**FINAL SUBMITTAL**

# HISTORIC SITE SURVEY
# BELTSVILLE AGRICULTURAL RESEARCH CENTER

## BELTSVILLE, MARYLAND

**PREPARED FOR:**

**U.S. DEPARTMENT OF AGRICULTURE**
**AGRICULTURAL RESEARCH SERVICE**
**CONTRACT NO. 53-3K15-5-9071**
**TASK ORDER NUMBER 14**

**VOLUME II**
**LANDSCAPE FORMS**

**JUNE 1998**

ROBINSON & ASSOCIATES, INC.
RHODESIDE & HARWELL, INC.

**BJY J.O. 95314**

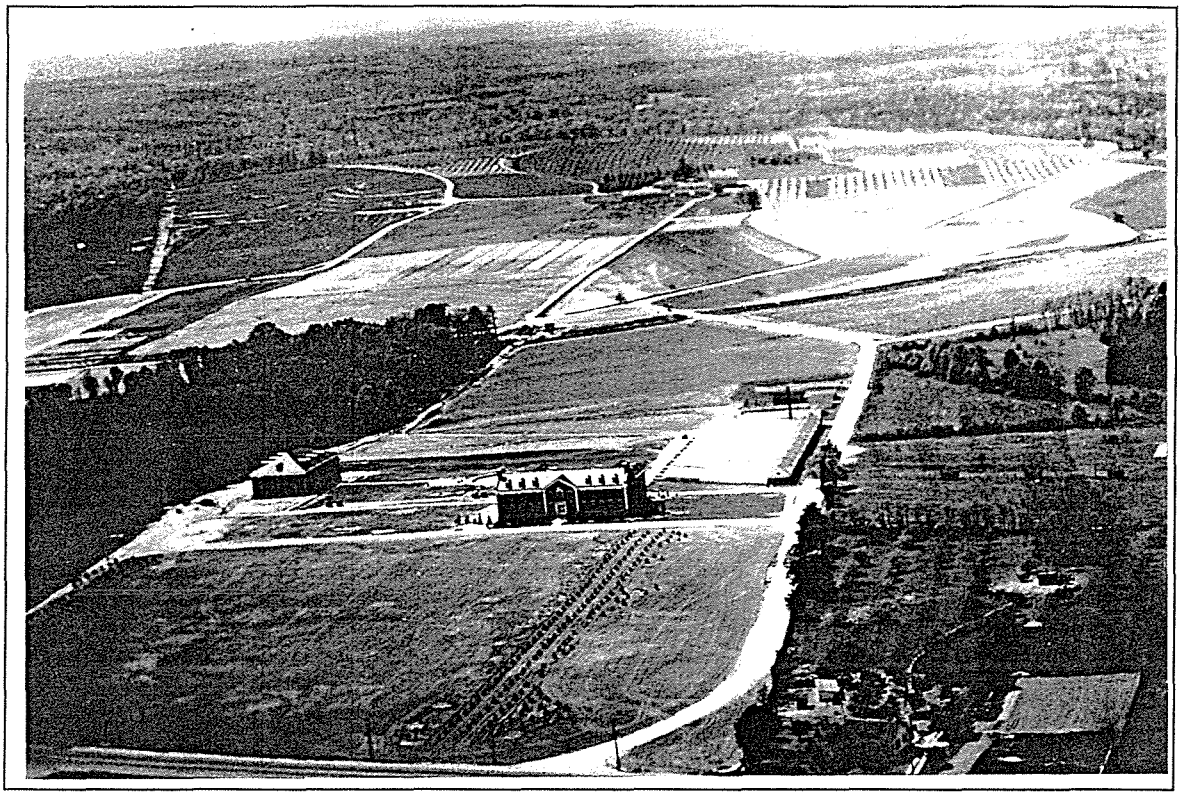
BERNARD JOHNSON YOUNG INC.
Architecture • Engineering • Planning • Systems

# BELTSVILLE AGRICULTURAL RESEARCH CENTER

BELTSVILLE, MARYLAND

# LANDSCAPE FORMS

VOLUME 2



Prepared for:
UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE

Prepared by:
ROBINSON & ASSOCIATES, INC.
&
RHODESIDE & HARWELL, INC.

In association with:
BERNARD JOHNSON YOUNG, INC.

**FINAL SUBMISSION**
JUNE 1998

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JUNE 1998

# BELTSVILLE AGRICULTURAL RESEARCH CENTER
# BELTSVILLE, MARYLAND

# LANDSCAPE FORMS - NORTH, SOUTH, LINKAGE, CENTRAL, AND EAST FARMS
## VOLUME 2

*Prepared for*:
UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE
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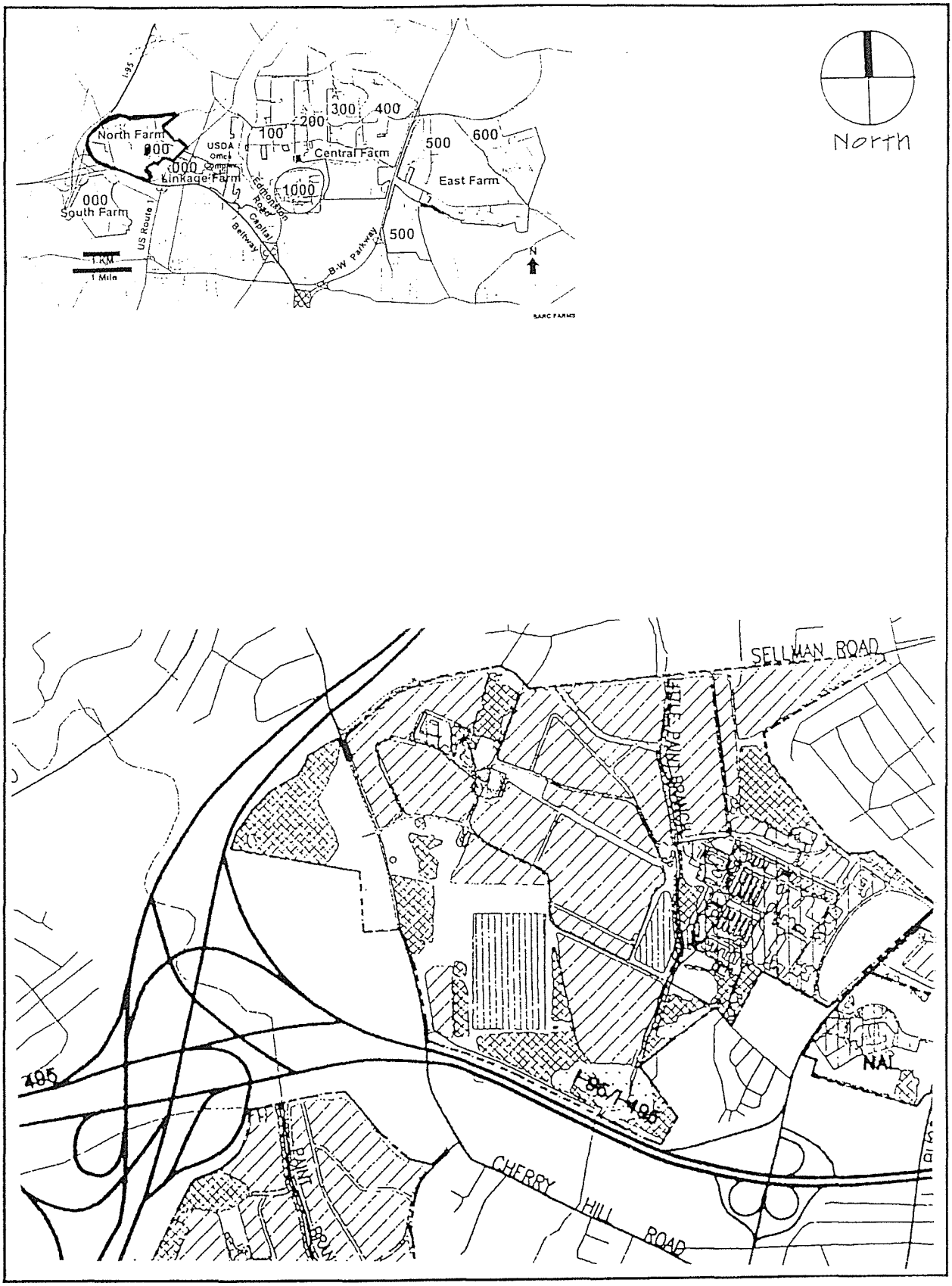
# BELTSVILLE AGRICULTURAL RESEARCH CENTER – BELTSVILLE, MD
# SURVEY FORM: LANDSCAPE

General

| | | |
|---|---|---|
| Field Area: NORTH FARM | Cluster: | Landscape Unit: |
| Acreage: 549 Acres | Location: MHT # PG: | |
| Master Plan Page/Grid: 3/C4-5,D3-6,E3-7,F3-7,G3-7; 4/A3-7,B3-7,C2-7,D6-7,E7; 9/E1,F1,G1-2 | | |
| Boundaries: US Rt. 1 (S); I95 (N); apartments/commercial (E); residential/Cherry Hill Rd/I495 (W) | | |
| Historic Owner/Designer/Administrator's Name: Bureau of Plant Industry, USDA | | |
| Historic Use/Current Use: Administration, Laboratory Research, Field Research/same | | |
| Historic Name/Current Name: U. S. Horticultural Station at Beltsville and U.S. Plant Industry Station/North Farm | | |
| Dates of Land Acquisition: 1933 & 1940 | Design: 1932-1943 | |
| Construction: 1932-1944 | | |

PHOTOGRAPH

Photo ID: 1937 Aerial Photograph, NARA Cartographic Division, RG 145, Can 2070




MAP ID: Base data from Beltsville Agricultural Research Center, 1996 Master Plan Update, Bernard Johnson Young, September 1996.

**Overall Description of Unit**

See Continuation Sheet
Sheet

**Landscape Type**

| | |
|---|---|
| Designed: Institutional Grounds/ Farm | Historic: |
| Vernacular: | Ethnographic: |

**Landscape Characteristics and Features**

See Continuation Sheet
Sheet

**Assessment of Condition Overall**

The road system is good. Circle Drive, 1st Street, and North Drive and are in good conditon. Most other road surfaces in the reserach areas are in fair to poor condition. The paved roads in the research fields are stable and the pavement appears to be intact. None of the gravel or dirt/farm roads is washed out.
The drainage system from the 1940s is still intact and appears to be in operating condition.
Little Paint Branch Creek is flowing without any obvious obstructions.
The perimeter woodland forests are in good condition with no visible signs of serious deterioration.
Some fields are undergoing research and/or crop rotation.

**SIGNIFICANCE** (Period of significance: National Register significance level)

| |
|---|
| See Continuation Sheet |

**PRELIMINARY NATIONAL REGISTER ELIGIBILITY ASSESSMENT**

| | |
|---|---|
| Individually Eligible: | |
| Eligible as Contributing to which Historic district: | |
| Non-Contributing to this Historic district: | |
| Relevant Evaluation Criteria:<br>A: North Farm is associated with events related to long standing agricultural research on a national level and is also associated with events and federal programs initiated under the New Deal. | |
| B: | |
| C: Professionally designed master plan | |
| D: | |
| Retains Integrity: Yes: X | No: |

**MAJOR SOURCES OF INFORMATION**

| |
|---|
| See Continuation Sheet<br>Sheet |
| Explain: |

| | | |
|---|---|---|
| Name of Surveyor: Jennifer Smith | Affiliation: RHI | Date: June 4, 1998 |

| Perry Wheelock | | June 4, 1998 |
|---|---|---|

**Overall Description of Unit:**

The Bureau of Plant Industry, Soils, and Agricultural Engineering is located at North Farm. The farm was acquired in 1933 and expanded in 1940. This 549-acre farm, one of the five farms which make up the BARC site, is a roughly bounded on the east by U. S. Route 1 (a major Beltsville arterial roadway); by woodland and Cherry Hill Road to the west; woodland and I-495 to the South; and Sellman road to the north. All of these roads incur heavy traffic. North Farm shares its southeast border with commercial buildings, a private campground on the southwest side, and residential development along the north and east.

Access to North Farm occurs at seven locations. Circle Drive serves as the primary entrance. Two points of access occur from U.S. Route 1 at Circle Drive. Two secondary access points occur at Cherry Hill Road and two entrances from Sellman Road. A locked entrance, at the southeast corner of the farm, is located near a former residence. This entrance leads to a narrow service road. Vehicular circulation on the North Farm is organized by primary paved roads, secondary gravel roads and tertiary dirt roads or farm lanes. The farm lanes course through fields as visible lines of hard-packed earth.

