe-42	95	3c1	
CdC3	Christiana clay, 5 to 10 percent slopes, severely eroded-----	17	IVe-3	96	3c1	
Ce	Coastal beaches-----	18	VIIIIs-2	98	----	
Ch	Codorus silt loam-----	18	IIw-7	93	1w1	
Ck	Colemantown sandy loam-----	19	IIIw-6	95	2w4	
Cm	Colemantown silt loam-----	19	IIIw-7	96	2w4	
CnB2	Collington loamy sand, 2 to 5 percent slopes, moderately eroded-----	20	IIS-4	93	2o2	
CnC2	Collington loamy sand, 5 to 10 percent slopes, moderately eroded-----	20	IIIe-33	95	2o2	
CoA	Collington fine sandy loam, 0 to 2 percent slopes-----	20	I-5	90	2o2	
CoB2	Collington fine sandy loam, 2 to 5 percent slopes, moderately eroded-----	20	IIE-5	90	2o2	
CoC2	Collington fine sandy loam, 5 to 10 percent slopes, moderately eroded-----	20	IIIe-5	94	2o2	
CoC3	Collington fine sandy loam, 5 to 10 percent slopes, severely eroded-----	20	IVe-5	96	2o2	
CoD2	Collington fine sandy loam, 10 to 15 percent slopes, moderately eroded-----	20	IVe-5	96	2o2	
CoD3	Collington fine sandy loam, 10 to 15 percent slopes, severely eroded-----	20	VIe-2	97	2o2	
CoE	Collington fine sandy loam, 15 to 40 percent slopes-----	21	VIe-2	97	2r2	
CpA	Collington silt loam, 0 to 2 percent-----	21	I-4	90	2o2	
CpB2	Collington silt loam, 2 to 5 percent slopes, moderately eroded--	21	IIE-4	90	2o2	
CpuB	Collington-Urban land complex, 0 to 5 percent slopes-----	21	-----	--	---	
CpuD	Collington-Urban land complex, 5 to 15 percent slopes-----	21	-----	--	---	
Cr	Comus silt loam-----	22	I-6	90	1o2	
CsC2	Croom gravelly sandy loam, 5 to 10 percent slopes, moderately eroded-----	22	IIIe-9	95	3f1	
CsD2	Croom gravelly sandy loam, 10 to 15 percent slopes, moderately eroded-----	22	IVe-7	97	3f1	