North Farm includes two distinct areas divided by Little Paint Branch Creek, which runs north to south. Fairly steep land slopes down from upland plateaus and hills into the creek's flood plain and bottom lands. Three land use zones, administration, laboratory research, and field crops research closely relate to the landform and soils at North Farm. The river bottom soils associated with the creek and well-drained soils along its slopes met the USDA's criteria for locating suitable land in 1930. About seven research fields lay east of the creek in bottom land and a hill that slopes northeast up to Sellman Road. The predominate field research area lays west of Little Paint Branch Creek. It consists of bottom lands and hillsides in the northwest gradually sloping up to Cherry Hill Road. This area includes experimental plots, scattered service buildings and a cluster of 12 maintenance buildings. This maintenance complex was historically referred to as the West Service Area during the 1930s. This portion of North Farm also includes the wood-framed Sellman House (bldg. 023), which dates to 1905. When the Bureau acquired the Sellman property in 1932 the house served as the Superintendent's residence. The house remains standing and in partial use by BARC today. The adminstrative zone is located on the eastern slope and upland plateau of Little Creek Branch. This zone includes eight administrative/office buildings clustered at the plateau's edge adjacent to Route 1. The administration zone includes academic-type buildings, manicured lawns, ornamental plantings, paved roadways, and sidewalk in a particular set of formal relationship. The roads and walks run across and down the slope connecting adminstrative buildings with laboratory research buildings. A grid organizes the layout of the laboratory research zone. This zone includes small out-buildings, greenhouses, head houses, and small row-house. The USDA's fairly consistent use of Georgian Revival style architecture unifies the overall plan arrangement. This arrangement reflects the design intentions of a 1938 general plan by National Park Service (NPS) landscape architect Malcom Kirkpatrick.

Around 1930 the Department of Agriculture searched for land to relocate the Bureau of Plant Industry's Division of Fruit and Vegetable Crops and Diseases which resided at Arlington Farm. In December 1931, the USDA leased two truck crop production properties owned by Irvine L. Miller and Theodore Alexander Sellman and Robert Lee Sellman. Landform, soil characteristics, and proximity to the USDA's Central Farm made the properties attractive. Sellman farm included 100 acres of "strong river bottom land, admirably suited for truck crop experiments." Another 100 acres at a slightly higher elevation had "good air drainage and particularly suited for experimental work with fruit crops." Apparently, only one woodland, consisting of scrub pine saplings, existed on the properties. Besley's 1912 map of Forest Areas by Commercial Type indicates these woods stood on the eastern side of Little Paint Branch Creek.

In 1933 the USDA purchased both properties; designating them as the "U.S. Horticultural Field Station at Beltsville, Maryland." The Bureau of Plant Industry's Division of Fruit and Vegetable Crops and Diseases began planting in experimental crops during the same year. These crops included apple, peach, nut and other

fruit trees. The office of Forage Crops, another Bureau of Plant Industry division, relocated shortly thereafter to North Farm. While the Department of Agriculture leased the Sellman and Miller tracts, the Office of Forage Crops conducted pasture investigations on USDA land (Central Farm) east of Route 1. The same year Public Works Administration (PWA) funds were allocated to the North Farm site for land clearing, drainage and water lines, irrigation system installation, road and fence construction and electric service. The Civil Works Administration (CWA) allotted additional funds for improvements in 1933 and 1934. Ditch and tile draining of approximately 200 acres was the largest funded project. Other CWA funded projects included road and bridge building, cutting fire guards along property lines, removing ditch banks, digging gas and water lines, creating a sewage disposal system, installing a Skinner irrigation system, erecting fences, land grading to prevent erosion, and improvements to ditches and the bed of Little Paint Branch Creek. Many of these improvements remain part of the landscape today. Surviving features include the bridge locations, irrigation reservoir, Fruit Products Building (006), horticultural laboratory and reserach building (004) and the Cold Storage Laboratory (North Wing Administrative Building 002), Central Heating Plant (Service Building 012), Range 1-Greenhouse and Headhouse (011), storage buildings, variousportions of roads, ditch and drainage systems and the Little Paint Branch Creek levee.

Centralization of the Bureau of Plant industry occurred in 1934. This administrative change spurred the construction of a core area which grouped all Bureau research together (including on-going research at the Glendale Plant Introduction Station). An aerial photograph circa 1936 shows the early layout of the administrative, research, utility, and headhouse and greenhouse buildings within this core area. A particularly interesting feature was the octangonal, surface level cooling pond used to condense water for the refigeration equipment used in the Fruit Products Laboratory (006) and Cold Storage Building (002). The cooling pond was most striking in its visibly formal relationship to the Range 1 greenhouses and headhouse (011), the Fruit Products Laboratory, and the Horticultural Laboratory (004). The beginnings of a quadrangle appear in this photo with walks leading off the cooling pond. A parking lot now covers the site of the cooling pond.

The Bureau also expanded its boundary to include two tracts east of U.S. Route 1. This area would be referred to as "East Farm," (known today as Linkage Farm) and carry out much of the same field research as North Farm. During this same time, the Division of Plants and Nematology relocated to North Farm. Further administrative centralization occurred in 1938 when the Bureau of Soils, and in 1953, the Bureau of Agricultural Engineering merged into the Bureau of Plant Industry. The Bureau was renamed Bureau of Plant Industry, Soils, and Agricultural Engineering. The Bureau of Soil's research related to fertilizer, soil management and irrigation, and soil survey. The Bureau of Agricultural Engineering brought research relating to farm buildings and rural housing, farm electrification, farm machinery, and the mechanical processing of farm products into the organization. As a result of this continued centralization North Farm has the highest density development at BARC.

In 1943 the Bureau of Plant Industry, Soils, and Agricultural Engineering developed a plan which designated North Farm for field crops, orchard research, and vineyards. Field research investigations included plant breeding, physiology, cultural requirements, and propagation. Specific crops research included soy beans, blueberries, potatoes, Easter lilies, and lespedeza. The Bureau's plan utilized a 1943 Conservation Plan prepared by the Soil Conservation Service. The SCS plan called for the grading of North Farm's western slope with terraces for orchards; for the Little Paint Branch Creek bottom lands furrowed and farmed in beds, and the eastern slopes to be cultivated with strip crops or contour orchards. At present, research fields are assigned to Turfgrass Research,Vegetable Crop Demonstration, and orchard research. The majority of turfgrass and vegetable research occurs in the creek bottomlands. A small orchard has been reestablished on an upland slope.

North Farm features several historic buildings. These include the Administration Building (003) and the Sellman House (023). For more information on buildings, see the Structures Survey Forms.

Landscape throughout North Farm is formed by lawns, specimen trees, and beds of shrubs, perennials and annuals. National Arboretum cultivars have been planted throughout the administrative and laboratory areas. Foundation beds of small shade and flowering trees, evergreen trees, perennials, and bulbs surround

buildings. The plantings around the administrative buildings are fairly formal. By contrast, foundation plantings at the outbuildings, associated with research fields, appear informal and somewhat arbitrary. Inconsistent use of prepared beds and irregular-in-habit plantings contrast with the administrative area's formality. Ornamental plantings of mature evergreen trees, American Holly *(Ilex opaca)* and Pine *(Pinus sp.)* surround the former Sellman House. These trees serve to screen the adjacent maintenance complex. In the western research fields, mature evergreen trees screen the southeast sides of service buildings. The planting screens effectively block the service buildings' visibility from the administration area..

**Landscape Characteristics and Features:**

- **SPATIAL ORGANIZATION:** Woodlands on the northeast, south, and western sides enclose the farm. A chain link fence, visible in a few locations, delineates the North Farm property line. As noted earlier, Little Paint Branch Creek divides North Farm. Two basic spatial areas exist along this divide: the western and eastern slopes. A skewed, but visible, axis exists between two main buildings sited opposite each other on the eastern and western slopes: the Sellman House and the Administration Building. This axis reinforces a formal-to-informal spatial progression found at North Farm in 1943. The progression began at the administration area. On the east slope adjacent Route 1, a formal campus-like layout of the administrative area overlapped into the laboratory area's more dense, urban grid of buildings and streets. At Little Paint Branch Creek, the grid ends and irregular field patterns and relaxed grids of orchards move up the western slope. The Sellman House sits prominently on the crest of a western slope hill among the research fields. This prior relationship between the dividing line of the creek and opposite levels of development on its adjacent lands appears to compose the three distinct spatial zones found at North Farm today: the administrative/office area, the laboratory research area, and the research fields.

The administrative and laboratory zones, on the eastern slope, appear to have been formally laid out between 1935 and 1950. By 1936 the North Farm had a headhouses with associated greenhouses(011), a Fruit Products Building (006), a Horticultural Laboratory (004), and a central heating plant. An aerial photograph circa 1936 captures the formality of this early layout around an octangonal, surface level cooling pond. A 1938 general plan produced by NPS landscape architect Malcom Kirkpatrick seems to respond to these existing conditions. His plan organization shows buildings, cooling pond, and trees existing prior to 1938 in outline and those proposed as shaded. Kirkpatrick's plan (figure 1) shows a rather formal, almost baroque layout of the administration and laboratory facilities around oval lawns, rectangular lawn panels, street grids, and allees. Of particular note, Kirkpatrick designed an oval lawn adjacent Route 1 for the layout of large academic-type buildings. Kirkpatrick also indicated rectangular blocks of research buildings sited on the hillside behind the oval lawn and academic-type buildings. The 1943 map of North Farm, complied from surveys and aerial photographs, delineates the academic-type administrative buildings, oval lawn, and grid of rectangular research buildings called for in Kirkpatrick's general plan. This suggests that partial implementation of his plan occurred between 1938 and 1943. At present, administrative buildings open onto spacious lawn panels intersected with walks. These panels feature perennials and specimen shade trees. Street trees and an allee further evidence their location origins in Kirkpatrick's formal parti. The Administration Building and a half-oval lawn area, outlined by Circle Drive, marks BARC's distinctive presence on Route 1. This "front" lawn contains several large specimen trees and five planting beds of ornamental trees, shrubs, and perennials.

The research fields zone, predominately located on the western slope, appears more informal and predates the Kirkpatrick plan. This zone largely consists of relaxed orchard grids and irregular plots of vineyards, pasture, and turfgrass. The preexisting, rural vernacular landscape at North Farm included large portions of truck crop production. A 1932 memo from William A. Taylor, Chief of the Bureau of Plant Industry, to the Secretary of Agriculture, suggests these vernacular farming conditions largely determined the research fields' spatial organization. Truck crops occurred in the bottom lands of the Little Paint Branch Creek. The Bureau then placed its orchards and grapes on the slopes above by utilizing terrace grading and contour planting. Today the western slope still contains most of the research field. However, the orchards are gone and only the ghost of their terraces remain. By 1943, numerous service roads traversed the rural vernacular landscapes the USDA inherited. Most of these roads remain at present.

• **TOPOGRAPHY/GRADING:** As noted above, the Sellman and Miller farmstead contained landform and soil characteristics most suitable for the Bureau's needs. The North Farm is shaped like a bowl with high elevations at the perimeter and low bottom lands in the center along the creek bed. The terrain west of the creek varies from flat bottom lands to steep hillside slopes. The terrain east of the Creek varies from flat bottom lands to the more gradually sloped uplands near Route 1. The northwest corner of the site slopes steeply up to Sellman Road. The northeast corner of the site slopes up to Baltimore Avenue. Adjacent to the Creek, bottom lands slope up south to north with topographic elevations ranging from 90-feet to 150-feet. The two highest points on the Farm are in the northwest and northeast corners.