GUIDE TO MAPPING UNITS--Continued

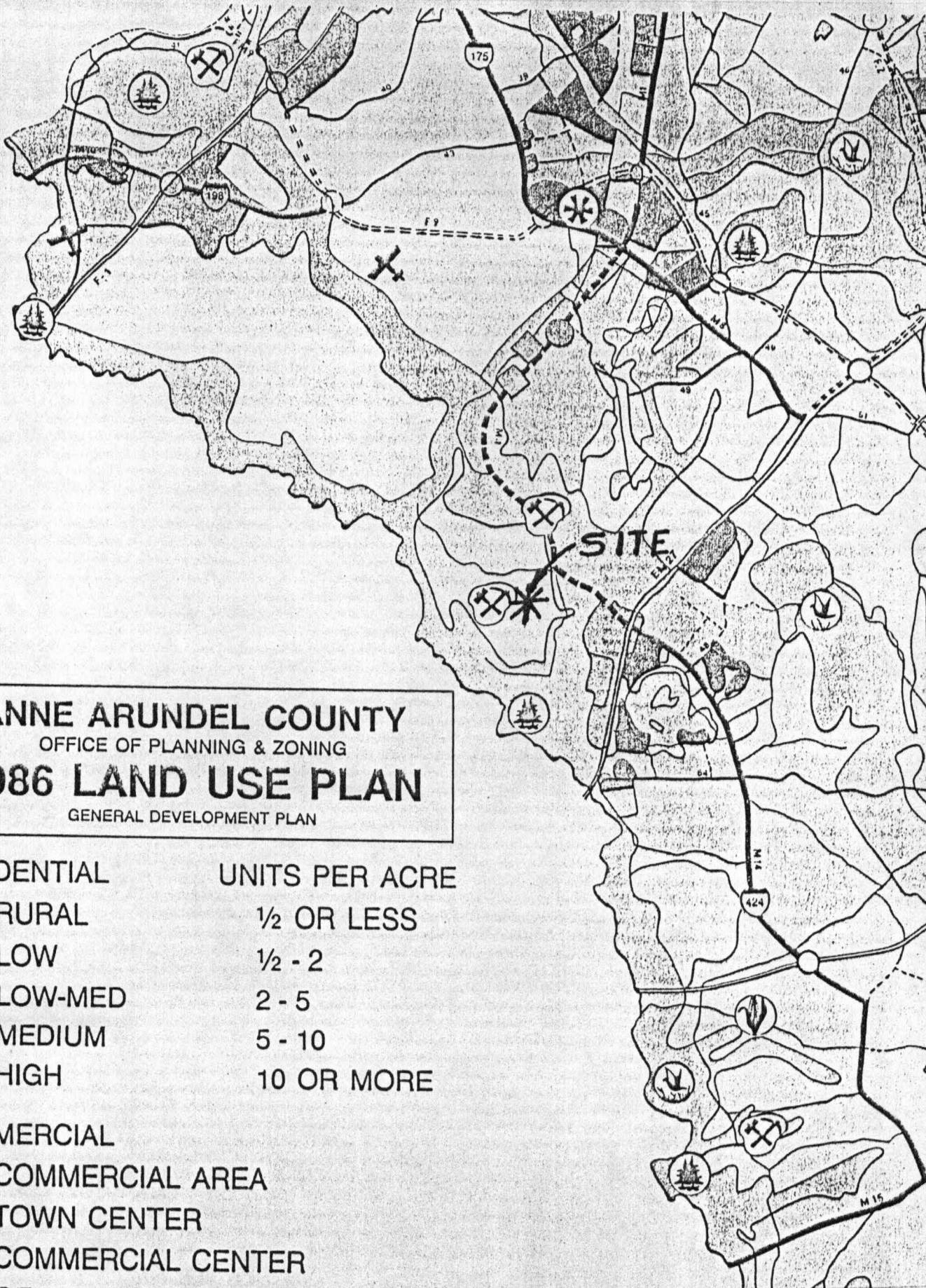
Map symbol	Mapping unit	De-scribed on page	Capability unit		Woodland suitability group	
			Symbol	Page	Number	Pa
CsE	Croom gravelly sandy loam, 15 to 40 percent slopes-----	23	VIIe-2	98	3f1	1
CtD	Croom-Urban land complex, 5 to 15 percent slopes-----	23	-----	--	---	-
CuB	Cut and fill land, 0 to 5 percent slopes-----	23	-----	--	---	-
CuD	Cut and fill land, 5 to 15 percent slopes-----	23	-----	--	---	-
CuE	Cut and fill land, 15 to 30 percent slopes-----	23	-----	--	---	-
DnA	Donlonton fine sandy loam, 0 to 2 percent slopes-----	25	IIw-9	93	2w3	1
DnB2	Donlonton fine sandy loam, 2 to 5 percent slopes, moderately eroded-----	25	IIe-36	91	2w3	1
DuB	Donlonton-Urban land complex, 0 to 5 percent slopes-----	25	-----	--	---	-
Ek	Elkton sandy loam-----	26	IIIw-11	96	3w3	1
En	Elkton silt loam-----	26	IIIw-9	96	3w3	1
EoB	Evesboro loamy sand, 0 to 6 percent slopes-----	26	IVs-1	97	3s1	1
ErB	Evesboro loamy sand, clayey substratum, 0 to 5 percent slopes---	26	IIIs-1	96	3s1	1
ErC	Evesboro loamy sand, clayey substratum, 5 to 10 percent slopes--	27	IVs-1	97	3s1	1
EsC	Evesboro and Galestown loamy sands, 6 to 12 percent slopes-----	27	VIIIs-1	98	3s1	1
EsE	Evesboro and Galestown loamy sands, 12 to 40 percent slopes-----	27	VIIIs-1	98	3s2	1
EuC	Evesboro-Urban land complex, 0 to 15 percent slopes-----	27	-----	--	---	-
Fa	Fallsington sandy loam-----	28	IIIw-6	95	2w1	1
GaB	Galestown loamy sand, 0 to 5 percent slopes-----	28	IVs-1	97	3s1	1
Gp	Gravel and borrow pits-----	28	VIIIs-4	98	---	-
Ha	Hatboro silt loam-----	29	IIIw-7	96	3w7	1
HfB2	Howell fine sandy loam, 2 to 6 percent slopes, moderately eroded-----	30	IIe-28	91	2c1	1
HgB2	Howell fine sandy loam, shaly subsoil, 2 to 6 percent slopes, moderately eroded-----	30	IIe-28	91	2c1	1
HsB2	Howell silt loam, 2 to 6 percent slopes, moderately eroded-----	30	IIe-29	91	2c1	1
HtB2	Howell silt loam, shaly subsoil, 2 to 6 percent slopes, moderately eroded-----	30	IIe-29	91	2c1	1
HyC3	Howell clay loam, 6 to 12 percent slopes, severely eroded-----	30	IVe-3	96	2c1	1
HyD3	Howell clay loam, 12 to 20 percent slopes, severely eroded-----	30	VIe-2	97	2c2	1
HyE3	Howell clay loam, 20 to 40 percent slopes, severely eroded-----	31	VIIe-2	98	2c3	1
HzC3	Howell clay loam, shaly subsoil, 6 to 12 percent slopes, severely eroded-----	31	IVe-3	96	2c1	1
KeA	Keyport sandy loam, 0 to 2 percent slopes-----	31	IIw-9	93	3w1	1
KeB	Keyport sandy loam, 2 to 5 percent slopes-----	31	IIe-36	91	3w1	1
KpA	Keyport sandy loam, 0 to 2 percent slopes-----	32	IIw-8	93	3w1	1
KpB2	Keyport silt loam, 2 to 5 percent slopes, moderately eroded-----	32	IIe-13	91	3w1	1
KrB	Keyport-Urban land complex, 0 to 5 percent slopes-----	32	-----	--	---	-
Ks	Klej loamy sand-----	32	IIIw-10	96	3s2	1
LoB	Loamy and clayey land, 0 to 5 percent slopes-----	33	IIIe-42	95	3c1	1
LoC	Loamy and clayey land, 5 to 10 percent slopes-----	33	IVe-3	96	3c1	1
LoD	Loamy and clayey land, 10 to 40 percent slopes-----	33	VIe-2	97	3c2	1
Ma	Made land-----	33	-----	--	---	-
MfB2	Marr fine sandy loam, 2 to 6 percent slopes, moderately eroded--	34	IIe-5	90	3o3	1
MfC2	Marr fine sandy loam, 6 to 12 percent slopes, moderately eroded-----	34	IIIe-5	94	3o3	1
MfC3	Marr fine sandy loam, 6 to 12 percent slopes, severely eroded---	34	IVe-5	96	3o3	1
MfD2	Marr fine sandy loam, 12 to 20 percent slopes, moderately eroded-----	34	IVe-5	96	3r1	1
MfD3	Marr fine sandy loam, 12 to 20 percent slopes, severely eroded--	34	VIe-2	97	3r1	1
MfE3	Marr fine sandy loam, 20 to 35 percent slopes, severely eroded--	34	VIIe-2	98	3r1	1
MkA	Matapeake fine sandy loam, 0 to 2 percent slopes-----	35	I-5	90	3o1	1
MkB2	Matapeake fine sandy loam, 2 to 5 percent slopes, moderately eroded-----	35	IIe-5	90	3o1	1
MmA	Matapeake silt loam, 0 to 2 percent slopes-----	35	I-4	90	3o1	1
MmB2	Matapeake silt loam, 2 to 5 percent slopes, moderately eroded---	35	IIe-4	90	3o1	1