The addition of buildings, roads, orchards, fields, and irrigation required grading throughout North Farm. The 1943 SCS conservation plan for BARC recommended that the North Farm tract included "crop-land terracing, orchard terracing, contour strip cropping, and broad-based drainage ditching." It appears that these recommendations were to bring BARC into compliance with newer methods of soil conservation practices developed elsewhere, rather than set or develop a standard based on experimentation at BARC. Erosion control terrace experimentation did occur on about 25 acres of the west slope around 1935. However, the 1943 conservation plan stated that "the present concept of terracing would indicate...the area is too steep for a terrace system and that [drainage] diversions should be used." The SCS recommended terraces only on those slopes that met the existing grade and soil requirements for minimal erosion. Fragments of these erosion control terraces created after 1943 are located in the northwest quadrant of the site, adjacent to Cherry Hill Road. Grading on or near bottom lands apparently continued much of the vernacular practices at North Farm prior to 1932. The Bureau, through the WPA-PWA implemented drainage diversions in the form of swales, terraces, ditches, and catch basins. The SCS recommended paving many open drainage ditches, especially those near roads and channelization of Little Paint Branch Creek to reduce the risk of serious flood damage. An irrigation reservoir was also built adjacent Cherry Hill Road near a woodland. Today, paved ditches remain, as do the reservoir and channelized sections of Little Paint Branch Creek. A more recently constructed waste water treatment pond is located adjacent Little Paint Branch Creek, west of Range 3.

| TOPOGRAPHY/GRADING | CONTRIBUTING/NON-CONTRIBUTING |
|---|---|
| Diversion Terraces | Contributing |
| Drainage Diches | Contributing |
| Drainage Swales | Contributing |
| Catch Basins | Contributing |
| Waste Water Treatment Pond | Non-Contributing |
| Paved Roads | Contributing (except West Drive) |
| Unpaved Roads | Contributing |

• **VEGETATION:** Vegetation on the North Farm is diverse and includes ornamental plantings, woodlands, research orchards, and research plots of turfgrass and vegetables. The vegetation can be organized into categories of building foundation plantings, ornamental bed planting, specimen plantings, lawn, and woodland. Most ornamental planting was introduced after 1950. These plantings include cultivars developed by the National Arboretum and the Plant Introduction Station.

The foundations plantings at the administrative buildings include substantial plant material from the National Arboretum. Mark Cathey, a National Arboretum director, designed the original planting beds which include shrubs and small trees in front of buildings and larger shade trees planted in the side lawn areas. The foundation planting in the laboratory areas are much simpler and regular. Typically, the entrance doors are flanked with symmetrical plantings of either shade trees or evergreen trees and/or shrubs. This is most apparent around the old greenhouses (Building 011) by the double juniper planting at the rear and the fastigiate oaks at the northeast entrance of Building 011B. The smaller laboratory buildings, such as quonset huts and small greenhouses, and out-buildings in the research fields also have foundation plantings.

Currently, the evergreen trees/shrubs screens the buildings from view when standing on the east side of Little Paint Branch. It is unclear whether these plantings were installed based upon a plan to screen any buildings within the research fields from the administration area.

In the formal "front lawn" of the North Farm, landscape material is organized into eight planting beds filled with one to three varieties of species. Seven of the beds are located on the inside loop of Circle Drive and the one remainder located on the outside eastern half of the loop drive. The eight planting beds consist of the following: Bed #1, outside of Circle Drive, includes Larch *(Larix sp.)*, Cotoneaster *(Cotoneaster sp.)*, and Chrysanthemum *(Chrysanthemum sp.)*. Bed #2 includes sheared Scarlet Firethorn *(Pyracantha coccinea)*, Saltspray Rose *(Rosa rugosa)*, Doublefile Viburnums *(Viburnum plicatum var. tomentosum)*, and Scholar-tree *(Sophora japonica)*; Bed #3 includes Foster Holly trees *(Ilex x attenuata 'Fosteri')*, ornamental grasses *(Pennisetum)*, Sedum *(Sedum 'Autumn Joy')*, and unknown with green piths; Bed #4 includes Tulip Magnolia *(Magnolia quinquepeta)* and *Narcissus* bulbs; Bed #5 includes Common Smoketree *(Cotinus coggygria)*, Nandina *(Nandina domestica)*, and Liriope *(Liriope sp.);* Bed #6 includes deciduous azalea *(Azalea sp.)*, Flowering Cherry trees *(Prunus sp.)*, and unknown shrub. Bed #6 is the largest planting bed in the front lawn and is the only divided bed. Bed #7 and #8 are located in front of the two BARC main entrance signs and include annual bedding plants, shrubs and small flowering and evergreen trees, such as Marigolds, Blue Atlas Cedar *(Cedrus atlantica 'Glauca')*, Juniper *(Juniperus sp.)*, and American Holly.

Single specimen deciduous and evergreen trees are used throughout the North Farm. Individual trees occur in the "front lawn" close to the Rt. 1 right-of-way, and include specimens of Oak *(Quercus sp.)*, Fastigiate Oak *(Quercus )*, Dawn Redwood *(Metasequoia glyptostroboides)*, Flowering Dogwood *(Cornus florida)*, common Persimmon (Diospyrus virginiana), Star Magnolia *(Magnolia quinquepeta)*, Japanese Red Maple *(Acer palmatum)*, American Holly *(Ilex opaca)*, and Spruce *(Picea sp.)*. In the administrative area, specimen shade trees consisting of Chestnut Oak *(Quercus prinus)* and Willow Oak *(Quercus phellos)*, are located in three large lawn panels. Also in these lawn panels is a diverse mix of large evergreen trees with loose habits consisting of Fir *(Abies sp.)*, Cedar *(Cedrus sp.)*, Pine *(Pinus sp.)*, Spruce *(Picea sp.)*, and Arborvitae *(Thuja sp.)*. Picnic tables, benches and walks are common furnishings within these lawn areas. A magnificent stand of three Star Magnolias (Magnolia stellata) is located at the intersection of Circle Drive and North Drive. In the laboratory zone, single specimen trees occur in medians, forest buffer management areas, and between buildings. These species range from Oak *(Quercus sp.)*, Linden *(Tilia sp.)*, American Holly *(Ilex opaca)*, Sycamore *(Platanus sp.)*, and Bradford Pear *(Pyrus calleryana 'Bradford')*. In the research fields, large shade trees define the edges of fields. Five Linden *(Tilia sp)* trees are located at the intersection of East Line Road and North Drive, three Oak trees line the forest management buffer, and the remaining majority of other specimen trees are located in the fields west of North Farm Drive. One American Holly tree, which stands approximately 30-feet tall, is located at the southern Cherry Hill Road entrance. Three clusters of distinct American Holly trees occur on the North Farm. These trees are noticeable due to their quantity, ranging from four to eighteen, their consistently straight alignment, limbed up branches, and visible trunks.

Lawn areas are a major element of the North Farm landscape. Lawn defines the ground plane in the administrative and portions of the laboratory areas with the exception of mulched planting beds.

Woodlands define the south, west and portions of the east perimeters of the North Farm. These woodlands are a mix of deciduous and evergreen trees with an understory of smaller trees and shrubs. This vegetation blocks views to adjacent property and screens the chain link fence on the property line. The forest stand on the south perimeter is the largest in area and encroaches into the southern research fields. This vegetation has remained as early as 1937 and appears to only have been cleared for the construction of Interstate 495 and a parallel dirt lane within the Farm property. A small amount of woodland stands at the site perimeter along South Drive, south of Building 007. This stand, dotted with picnic tables beneath, provides a picnic area for the administrative area of the North Farm. Only one woodland stand encroaches the interior of the North Farm, and is located at the north end of South Drive, south of Little Paint Branch. This forest can be seen from the administrative area behind Building 001 and 002 and obstructs views into the southwest research fields. Today, BARC is planting Leyland Cypress *(X Cupressocyparis 'Leylandii')* along the fence line of Cherry Hill Road in an effort to create a continuous woodland edge for the North Farm property. These

plantings are young, however, the peaked tops are visible from the parking lot adjacent to Building 005 in the northeast corner of the site.

Miscellaneous vegetation at the North Farm includes the following:

The east and west perimeter plantings vary greatly. The eastern perimeter landscape consists of a large stand of Pine (*Pinus sp.*) adjacent to a parking lot, and can be documented to as early as 1936. This stand appears to be successional from the previous farm use of this land. The Pine stand is divided into two areas with no understory growth other than lawn. Between the two stands are several unique ornamental plantings of Kousa Dogwood *(Cornus kousa)*, Sargent's Canadian Hemlock *(Tsuga canadensis 'Sargentii')*, and Amur Maple *(Acer ginnala)*. The Pine stand screens the adjacent apartment complexes. The western perimeter has a more diverse variety of plant material which includes Glossy Euonymus, Weigela, Spruce, and Juniper. This low hillside planting screens the adjacent land use completely.

Orchards have historically been a part of the research activities of the North Farm. The 1943 SCS Plan delineates orchard research in the slopes on the north side of Little Paint Branch. Today, remnants of the terraces occur east of the northern Cherry Hill Road entrance gate. In the central northern sloped fields of the North Farm, no orchards from the 1943 era remain today. However, in the far western corner of the Farm, a small and young fruit orchard is growing. The only other stand of orchard type planting occurs near the remnant terraces and is a cluster of 16 Chinese Chestnut *(Castanea mollisima)* trees. This grouping is a mature planting of trees and can be seen from the southern portion of the site.

On the western portion of First Street, 24 Willow Oaks *(Quercus phellos)* are planted in single rows along each side as street trees. This particular planting of trees resembles typical campus development type elements. A perpendicular row of seven Willow Oaks is linked to this street tree planting, and courses across the lawn panel between Building 001 and 002, and then down slope towards the greenhouses.

The North Farm has four ornamental residential landscapes which range from simply lawn with shade trees, to a complex variety of shade trees, evergreen trees, and garden plots filled with shrubs and perennials. The three residential houses, located on the south side of Little Paint Branch, are amongst a shady woodland canopy and have a small amount of common ornamental shrubs and perennials at their foundations, consisting of Azalea *(Azalea sp.)*, Yew *(Taxus sp.)*, and Rose *(Rosa sp.)*.

A diverse palette of plant material occurs in the Sellman House (023)landscape. Overall, the residence is surrounded by large evergreen and shade trees with a sloped lawn area on three sides, distinctly separating this landscape from the research fields. The residence is located directly adjacent to the primary maintenance complex to the north, with additional shops located along the western side. To screen these shop uses, a hedge of American Holly and grove of Pine were planted on the north side of the residence property. Today, this hedge of holly forms a dense screen, and the maintenance complex is not visible. This stand of pine trees provide a backdrop for the residence from the administration area. A woodland consisting of Sweetgum, Pine, Oak, holly, with a few unique plantings intermixed, such as Sargent's Canadian hemlock, is located on the east side of the residence. To the south of this woodland, a small vegetable and perennial garden remains. Currently remnant plant material is sprouting, however, this material appears unattended and partially overgrown. Along the inside roadways circulating around the Sellman House, large evergreen trees exist. These trees partially screen the residence from view, similar to the Buildings 035, 036, 037, 038, 039, 040, and 041, plantings, from the research fields and the south end of North Farm. This mix of Spruce, Holly, Black Locust, Maple, and Viburnum is currently very large and provides enclosure to the front lawn.

Riparian vegetation appears in drainage swales, along some drainage ditches, and around a fenced holding pond.

| VEGETATION FEATURES | CONTRIBUTING/NON-CONTRIBUTING |
|---|---|
| Fields/Cropland | Contributing |

| | |
|---|---|
| Woodland edge (NW, W, SW, S) | Contributing |
| Remnant Landscape of Sellman House | Contributing |
| Small Fruit Orchards | Contributing |
| Ornamental Geometric Tree Planting | Contributing |
| Ornamental Planting Beds and Shrubs | Non-Contributing |
| Riparian Creek vegetation | Non-Contributing |
| Single Specimen Trees | Contributing |
| Screen Planting on West Slope | Non-Contributing |

• **RESPONSE TO NATURAL FEATURES:** Crop and orchard locations corresponded closely to suitable soil types, grades, and drainage. Soil suitability was an initial determinate for the USDA in acquiring the North Farm lands in 1932. Various farming techniques have dictated the use of tile drains, drain inlets and outlets, and erosion control. Terraces have been used to direct water on the hillside to control erosion. To collect water, tile drains were installed with inlets constructed along the roads. Many research fields use contour based grading and planting. Roads grades, on portions of North Farm, follow land contours. Two prominent buildings, the Sellman House and the Administration building, appear sited on or near the top of hillsides for visibility.

• **CIRCULATION:** Prior to 1930 the only visible North Farm road shown on USGS maps of 1903,1911, and 1927 leads to the Sellman House. This indicates that most of the road network in place at North Farm today was built between 1930 and 1943. Circulation at the farm is organized by a primary entrance loop road, a grid of streets and field roads. Roadways consist of paved surfaces, gravel surfaces, and dirt lanes coursing through research fields. Sidewalks are utilized in the North Farm, unlike the South Farm, and are found in the administrative and laboratory research areas. These concrete and asphalt paths connect buildings and parking areas of the North Farm.

East of Little Paint Branch, the vehicular roadways of the North Farm are organized in a grid pattern, with the exception of Circle Drive, and include the following roads: First Street, Second Street, Third Street, Fourth Street, and Fifth Street are all parallel and run in an east/west direction; North Drive, Range 2 Drive, Range 3 Drive, and South Drive are also parallel and run in a north/south direction. Circle Drive is semi-circular, looping around the grand "front lawn" and is the primary entrance road of the North Farm. The hierarchy of road alignments starts with Circle Drive and gradually decreases farther from Rt. 1. Circle Drive is the only paved road with curb and gutters at the North Farm. All other named roads located east of Little Paint Branch are paved surfaces, with the exception of two segments of Third Street, which are gravel and dirt paving.

On the north side of the Creek, roadways are organized around the fields and follow topography. These roads include the following roads: North Farm Drive, Service Drive, Peach Orchard Drive, West Drive, Pine Loop Road, plus other unnamed gravel roads and dirt lanes. The paved roads within the field areas do not have curb and gutters. These road alignments provide access to the research fields, the maintenance complex, the Sellman residence, and the far north and south ends of the Farm.

Seven gates are located at the North Farm and are located on both sides of Little Paint Branch. Two gates, one named Cherry Hill Gate on the 1943 Bureau Plan, are located at the Cherry Hill Road entrances; one, named Paint Branch Gate on the 1943 Bureau Plan, at the East Line Road entrance from Sellman Road; another gate, named North Gate on the 1943 Bureau Plan, located at the intersection of West Drive and Sellman Road; one gate at North Drive and Little Paint Branch; and the fifth gate, named Canary Gate on the 1943 Bureau Plan, located at West Drive and Canary Road. Canary Gate is the only closed and locked gate. The gate leading into the research fields has been open during survey work, however, signage notes that

"Fields May be Closed Due to Pesticide Spraying."

Staff parking areas of the administrative zone occur in designated lots, typically away from the buildings. However, service areas for loading and special deliveries are located directly behind most of these buildings. All parking areas are easily accessible and are linked to building entrances with sidewalks. There are seven parking lots located on the top flat level of the North Farm, associated with the administrative buildings. Around laboratory buildings, parking occurs in pull-in-spaces with access to the fronts of buildings. On-street parking is not permitted with the exception of parallel parking on Circle Drive.

Access to all buildings is provided by these road alignments. Finally, a pedestrian network of sidewalks and roads serve the North Farm. Most of this network is concentrated in the Administrative and Laboratory Research zones.

| CIRCULATION FEATURES | CONTRIBUTING/NON-CONTRIBUTING |
|---|---|
| Paved Roads -Circle Drive, North Drive, South Drive, Range 2 Drive, Range 3 Drive, First Street, Second Street, Third Street, Fourth Street, Fifth Street, Cherry Hill Road, Canary Road, North Farm Road, Peach Orchard Drive, Service Road, Cherry Hill Road, Pine Loop Road, and East line Road. | Contributing |
| West Drive | Non-Contributing |
| Gravel Roads | Contributing |
| Dirt/Farm Lanes | Contributing/Non-Contibuting |
| Bridges | Contributing |
| Bridge Crossing Locations | Contributing |

- **LAND USES:** Three land uses occur on the North Farm; administrative, laboratory research, and field research. These uses occupy different zones on the land and have distinct characteristics. Administrative and laboratory research land use zones include buildings, grounds, utilities, roads, and parking. Field research requires the largest use of land on North Farm. This land use zone is supported by drainage and irrigation systems, roadways, utilities, and roads. Other land uses include: a spoils area along gravel West Drive, west of the Potato House, recreational use of roadways (walking), a sand volleyball court, residences, and child care.

- **CLUSTER ARRANGEMENT:**

Laboratory/Office/Greenhouse Cluster (1930s to 1950s): The North Farm buildings fronting on Route 1 and running west to include the headhouses for Ranges 1, 2, 3, and 4 are sited in a fairly formal, generally symmetrical fashion. They represent an unusually cohesive collection of buildings with Georgian Revival detailing spanning the years from 1935 to 1950. The endurance of both the Georgian revival stylistic vocabulary and the accompanying palette of materials (brick walls, slate roofs, stone detailing) for a variety of types of buildings over the years is unusual. The continuance of the style has meant that the North Farm remains largely intact to its early (1930s to 1940s) character. The Headquarters Service Area buildings (Building 012 and 014), although differing somewhat from the design characteristics of the other buildings, still rely on similar materials. Originally, the appearance of Building 012 was in keeping with the rest of the area, it has, however, been recently stuccoed and it has lost some of its original detailing.

Initial North Farm Service Area (1930s): This first area devoted to the service buildings necessary to operate the Plant Industry Station had quite a different architectural style and character from the buildings of the main laboratory/office area. In layout, the buildings are positioned in somewhat haphazard arrangements of two or three buildings. In terms of the design of the buildings, most are small wood structures with wood siding and gabled roofs. (The bank storage buildings -- buildings 038-040 -- were likely constructed of rock-faced concrete block because of their partially subterranean design.) All of the buildings in this area, which were and are largely used for storage, are architecturally indistinguishable from outbuilding that would be constructed by farmers throughout the United States at this time.

Second North Farm Service Area (1930s - 1940s): The service buildings located in the area behind the Sellman House (023) were sited in a rectangular grouping that has as its axis a line that bisects the Sellman House. Architecturally linked to the South Farm service buildings, they were completed in an expedited fashion using utilitarian concrete-block construction. Many of the buildings are set in the hillside and include a basement ground level on one side and a second-floor ground level on the other.

For more information regarding specific historic buildings on the North Farm, see individual Building Survey forms which follow this form.

- **STRUCTURES:**

Currently, four residences stand at the North Farm, three of which are located east of the Creek. The fourth, the Sellman House, is located on a skewed axis with Building 003, in the sloped area of the research fields. This house stands directly to the east of a large maintenance complex. The 1943 Bureau Plan designates seven "station residences" at the North Farm. These residences include the four previously mentioned, plus one along Sellman Road and one near the northeast boundary where currently a pine grove stands. The 1943 SCS Plan shows three residences, one at West Drive/Canary Road; one north of the Fruit Products Laboratory Building (006), and the Sellman House.

There are 112 buildings on the North Farm, which can be classified as administrative buildings, laboratories, headhouses, greenhouses, residences, and miscellaneous out-buildings. Buildings more than 50 years old include: the residences (016-018, and 022), Sellman House (023), Storage (034-041), South Building (001), South Wing Administration Building (002), Administration Building (003), North Wing Administration Building (004), North Building (005), Fruit Products Laboratory Building (006), Soils Building (007), Laboratory Building (008), Range 1-Greenhouse and Headhouse (011), Range 2-Greenhouse and Headhouse (010), and Range 3-Greenhouse and Headhouse (009).

- **SMALL SCALE FEATURES:** The ongoing research activities at the South Farm contribute distinct small scale features to the landscape, similar to the South Farm. Some of these features are permanent such as the small greenhouses, quonset huts and standpipes located east of the Creek, while others appear temporary, such as campers/trailers, electrical generators and wiring, and irrigation piping, located in the research fields. Every week new research features are added to the Farm as plots are tilled and seeds are planted for research programs.

The boundary fence of chain link is the primary fence at the South Farm. This fence, topped with parallel lengths of barbed wire, appears to be continuous, exception along the Rt. 1 frontage. In most cases, the fence is hidden by vegetation. Chain link fencing also occurs inside of the Farm around the wastewater treatment pond. This fence is painted black and is covered with vines at one corner. Split rail fencing is used around the forest management buffers and two satellite dishes. The fence around the forest buffers is not continuous, consisting of only two rail sections at each corner and in one long middle run used to delineate the mowing limits. In the sloped fields of the northwest quadrant, two research areas are fenced with tall chin link. These fenced areas also have restrictive access signage due to radioactive testing. Another research plot, located in the central low lying area is also enclosed with chain link fence, but does not appear to have high restricted

access.

Four styles of lighting fixtures are used on the North Farm. The Cobra Head light and mounted Flood lights, are used in parking lot and greenhouse areas. A pedestrian post and neo-Colonial lamp, with a black finish, is used around the inside tract of Circle Drive. Another pedestrian post light is used in the foreground of the administration buildings. This light, also with a black finish, has a larger fixture than the light used around Circle Drive. A newer contemporary post light and torch lamp, with a black, finish is used around Building 010A.

Main entrance signs are located at both Route 1 entrances and are labeled United States Department of Agriculture, Beltsville Agricultural Research Center. These painted metal signs with blue background are free standing walls with brick piers. At the secondary entrances from Cherry Hill Road, signs labeled with "No Trespassing" and "Fields May Have Received Pesticide Applications" are posted. Building signage is done by two methods. Each building has large white painted numbers attached to the front facade. Also, free standing wood constructed signs are located in front of all buildings. Wood slats are carved with the building numbers and below, plastic slats describe the specific laboratory/division within each building. Road signage is clear on the North Farm with the use of standard street signs at most corners and intersections. The research fields also have descriptive signage, labeled as the National Turfgrass Research and Vegetable Crop Demonstration. Lastly, the meadow area around Building 011 is labeled as a Forest Buffer Management Area. The locations of signs in reserach fields buffers, designated picnic areas, and volleyball courts are not permanent.

Heating/cooling ventilators are present in the east landscape of the North Farm. These ventilators are approximately three feet square and project from the ground approximately three feet. These ventilators are located primarily in the lawn areas adjacent to Buildings 001, 002, and 007. One recently renovated greenhouse cluster has a series of water cooler tanks located on the southern side of the building.

Several picnic tables are located at the North Farm, and are typically dispersed amongst the administration and laboratory buildings. One parcel of the North Farm is designated as a picnic zone and is located at the intersection of South Drive and Second Street. This picnic area is amongst a stand of deciduous trees with a lawn area beneath. A sand volleyball court is another recreational feature of the North Farm and is located adjacent to Building 011.

Standpipes and fire hydrants are present at the North Farm. In the research fields, both the hydrants and standpipes are commonly used to irrigate the crops with links of steel pipes attached to reach the fields. Fire hydrants are also located around the administration and laboratory buildings.

Overhead electric utility poles are located primarily in the fields west of the Creek. Underground utility lines must provide service for the administration and laboratory buildings. The electric line is secured by timber poles, originating from Cherry Hill Road. The two primary lines in the research fields originate from Cherry Hill Road and traverse down the slope into the low lying areas of the research fields. One line closely follows Canary Road., then along the small ditch southeast of the Potato Houses, and finally turns north to meet the other primary line near North Farm Drive. The second primary line is a double row of poles which extend from the maintenance complex to North Farm Drive just west of the Creek bridge. Secondary feeder lines branch from the primary lines and provide service to the out-buildings and experimentation features.

Several trellis type features occur in research area of the Farm. One type, located just inside the northern Cherry Hill Road gate, is a series of angled wood rails with wiring. Currently, this trellis does not appear to be under active experimentation. Other small trellises occur in the Vegetable Crop research test plots and appear to be used for berry research. These trellises are approximately 24-inches tall and are a simple wire and post framework.

Raised planter beds of concrete blocks, cold frames, are located south of the Range 3 buildings. These planters are used for research, although, only two are currently used for active experimentation.

| SMALL SCALE FEATURE | CONTRIBUTING/NON-CONTRIBUTING |
|---|---|
| Experiment Areas | Contributing |
| Experiment Features | Non-Contributing |
| Drain Tiles/Inlets/Outlets | Contributing/Non-Contributing |
| Utility poles | Non-Contributing |
| Informational Signage | Non-Contributing |
| Lighting Fixtures | Non-Contributing |
| Chain Link Fence | Contributing |
| Cold Frames | Contributing |

- **VIEWS AND VISTAS:** From the northwestern and southeastern perimeters, panoramic vistas can be seen over the central fields, administration buildings and the greenhouses. A significant view from the Sellman House to the Administration and Laboratory Area exists. The Administration building cluster facades are clearly visible to the public from US Route 1.

**Significance:**

The land that comprises the North Farm was first leased in 1931 and then acquired in 1933 by the Bureau of Plant Industry for use by the Division of Fruit and Vegetable Crops and Diseases as a field station for long-term experiments. The type of bottom land soil and its historically high rate of productivity were the significant criteria in the selection of the site. The area was also identified as a possible location for the entire Bureau, if the USDA was forced by the War Department to vacate its facility at Arlington Farms in Virginia. The War Department considered the Bureau's Arlington facility prime land for the expansion of defense-related activities. Their proposal became reality when Congress appropriated funds in 1940 for the acquisition of additional land at Beltsville to facilitate the move from Arlington and the consolidation of the Bureau's administration and research efforts at one location.