GUIDE TO MAPPING UNITS--Continued

Map symbol	Mapping unit	De- scribed on page	Capability unit		Woodlar suitabili- group
			Symbol	Page	Number
MnC2	Matapeake silt loam, 5 to 10 percent slopes, moderately eroded--	35	IIIe-4	94	3o1
MnC3	Matapeake silt loam, 5 to 10 percent slopes, severely eroded----	35	IVe-3	96	3o1
MmD3	Matapeake silt loam, 10 to 15 percent slopes, severely eroded---	35	VIe-2	97	3o1
MnA	Matawan loamy fine sand, 0 to 2 percent slopes-----	36	IIw-10	93	2o1
MnB	Matawan loamy fine sand, 2 to 5 percent slopes-----	36	IIe-36	91	2o1
MpA	Mattapex fine sandy loam, 0 to 2 percent slopes-----	37	IIw-5	93	3o2
MpB2	Mattapex fine sandy loam, 2 to 5 percent slopes, moderately eroded-----	37	IIe-36	91	3o2
MrA	Mattapex silt loam, 0 to 2 percent slopes-----	37	IIw-1	92	3o2
MrB2	Mattapex silt loam, 2 to 5 percent slopes, moderately eroded----	37	IIe-16	91	3o2
MrC2	Mattapex silt loam, 5 to 10 percent slopes, moderately eroded---	37	IIIe-16	95	3o2
Mt	Mixed alluvial land-----	37	VIw-1	98	2w2
MuA	Monmouth loamy sand, 0 to 2 percent slopes-----	38	IIs-5	94	2o2
MuB2	Monmouth loamy sand, 2 to 5 percent slopes, moderately eroded---	38	IIs-5	94	2o2
MuC2	Monmouth loamy sand, 5 to 10 percent slopes, moderately eroded--	38	IIIe-5	94	2o2
MuC3	Monmouth loamy sand, 5 to 10 percent slopes, severely eroded----	38	IVe-5	96	2o2
MuD2	Monmouth loamy sand, 10 to 15 percent slopes, moderately eroded-----	39	IVe-5	96	2o2
MuD3	Monmouth loamy sand, 10 to 15 percent slopes, severely eroded---	39	VIe-2	97	2o2
MvA	Monmouth fine sandy loam, 0 to 2 percent slopes-----	39	I-28	90	2c1
MvB2	Monmouth fine sandy loam, 2 to 5 percent slopes, moderately eroded-----	39	IIe-28	91	2c1
MvC2	Monmouth fine sandy loam, 5 to 10 percent slopes, moderately eroded-----	39	IIIe-28	95	2c1
MvD2	Monmouth fine sandy loam, 10 to 15 percent slopes, moderately eroded-----	39	IVe-5	96	2c1
MvE	Monmouth fine sandy loam, 15 to 40 percent slopes-----	39	VIe-2	97	2c2
MwC3	Monmouth clay loam, 5 to 10 percent slopes, severely eroded----	39	IVe-3	96	2c1
MwD3	Monmouth clay loam, 10 to 15 percent slopes, severely eroded----	39	VIe-2	97	2c1
MxB	Monmouth-Urban land complex, 0 to 5 percent slopes-----	39	-----	--	---
MxD	Monmouth-Urban land complex, 5 to 15 percent slopes-----	40	-----	--	---
MyB	Muirkirk loamy sand, 0 to 5 percent slopes-----	40	IIs-5	94	3s1
MyC	Muirkirk loamy sand, 5 to 10 percent slopes-----	40	IIIe-5	94	3s1
MyD	Muirkirk loamy sand, 10 to 15 percent slopes-----	40	IVe-5	96	3s1
MyE	Muirkirk loamy sand, 15 to 30 percent slopes-----	41	VIIe-2	98	3s2
MzB	Muirkirk-Urban land complex, 0 to 5 percent slopes-----	41	-----	--	---
MzD	Muirkirk-Urban land complex, 5 to 15 percent slopes-----	41	-----	--	---
Os	Osier loamy sand-----	41	IVw-6	97	2w1
Ot	Othello silt loam-----	42	IIIw-7	96	3w3
RuA	Rumford loamy sand, 0 to 2 percent slopes-----	43	IIs-4	93	3o3
RuB2	Rumford loamy sand, 2 to 5 percent slopes, moderately eroded----	43	IIs-4	93	3o3
RuC2	Rumford loamy sand, 5 to 10 percent slopes, moderately eroded---	43	IIIe-33	95	3o3
RuC3	Rumford loamy sand, 5 to 10 percent slopes, severely eroded----	43	IVe-5	96	3o3
RuD2	Rumford loamy sand, 10 to 15 percent slopes, moderately eroded---	43	IVe-5	96	3o3
RyB	Rumford-Urban land complex, 0 to 5 percent slopes-----	43	-----	--	---
RyD	Rumford-Urban land complex, 5 to 15 percent slopes-----	43	-----	--	---
SaA	Sassafras fine sandy loam, 0 to 2 percent slopes-----	44	I-5	90	3o3
SaB2	Sassafras fine sandy loam, 2 to 5 percent slopes, moderately eroded-----	44	IIe-5	90	3o3
SaC2	Sassafras fine sandy loam, 5 to 10 percent slopes, moderately eroded-----	44	IIIe-5	94	3o3
SaC3	Sassafras fine sandy loam, 5 to 10 percent slopes, severely eroded-----	44	IVe-5	96	3o3
SaD2	Sassafras fine sandy loam, 10 to 15 percent slopes, moderately eroded-----	44	IVe-5	96	3o3
SaD3	Sassafras fine sandy loam, 10 to 15 percent slopes, severely eroded-----	44	VIe-2	97	3o3

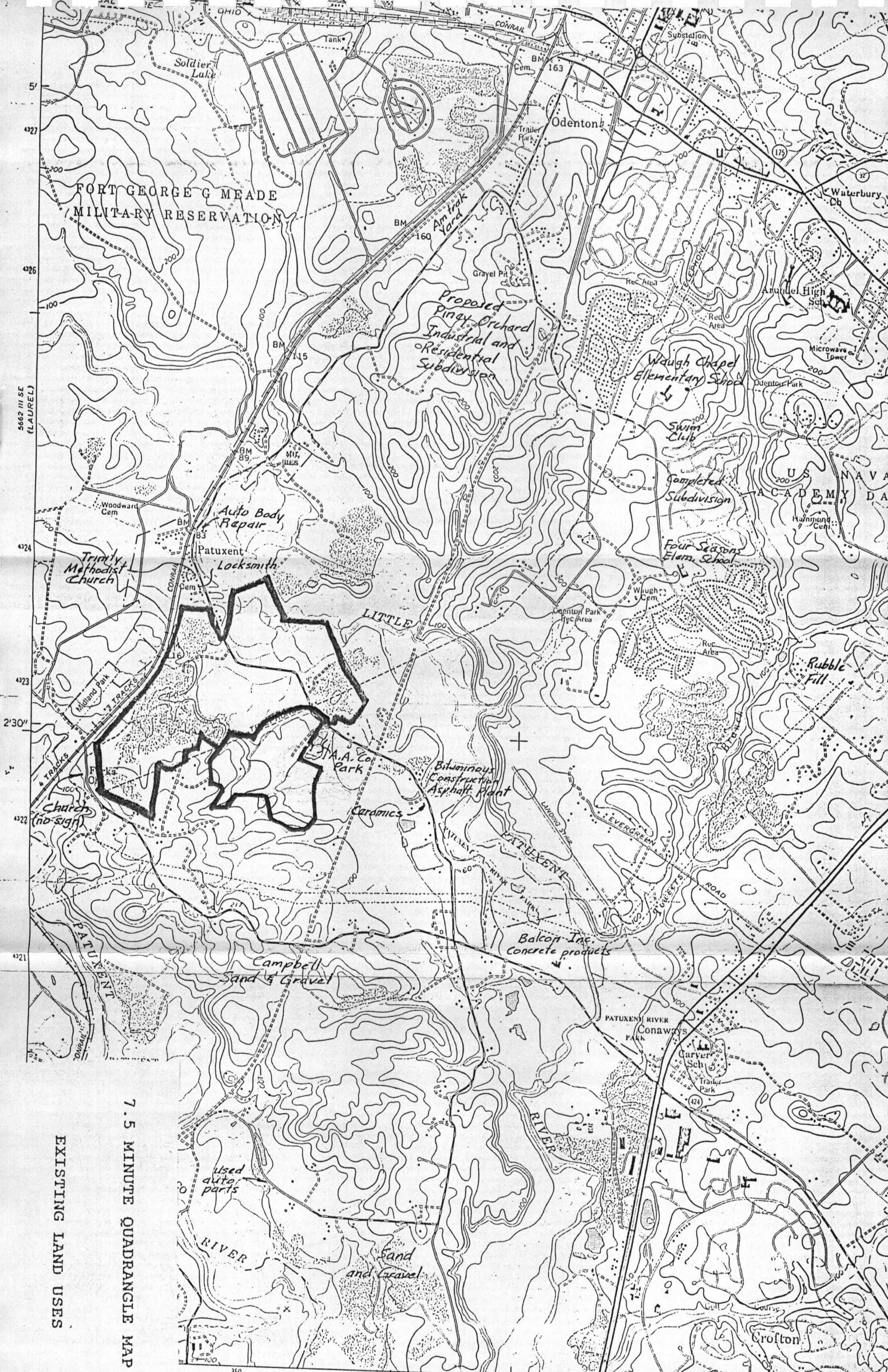
GUIDE TO MAPPING UNITS--Continued

Map symbol	Mapping unit	De- scribed on page	Capability unit		Wood suitabi gro
			Symbol	Page	Number
SaE	Sassafras fine sandy loam, 15 to 40 percent slopes-----	45	VIe-2	97	3r1
SfA	Sassafras loam, 0 to 2 percent slopes-----	45	I-4	90	3o3
SfB2	Sassafras loam, 2 to 5 percent slopes, moderately eroded-----	45	IIe-4	90	3o3
SnB	Sassafras-Urban land complex, 0 to 5 percent slopes-----	45	-----	--	---
SnD	Sassafras-Urban land complex, 5 to 15 percent slopes-----	45	-----	--	---
Sr	Shrewsbury fine sandy loam-----	46	IIIw-6	95	2w1
Ss	Shrewsbury silt loam-----	46	IIIw-7	96	2w1
Sw	Swamp-----	46	VIIw-1	98	---
Tm	Tidal marsh-----	46	VIIIw-1	98	---
Ur	Urban land-----	46	-----	--	---
WaB2	Westphalia fine sandy loam, 2 to 6 percent slopes, moderately eroded-----	48	IIe-5	90	3o3
WaC2	Westphalia fine sandy loam, 6 to 12 percent slopes, moderately eroded-----	48	IIIe-5	94	3o3
WaC3	Westphalia fine sandy loam, 6 to 12 percent slopes, severely eroded-----	48	IVe-5	96	3o3
WaD3	Westphalia fine sandy loam, 12 to 20 percent slopes, severely eroded-----	48	VIe-2	97	3r1
WaE3	Westphalia fine sandy loam, 20 to 50 percent slopes, severely eroded-----	48	VIIe-2	98	3r1
WdA	Woodstown sandy loam, 0 to 2 percent slopes-----	49	IIw-5	93	2o1
WdB	Woodstown sandy loam, 2 to 5 percent slopes-----	49	IIe-36	91	2o1
WoA	Woodstown loam, 0 to 2 percent slopes-----	49	IIw-1	92	2o1
WoB	Woodstown loam, 2 to 5 percent slopes-----	49	IIe-16	91	2o1



ANNE ARUNDEL COUNTY
 OFFICE OF PLANNING & ZONING
1986 LAND USE PLAN
 GENERAL DEVELOPMENT PLAN

- | RESIDENTIAL | UNITS PER ACRE |
|-------------|----------------|
| RURAL | 1/2 OR LESS |
| LOW | 1/2 - 2 |
| LOW-MED | 2 - 5 |
| MEDIUM | 5 - 10 |
| HIGH | 10 OR MORE |
-
- COMMERCIAL**
- COMMERCIAL AREA
 - TOWN CENTER
 - COMMERCIAL CENTER
 - GENERAL COMMERCIAL
-
- INDUSTRIAL**
- HEAVY
 - LIGHT



FORT GEORGE G MEADE
MILITARY RESERVATION

Proposed
Pinay Orchard
Industrial and
Residential
Subdivision

Waugh Chapel
Elementary School

Auto Body
Repair
Patuxent
Locksmith

LITTLE

Bituminous
Construction
Asphalt Plant

Balcon Inc.
Concrete products

Campbell
Sand & Gravel

used
auto
parts

Sand
and
Gravel

RIVER

RIVER

PATUXENT RIVER
Conaways
Park

Carver
Sch

Crofton

7.5 MINUTE QUADRANGLE MAP

EXISTING LAND USES

5662 III SE
(LAUREL)

427
426
424
423
2'30"
422
421

51 | 880 000 FEET

42'30"

GENERAL SITE DESCRIPTION

The Chesapeake Rubble Fill Addition site (Plummer Property) is located in the western portion of Anne Arundel County southeast of Ft. Meade. To the northwest the site is contiguous with the proposed Chesapeake Rubble Fill (see Figure 1). The Little Patuxent River is located approximately 1/2 mile north-northeast of the site. Patuxent River Road passes through the extreme northeastern portion of the property.

The low-lying portions of the property are marshy and are zoned as "open space." This portion of the property is cross-hatched in Figure 1 and is not included within the proposed rubble fill area.

Elevations at the site range from 60 to 160 feet mean sea level (msl).

WATER WELL INVENTORY

There are no water wells on the property.

According to the Anne Arundel County Utilities Division, the area is not served by public water; therefore, it is likely that domestic wells are the source of water for residences in the vicinity of the site.

Well records from the Maryland DNR for the period from 1969 to September 1988 do not list any wells within 1/2 mile of the perimeter of the site. Since there are several residences within this area it is likely that they are served by wells installed before 1969, the year it became a state requirement that well installations be reported.

Water Resources Basic Data Report #8 entitled Anne Arundel County Groundwater Information (Lucas, 1976) shows four wells within approximately 1/2 mile the site (see Figure 2). Well owners and depths are as follows:

<u>Well No.</u>	<u>Owner</u>	<u>Depth (ft)</u>	<u>Diameter (in)</u>
CC-7	A.D. Riden Co.	300	5
CC-13	Barton, A.E.	14	30 (dug well)
CC-20	Barton, A.C.	143	6
CC-51	Shorter, M.	6	42 (dug well)

GEOLOGY

The site lies within the Coastal Plain physiographic province of Maryland. According to the geologic map of Anne Arundel County (Glaser, 1976) two types of geologic materials are present at land surface at the site, the Patuxent River Terrace Deposits and Quaternary Alluvium (see Figure 3). The Patuxent River Terraces were formed during the last Ice Age and have an average thickness of close to 25 feet. The Quaternary Deposits are more recent and have a thickness of 3 to 15 feet (Glaser, 1976).