The development of the Bureau at Beltsville occurred in two phases. The initial phase occurred between 1933 and 1938 and was devoted to site preparation and to the construction of utilitarian structures that were specifically designated for plant research. The Civil Works Administration (CWA) and the Public Works Administration (PWA) funded this development. Some Civilian Conservation Corps labor also contributed to these projects. In the early 1940s, the administration buildings and additional research facilities were located and constructed according concepts articulated in earlier master plans, such as that of Malcolm Kirkpatrick, a National Park Service (NPS) landscape architect. At about the same time, the topography of the research slopes was contoured with terraces. Modifications and additions to these grades occurred about 1943-1944. By 1944, when all of the construction was completed, the formal ordered arrangement of structures and fields supported research that centered on cereal crops, tobacco, forage crops, fertilizer, cold storage, fruit breeding, and pharmacological and nematology work.

Three historical aspects of the development of the North Farm are clearly visible today. The first is the longstanding agricultural use of the land, which was incorporated into the USDA's adaption of existing productive farmsteads, such as the Sellman tract. Some features from the Sellman farm remain in tact on the western slopes above Little Paint Branch Creek. The second is the involvement of New Deal organizations and the use of master planning principles by NPS and other professionals in the development of the site. The arrangement of buildings and the separation of distinct land uses shown on these plans continues to provide the organizational structure to the site overall. The third aspect is the USDA's dedication to improving growing stock on a national level by conducting plant research on the North Farm at Beltsville. This dedication is manifested in the rehabilitation of original structures, such as greenhouses, the construction of new research buildings, and the ongoing research activities visible in the fields on the east and west sides of Little Paint Branch Creek.

**Sources of Information:**

Phoebe Cutler, The Public Landscape of the New Deal (New Haven: Yale U. Press, 1985)

William A.Taylor, Memorandum, January 18, 1932. NARA, RG 17, Entry 19(1943) Box 1933.

Soil Conservation Service, USDA, Beltsville Research Center Conservation Plan, November 1943.

Preliminary Historic Context Statement: North Farm/Beltsville Agricultural Research Center, 25%-Phase II & III, BJY and R&A, November 25, 1994.

Eligibility Report: Buildings 009, 010, and 011 (Ranges 3, 2, and 1), Beltsville Agricultural research Center-West, BJY and R&A, January 6, 1995.

Eligibility Report: Buildings 001 to 007/Beltsville Agricultural Research center, BJY and R&A, June 25, 1995.

BARC 1996 Master Plan Update, BJY, 1996.

Final Phase III Cultural Resources Report, BJY and R&A, December 1995.

Beltsville Research Center Conservation Plan, USDA Soil Conservation Service, November 1943.

Map by Bureau of Plant Industry, Soils, and Agricultural Engineering, Agricultural Research Administration, USDA, 1943.

NARA Cartographic Division, RG 145 Can 2070 Frames FG-132-177, FG-132-178, FG-135-17 thru 19

Aerial Mosaic/USDA/Agricultural Research Center, compiled by Cartographic Division, Soil Conservation Service, 1957

Maryland Geological Survey, Map of Prince George's Co. and District of Columbia showing Topography and Election Districts: G3843.P7.1903.M3 (1903), G3843.P7.1914.M3 (1914), G3843.P7.1927,M3 (1927), and G3843.P7.1936.M3 (1936).

Maryland Department of Geology, Mines, and Water Resources, G3843.P7.1946.M3 (1946)

Map of Prince George's Co. and District of Columbia Forest Areas by Commercial Type, prepared by F. W. Besley, Maryland Board of Forestry, 1912.

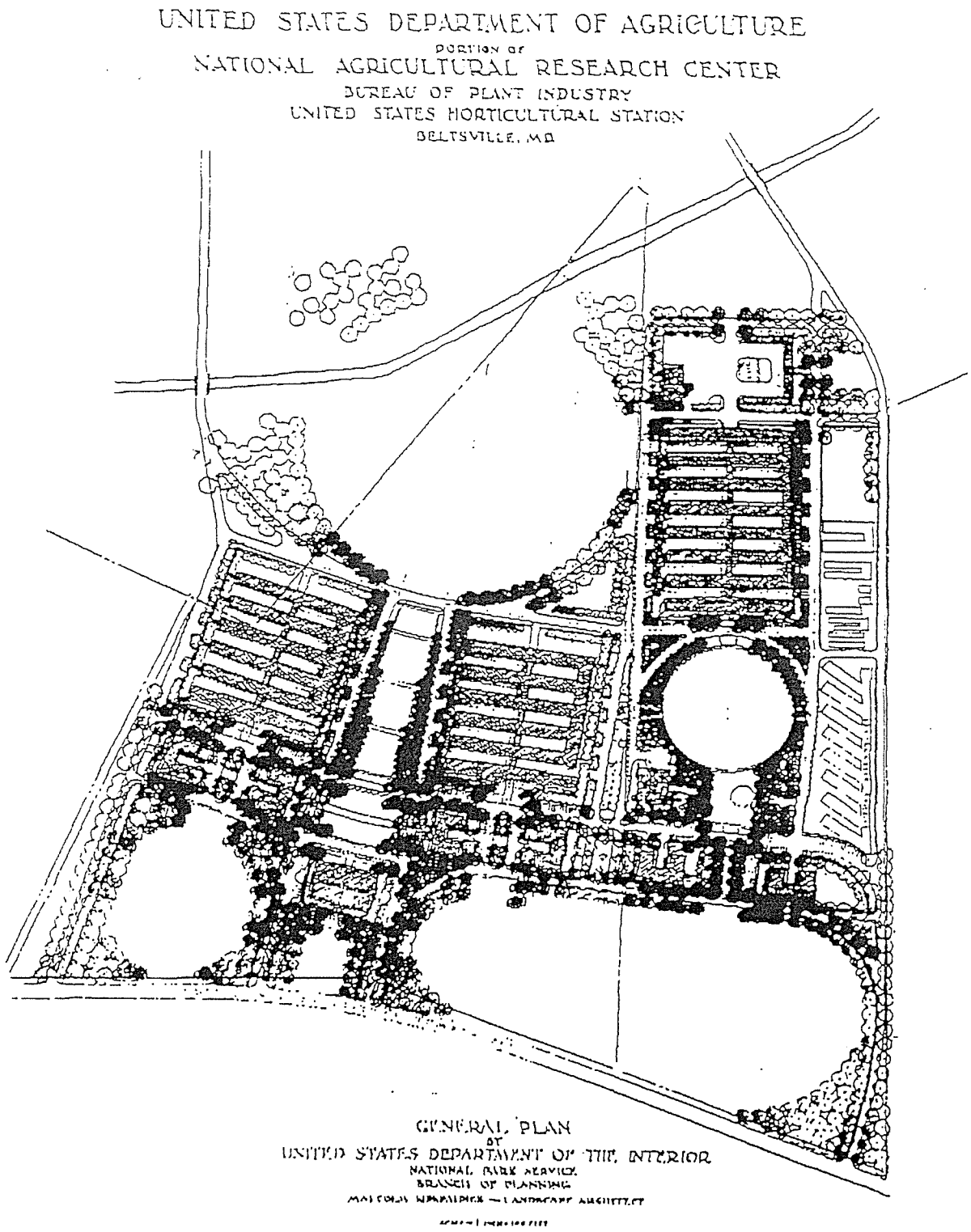



Figure 1: General Plan United States Horticultural Station Beltsville, MD Malcom Kirkpatrick 1938

PHOTO ID: Lamp post, sidewalk, "front lawn," along Circle Drive 5/97

PHOTO ID: Building 007 and Lawn Panel, looking south, 5/97

PHOTO ID: Sidewalk from Circle Drive and Range 3 Drive near Willow Oaks, looking east, 5/97

PHOTO ID: Planting bed near building 003 entrance on Circle Drive, 5/97


PHOTO ID: East facade of building 004, 5/97

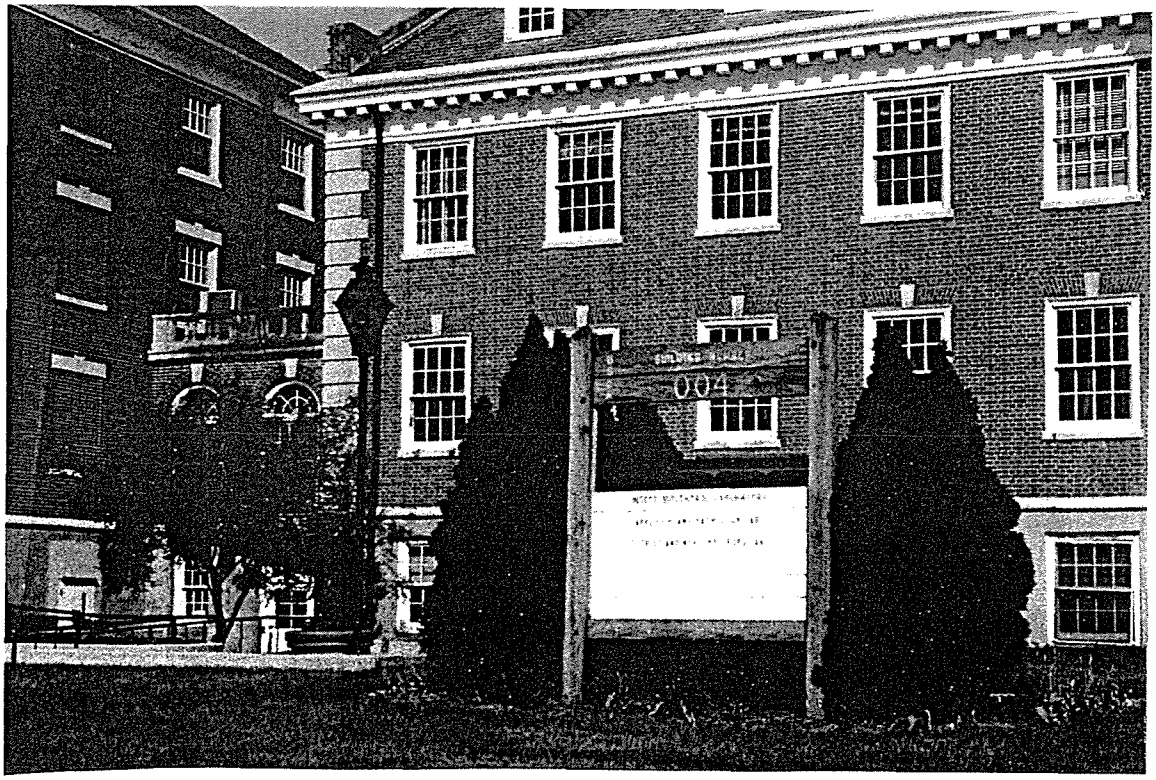



PHOTO ID: Typical building signage, 5/97

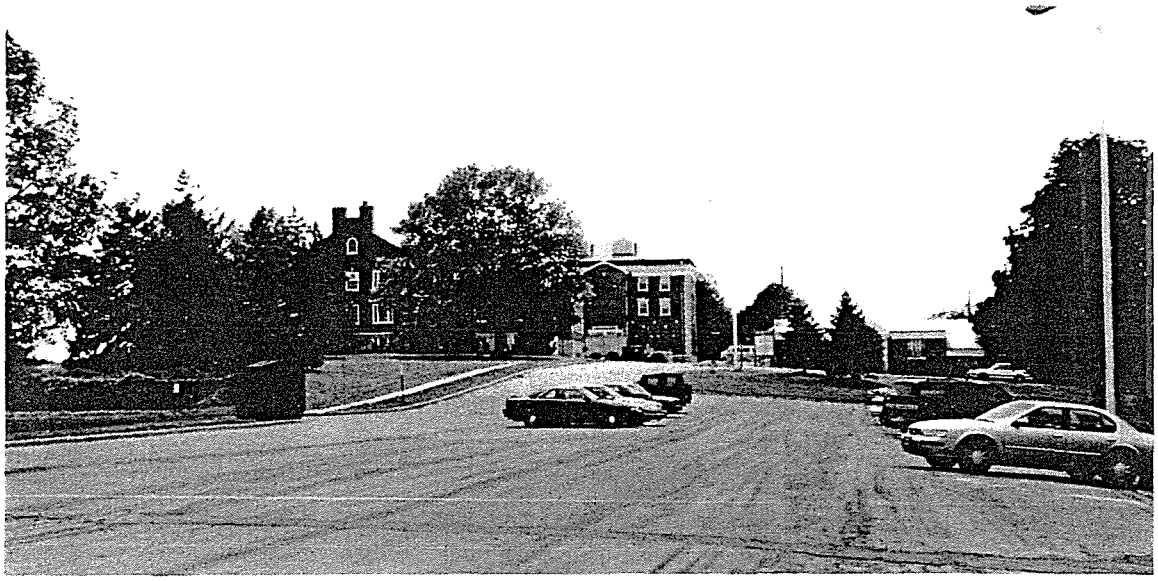


PHOTO ID: Parking area behind building 005 looking south to First. St. and building 004. 5/97