The Patuxent River Terrace Deposits and Quaternary Alluvium are underlain by the Patapsco Formation (probably the silt-clay facies). The Patapsco Formation extends to a depth of at least 250 feet msl. The Patapsco Formation dips gently to the southeast.

Descriptions of the formations are as follows:

Quaternary Alluvial Deposits

Interbedded sands, silts, clays, and gravels deposited in channel and floodplain areas.

Patuxent River Terrace Deposits

Sands and gravels deposited in river valleys by continual sedimentation by high energy streams. Gravel is predominantly quartzose, but contains cobbles and boulders of mostly mafic rock with boulders up to 4 feet in diameter. Silt and clay beds are thin and discontinuous. Limonite (iron oxide) cemented conglomerate ledges are locally common. Sand is predominantly clean and fairly well sorted but becomes clayey in upper portions of the terraces. The sands are described as the single most important source of construction sand and gravel in the county.

Patapsco Formation (Silt-Clay Facies)

The silt-clay facies of the Patapsco Formation consists of clay, silt, and subordinate fine to medium-grained muddy sand. It ranges in color from red, tan, gray, or buff, to mottled.

Patapsco Formation (Sand-Gravel Facies)

The sand-gravel facies encompasses sandy portions of the Patapsco Formation. It consists of interbedded quartz sand, pebbly sand, gravel, and subordinate silt-clay. The sand ranges from fine to coarse-grained, from poorly to well sorted, and from clean to very muddy. It is of variable color, and iron oxide cemented ledges are common.

HYDROGEOLOGY

The topography at the site is pronounced with the land surface sloping to the northeast toward the Little Patuxent River. Since the surface of the water table is usually a subdued reflection of topography it is likely that shallow groundwater at the site also flows toward the Little Patuxent River. Depths to groundwater and groundwater flow directions may be influenced by the presence and orientation of subsurface clay layers.

MONITORING WELLS

Number and Location

Borings to at least 50 feet will be made at the four locations shown on Figure 3. At each location approximately two monitoring wells will be installed in the most significant water bearing zones encountered. This represents a total of approximately eight wells. The exact number of wells will be dependent on the site specific hydrogeology.

Design

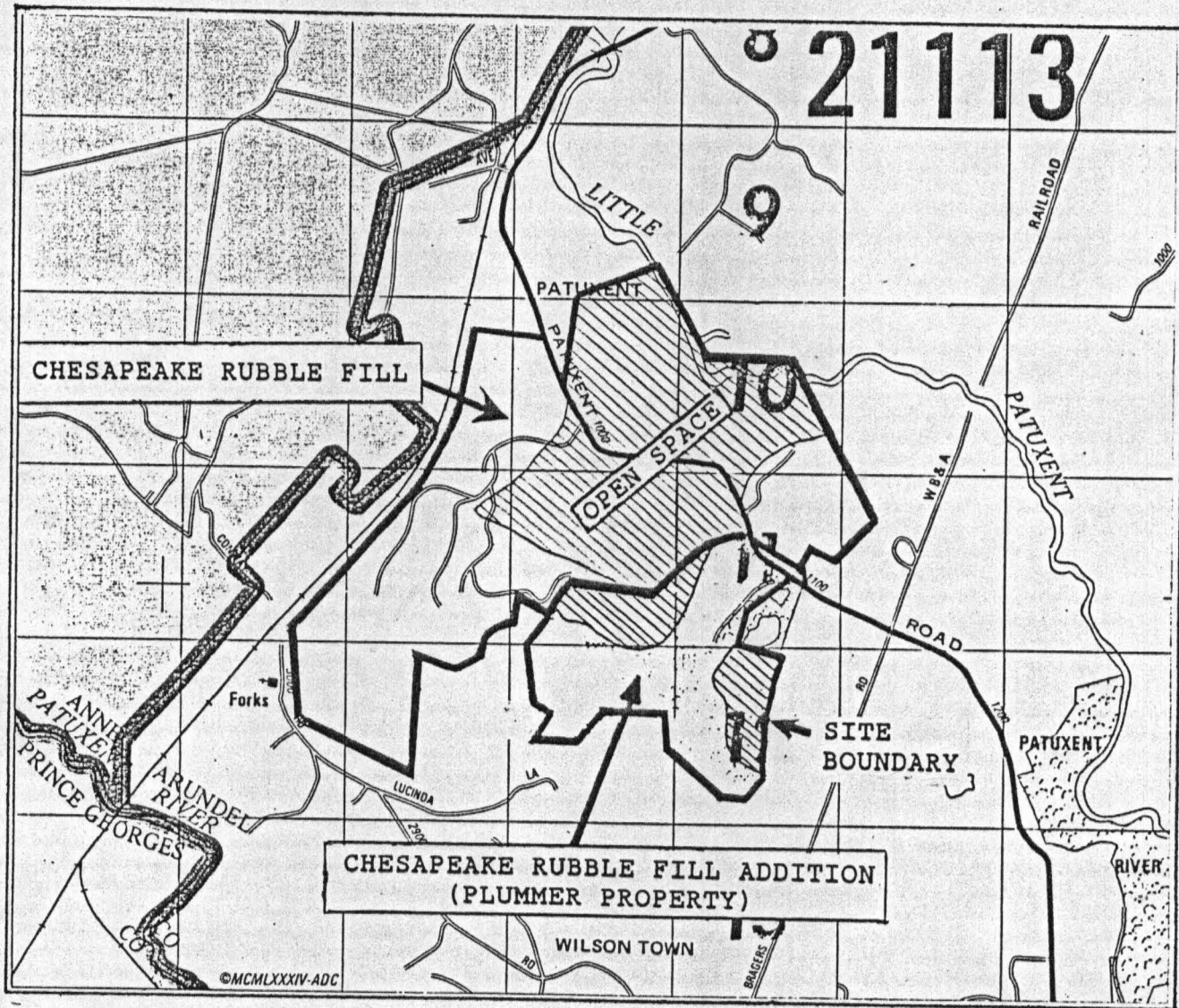
The purpose of the monitoring wells is to meet the requirements for a Phase II study, that is, to establish background water quality and determine groundwater flow directions and seasonal water table fluctuations.

The proposed monitoring wells are considered to be temporary since they may be located in fill areas which would require their removal. Since the wells are designed to be temporary they will be constructed of 2-inch PVC rather than the 4-inch required for permanent wells. With this one exception the wells will be installed in compliance with the attached Specifications for the Design and Installation of Groundwater Monitoring Wells At Solid Waste Disposal Facilities.

REFERENCES

Glaser, J.D. 1976. Geologic Map of Anne Arundel County. published by the Maryland Geological Survey

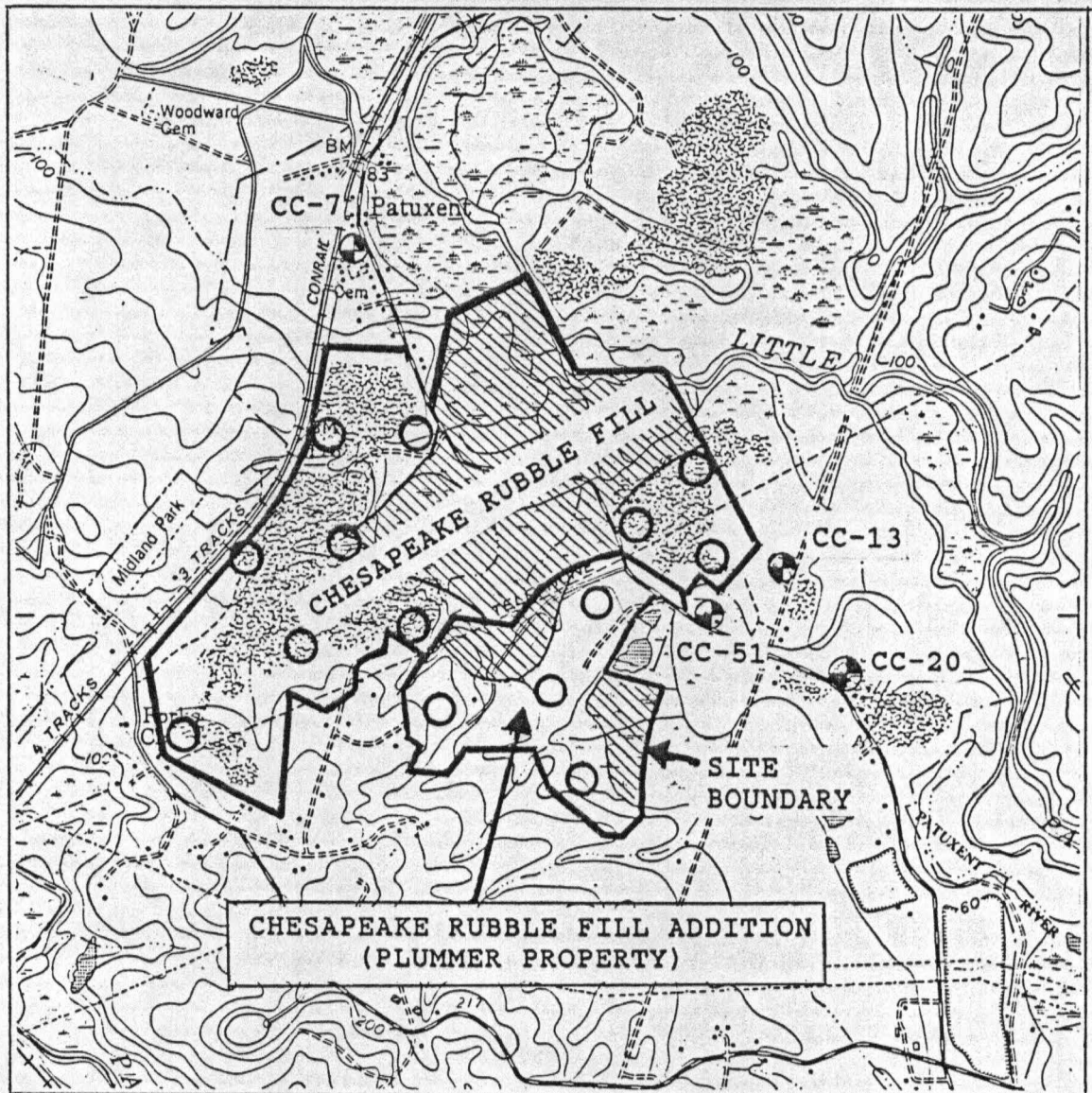
Lucas, R.C. 1976. Water Resources Basic Data Report No. 8 - Anne Arundel County Ground-Water Information: Selected Well Records, Chemical-Quality Data, Pumpage, Appropriation Data, and Selected Well Logs. published by the Maryland Geological Survey