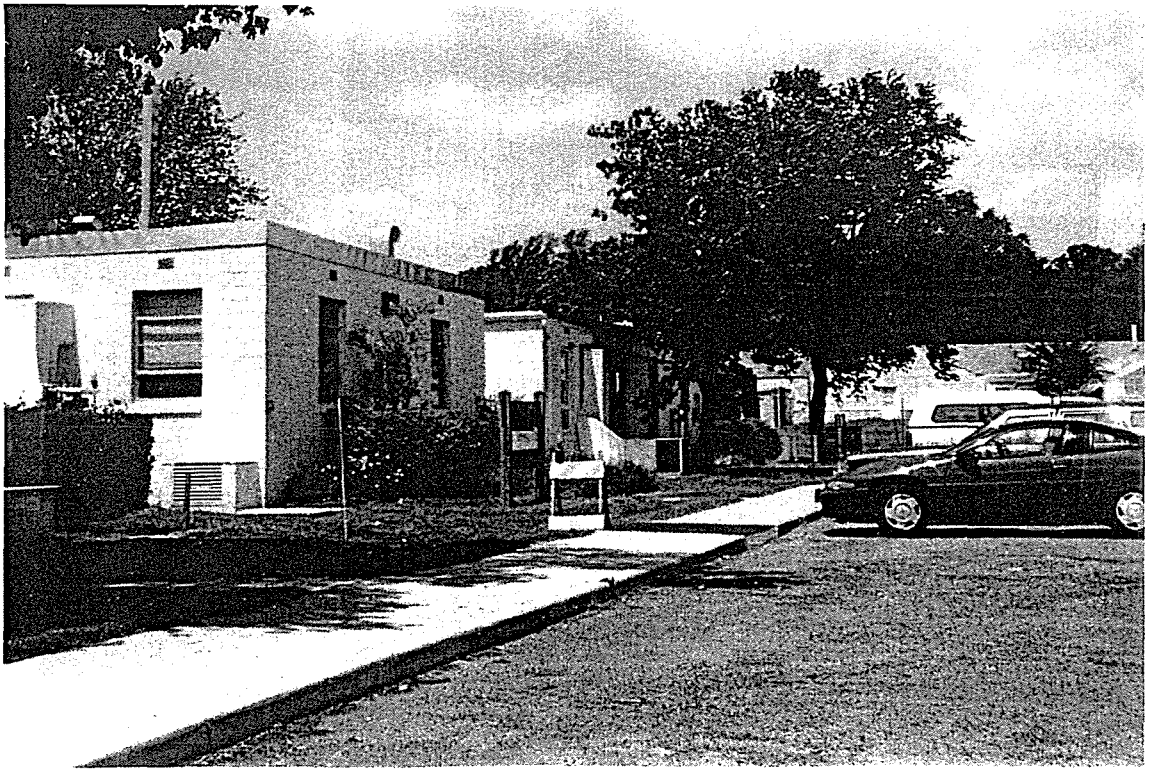


PHOTO ID: Small research labs along 3rd St., looking northeast/east, 5/97

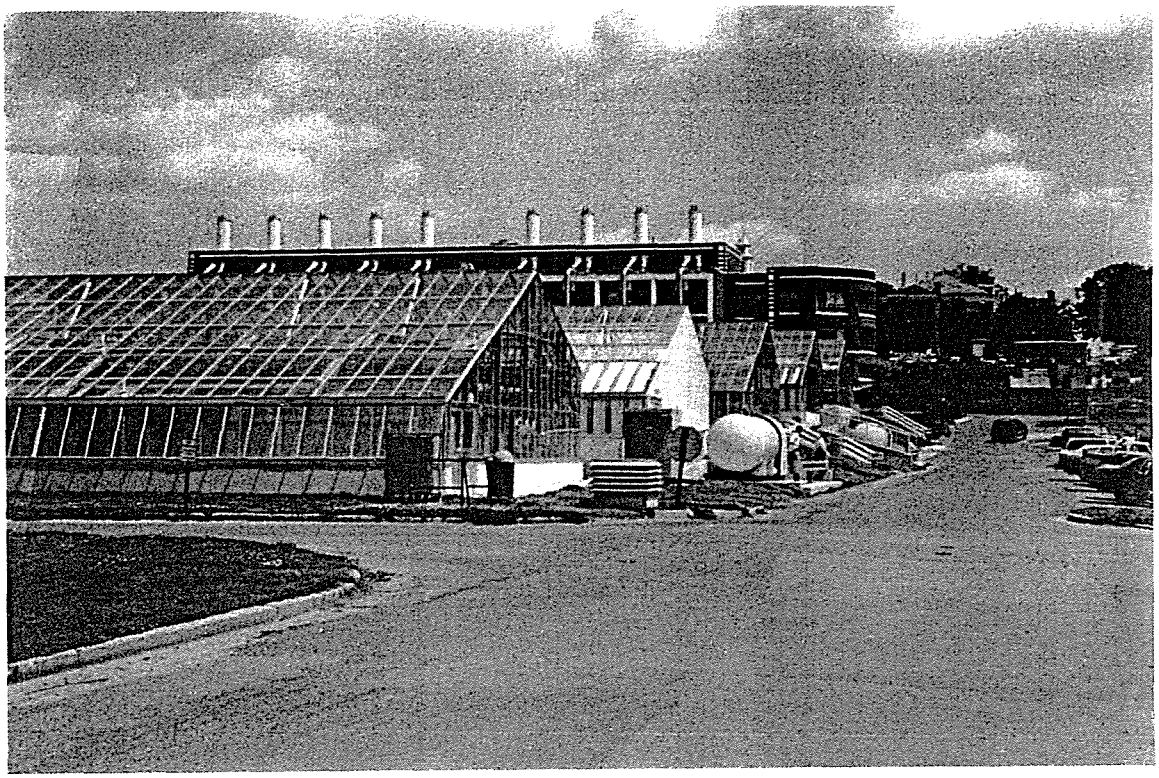


PHOTO ID: Recently renovated greenhouse cluster along Range 3 bldg., bldg. 010A in background, 5/97

PHOTO ID: 3rd street from South Drive intersection, looking north, 5/97

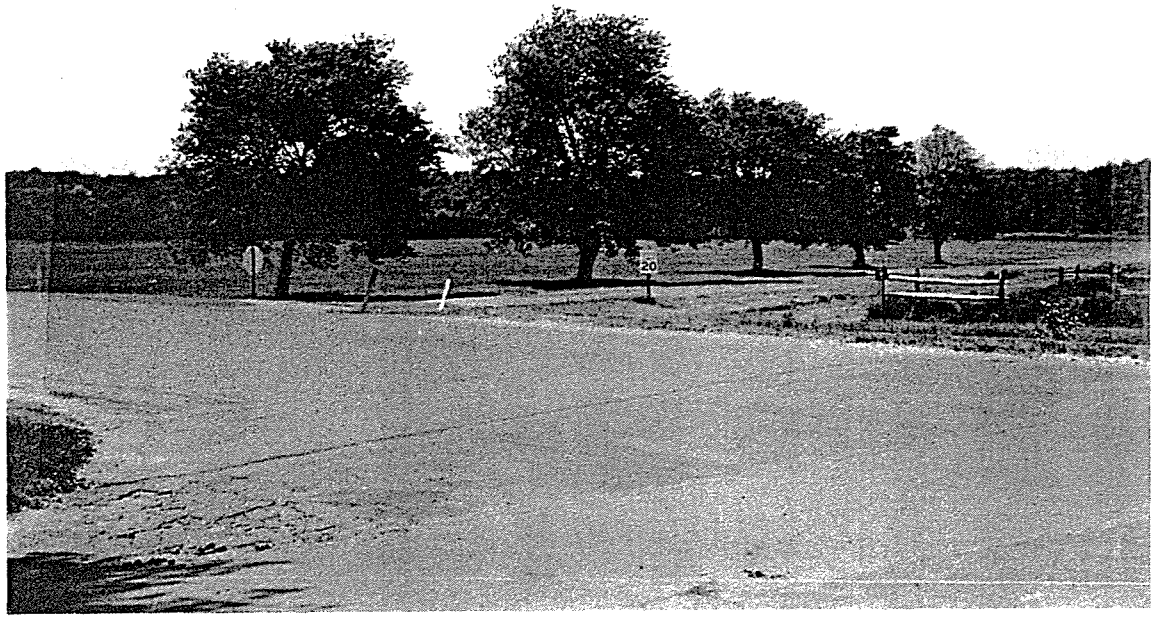


PHOTO ID: Turfgrass Research Area at East Line Road and North Drive, looking north, 5/97