Scale: 1"=2000'

 OPEN SPACE

Figure 1
General Location Map

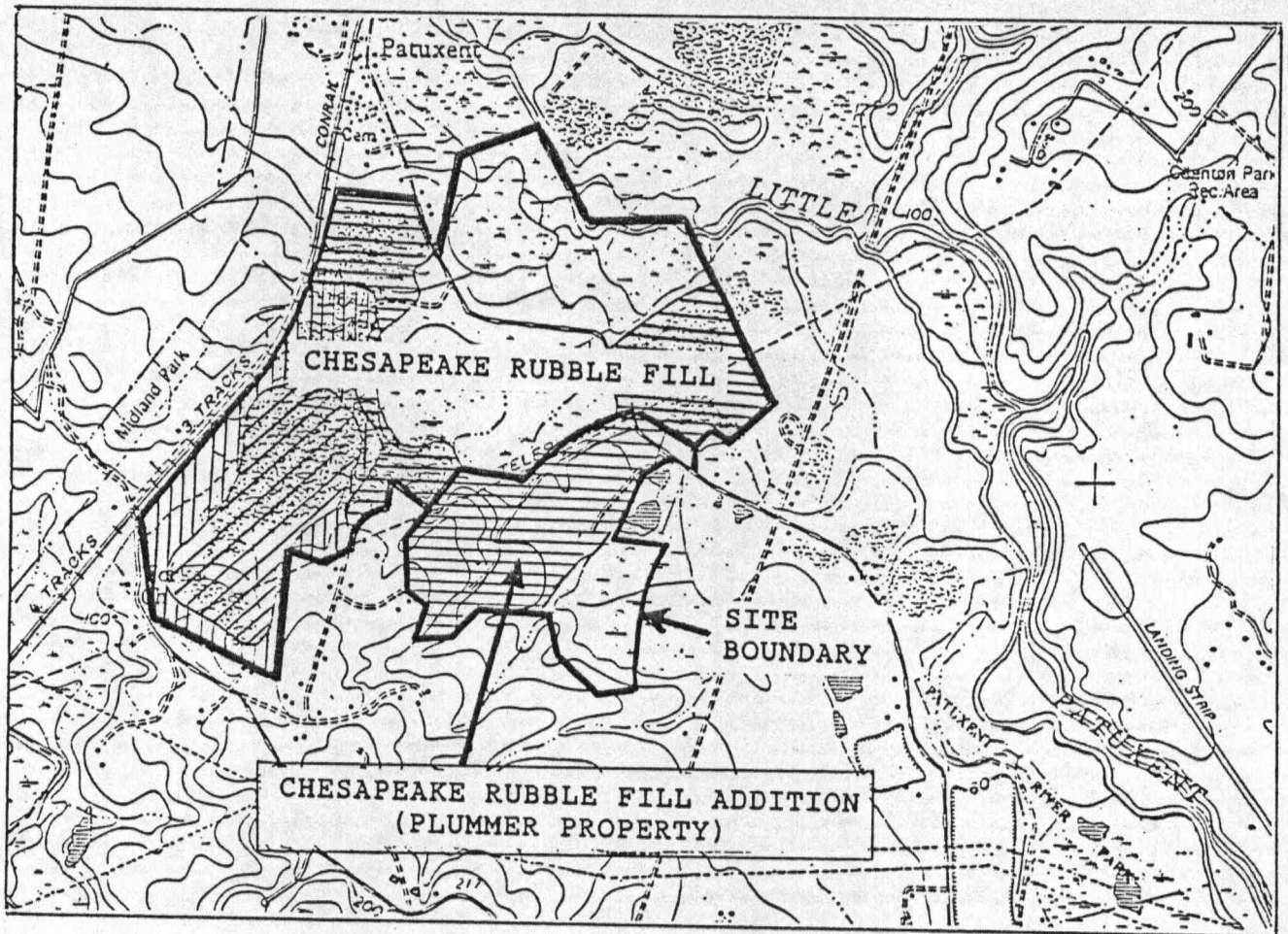


Contour Interval = 20 feet

Scale: 1"=2000'

- Proposed Monitoring Well
- ⊕ Existing Water Well (Lucas, 1976)

Figure 2
Well Locations



Scale: 1"=2000'

Contour Interval = 20 feet

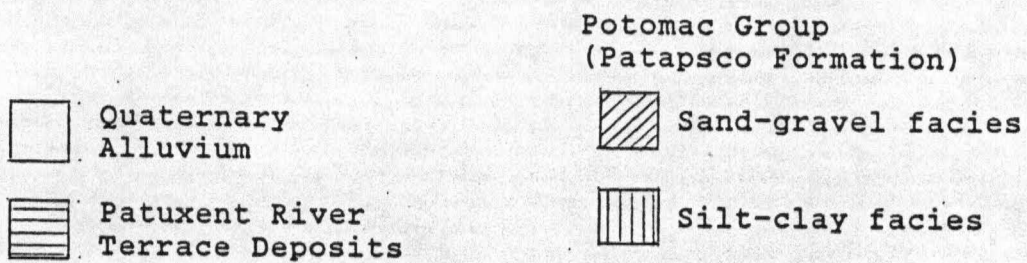


Figure 3
Site Geology