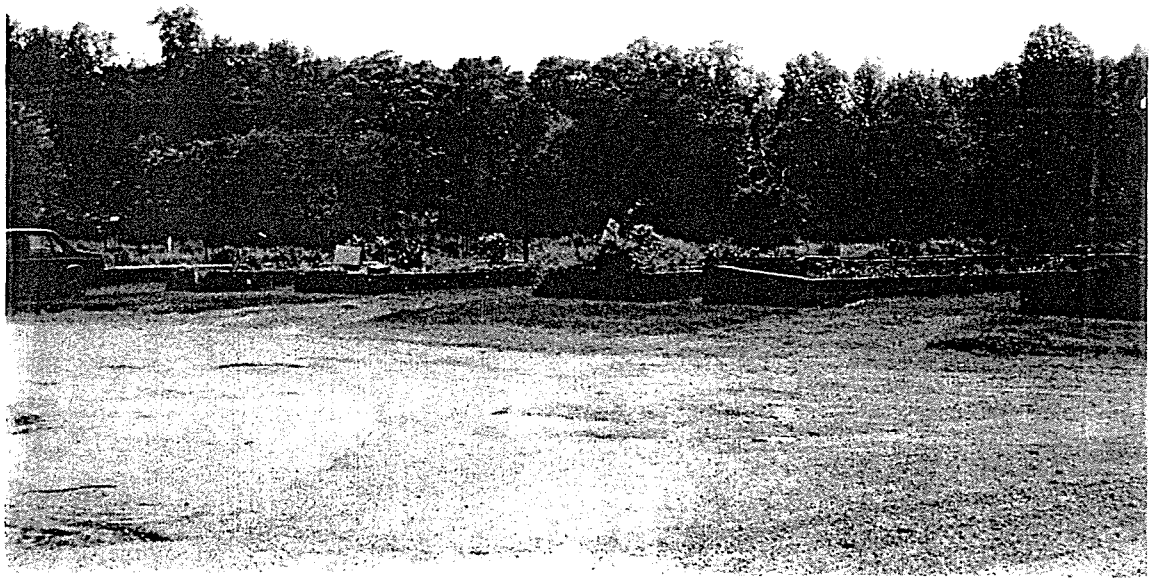


PHOTO ID: Cold frames behind Range 4 Greenhouses (bldg. 050) looking SW, 5/97

PHOTO ID: Willow Oak allee along First Street, looking north, 5/97

PHOTO ID: Perimeter Road at far south side of North Farm, looking west, 5/97

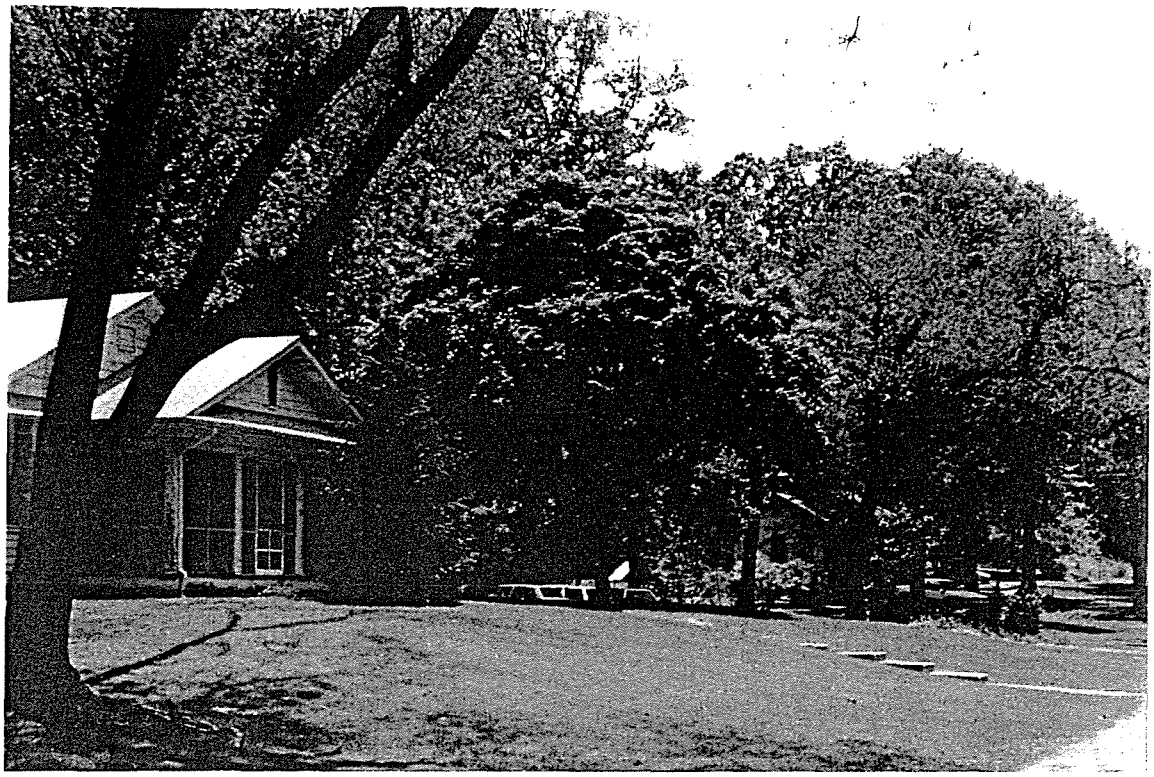


PHOTO ID: Residences 017 (day care) and 018, looking south, 5/97

PHOTO ID: Volleyball court in front of building 011A, 5/97

PHOTO ID: Drainage channel at 2nd St. near picnic grounds and residences, looking northeast, 5/97

PHOTO ID: Picnic grounds, looking SW, 5/97

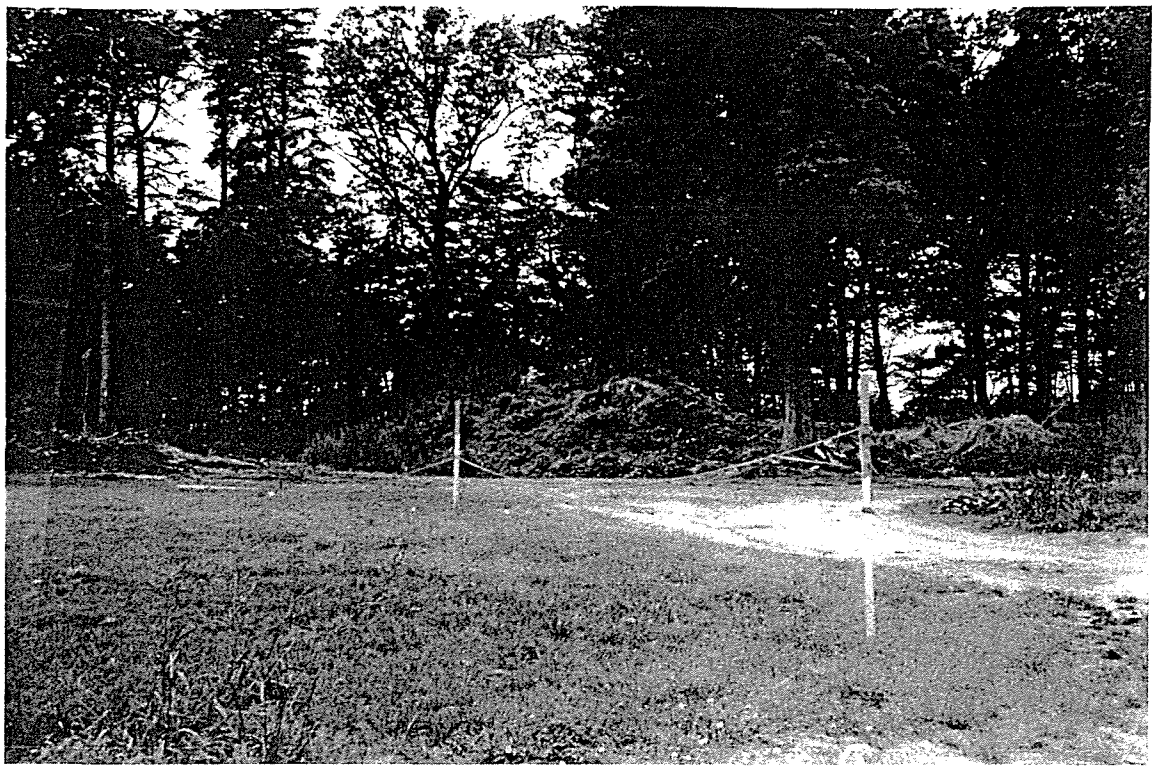


PHOTO ID:Woodland at the site perimeter along South Drive, 5/97

PHOTO ID: Waste water treatment pond, looking east/southeast, 5/97

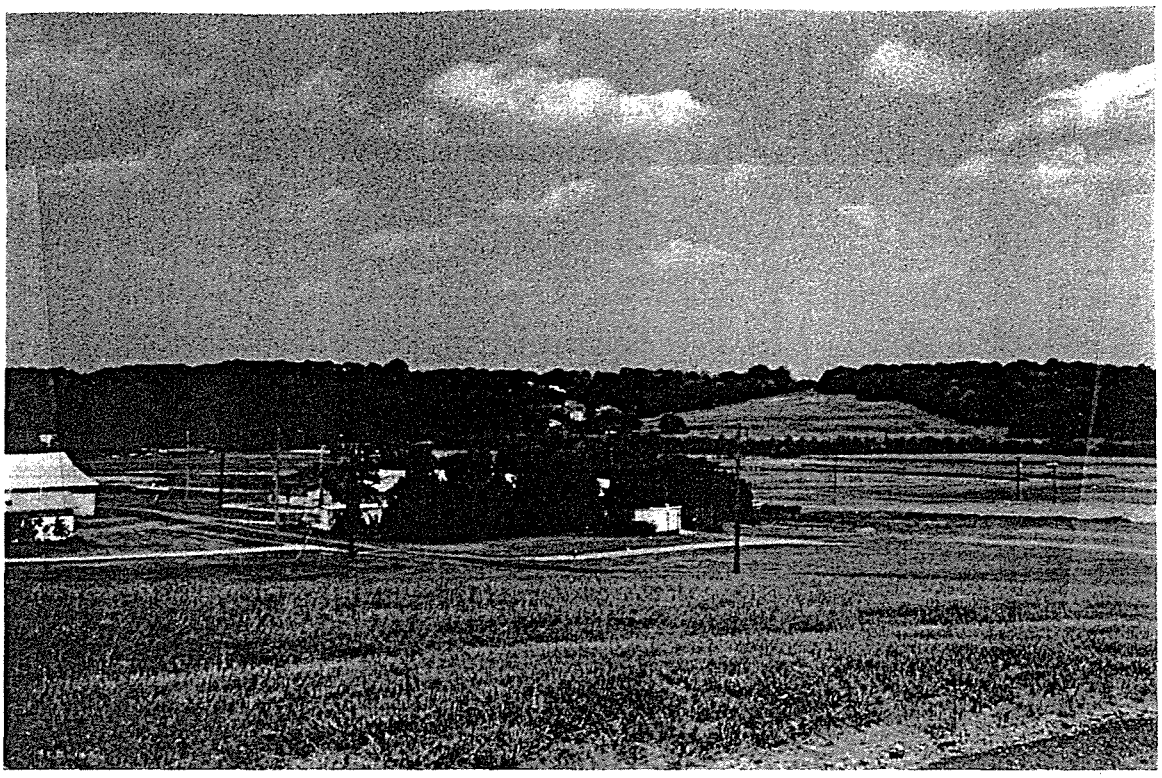


PHOTO ID: Looking at the far northeast corner of North Farm from the Chinese Chestnut grove, 5/97

PHOTO ID: Looking east from the Potato House, 5/97

PHOTO ID: Building 010A looking north, 5/97

PHOTO ID:Greenhouse building 011 looking west from parking behind bldg. 011, 5/97

# BELTSVILLE AGRICULTURAL RESEARCH CENTER—BELTSVILLE, MD
# SURVEY FORM: LANDSCAPE

## GENERAL

| | | |
|---|---|---|
| Farm Area: SOUTH FARM | | |
| Cluster: | | |
| Landscape Unit: | | |
| Acreage: 367 Acres | Prince George's County Region #: | |
| Boundaries: U. Of MD (S); single family housing (SW); I-495/95 (W/N); high rise apartments (E) | | |
| Location on Master Plan: Page: 9 + 15d Grid: A6, B3-6, C2-7, D2-7, E2-7, F6-7 | | |
| Historic Owner/Designer/Administrator's Name(s): Bureau of Plant Industry, USDA | | |
| Historic Use/Current Use: Field Crop Research/same | | |
| Historic Name/Current Name: Bureau of Plant Industry South Farm/same | | |
| Dates of: Land Acquisition: 1941 | Design: 1941-1943 | Construction: 1942 |

## PHOTOGRAPH

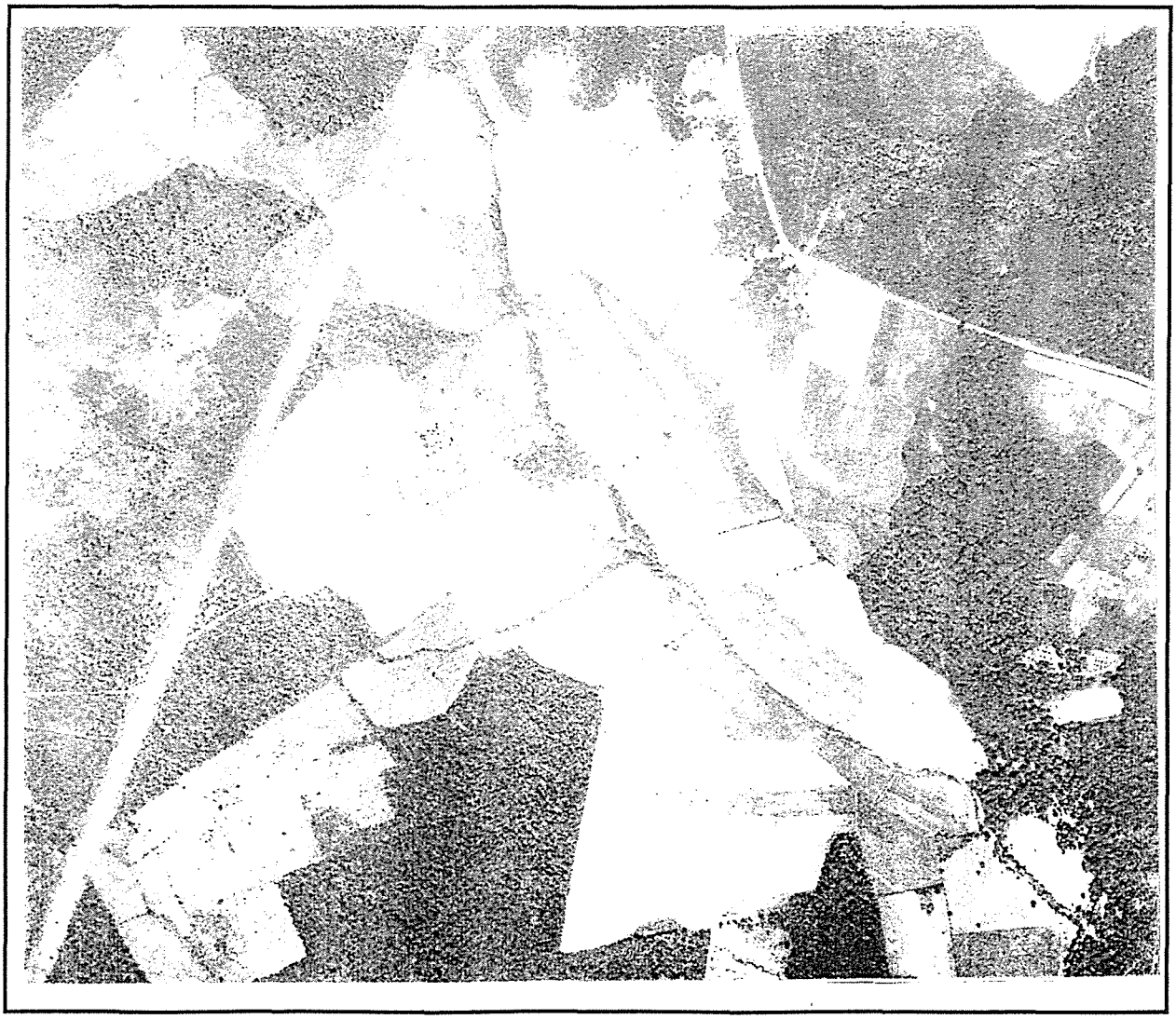
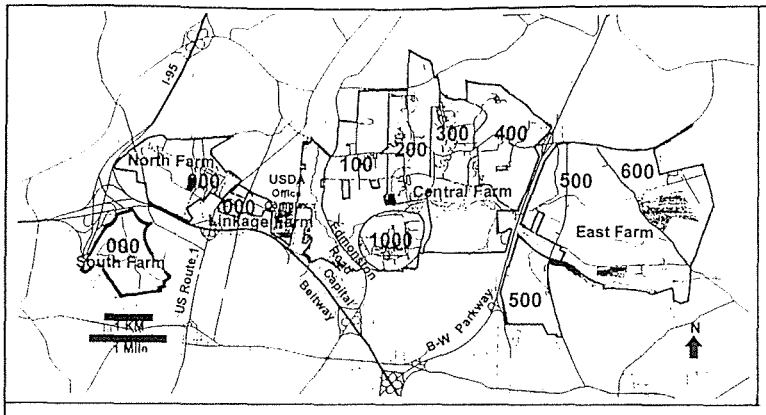
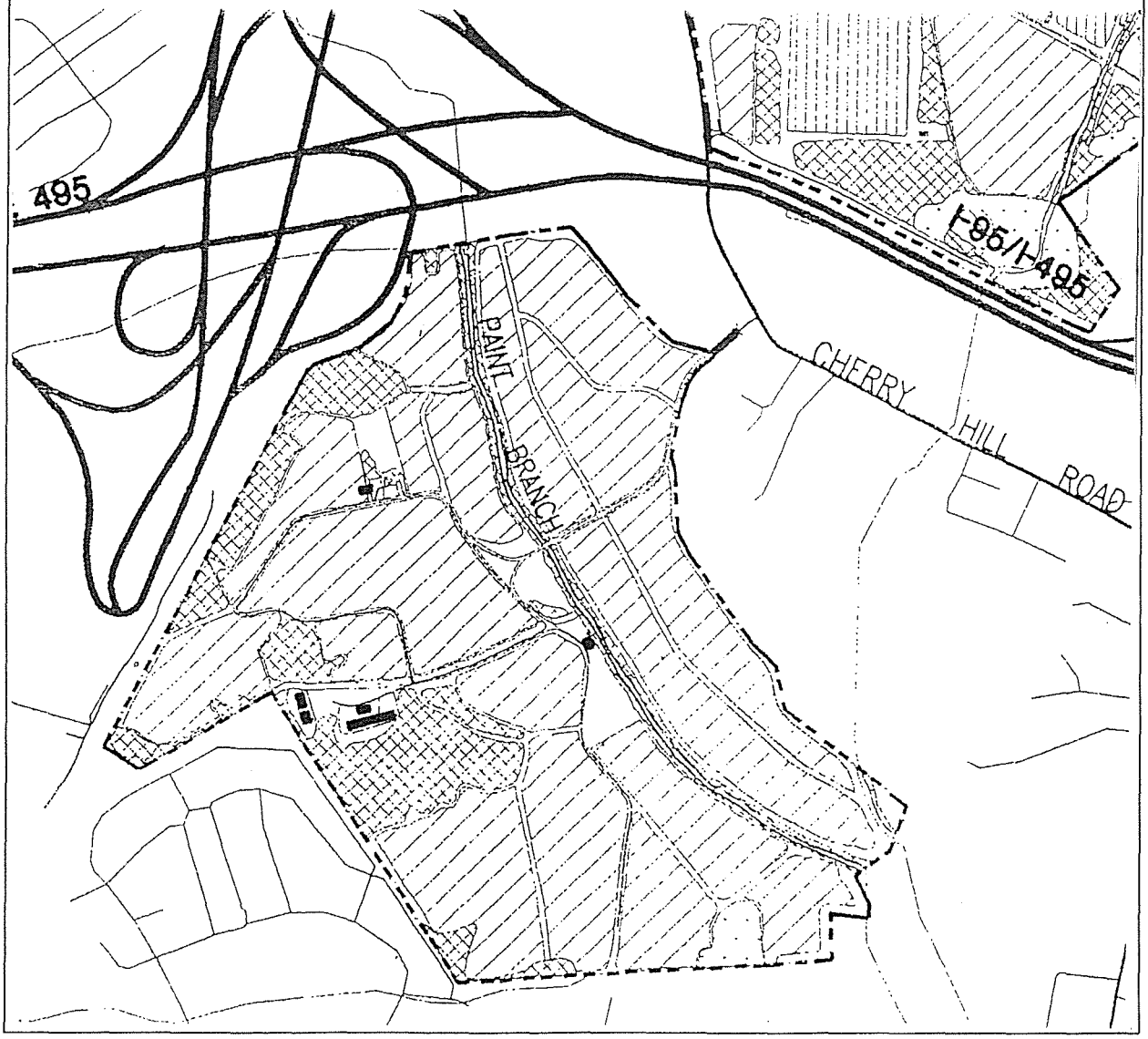


PHOTO ID: 1937 Aerial Photograph, NARA Cartographic Division, RG 145, Can 2070




North




MAP ID: Base Data from Beltsville Agricultural Research Center, 1996 Master Plan Update, Bernard Johnson Young, September 1996.

**Overall Description of Unit**

See Continuation Sheet
Sheet 5

**Landscape Type**

| | |
|---|---|
| Designed: | Historic: |
| Vernacular: Historic Vernacular | Ethnographic: |

**Landscape Characteristics and Features**

See Continuation Sheet
Sheet 6 - 11

**Assessment of Condition Overall**

The road system is good. The paved roads are stable and the pavement appears to be intact. None of the gravel or dirt/farm roads is washed out. The drainage system, portion of which date from the 1940s, appears in good operating condition. Little Paint Branch Creek is flowing without any obvious obstructions.
The perimeter woodland forests are in good condition with no visible signs of serious deterioration.
Some fields are undergoing research and/or crop rotation.

**SIGNIFICANCE** (Period of significance; National Register significance level)

See Continuation Sheet
Sheet 11

**PRELIMINARY NATIONAL REGISTER ELIGIBILITY ASSESSMENT**

| |
|---|
| Individually Eligible: |
| Eligible as Contributing to which Historic District: |
| Non-contributing to this Historic District: |
| Relevant Evaluation Criteria:<br>A: South Farm is associated with events related to long standing agricultural research on a national level and is also associated with events and federal programs initiated under the New Deal. |
| B: |
| C: |
| D: |
| Retains Integrity: Yes X No |
| Explain: |

**MAJOR SOURCES OF INFORMATION**


- Final Phase III Cultural Resources Report, BJY/Robinson & Assoc., December 1995.
- Beltsville Research Center Conservation Plan, USDA SCS, Nov. 1943.
- Bureau of Plant Industry, Soils, and Agricultural Engineering, Agricultural Research Administration, USDA, 1943.
- NARA Cartographic Division, RG 145 Can 2070 Frames FG-132-177, FG-132-178, FG-135-17 thru 19
- Aerial Mosaic/USDA/Agricultural Research Center, Compiled by Cartographic Division, Soil Conservation Service, 1957
- Maryland Geological Survey, Map of Prince George's Co. and District of Columbia showing Topography and Election Districts: G3843.P7.1903.M3 (1903), G3843.P7.1914.M3 (1914), G3843.P7.1927.M3 (1927), and G3843.P7.1936.M3 (1936).
- Maryland Department of Geology, Mines and Water Resources, G3843.P7.1946.M3
- Map of Prince George's Co. and District of Columbia Forest Areas by Commercial Type, prepared by F. W. Besley, Maryland Board of Forestry, 1912.
- Residence Survey, Building 056 - Heitmuller House, Beltsville Agricultural Research Center-West, R&A, January 16, 1995.
- 1941 Bureau of Plant Industry Plan of the South Farm, NARA, RG 54, Entry 151A, Box 2


| | |
|---|---|
| **Name of Surveyor/Company:** Jennifer Smith (RHI)/Perry Wheelock | **Date:** May 15, 1997 |

**Overall Description of Unit:**

The South Farm is a 367-acre tract defined primarily by research fields. Access into the South Farm is via a two-lane paved road from Cherry Hill Road on the eastern side of the farm. The South Farm is separated into two components by the Little Paint Branch Creek which runs from north to south. The land east of the Creek is mostly flat bottomland and the land to the west is both flat bottomland and rolling hillside. The South Farm is bounded on the north by Interstate 495/95; on the east by apartment buildings, a small ornamental tree nursery and Cherry Hill Road; by residential neighborhoods to the west and southwest; and by a golf course to the south. A high voltage transmission line follows the northwest edge of the South Farm. A woodland provides a backdrop for most of the western boundary of the Farm.

Vehicular circulation is clearly defined on the South Farm with primary paved roads, secondary gravel roads, and tertiary dirt roads, also called farm lanes. These farm lanes are dirt tracks coursing through the fields.

The research fields are the primary composition of the South Farm. These fields cover almost the entire site, extending from the Creek to the perimeter in some cases. Management of fields appears to be on a rotation schedule, with some fields left fallow. The fallow or undisturbed fields have been planted with cover crops or are overgrown, as a means to replenish the soil composition. The research fields are defined by the road systems, by narrow strips of cover crops such as grass, and the woodland edge.

Field areas are under active research, signified by researchers and their equipment. Campers/trailers, weather stations, and research hothouses are examples of small structural features that are found in six experimentation areas on the South Farm. Most of the experimental activity is occurring in the lowlands directly adjacent to the Creek.

One small research orchard at the South Farm is located at the top of a hillside to the west of a homestead. This fruit orchard is overgrown and is inactive at this time.

There are six buildings on the South Farm, five are potentially historic and one is a new homestead (055). The historic buildings are for service use and include a small pump house (057), Service Building D (060), a gasoline building (061), the Threshing Barn (062), and a cold storage cellar (063). For more information on the buildings, see the Structures Survey Forms.

One remnant ornamental landscape exists, adjacent to the new residence site, and surrounding the site of the former Heitmuller House. This house (known originally as Building 056) was built prior to the USDA purchase, and has recently been demolished. According to the Residence Survey of Building 056, the Heitmuller House was constructed ca. 1890.

**Landscape Characteristics and Features:**

- **SPATIAL ORGANIZATION:** Between 1941 and 1943 the land that today comprises the South Farm was pieced together from a total of five parcels (having four owners) by the Bureau of Plant Industry. The largest tracts, both acquired in 1941, were the Heitmuller Tract (196 acres) and the Boteler Tract (119 acres). Although both parcels originally had two houses on them, only one of the Heitmuller houses survived until the recent past.

  The Heitmuller Tract was purchased by the government from the family of W. Charles Heitmuller. Heitmuller, a Washington resident who was involved in real estate in the area, purchased the land in 1907 and rented it for farm use. During his ownership of the property, approximately two thirds of the land was tillable acreage, with the other one third being woods. A portion of these woods still remains today and contains the northwestern, western, and southwestern edges of the South Farm. According to the Maryland Board of Forestry, a 1912 Map of Forest Areas By Commercial Type showed the woodland edge standing to the north of the Heitmuller House site as a remnant segment of a larger forest that existed in 1912. This woodland was described then as consisting of "culled hardwood and scrub pine".

  Today, the South Farm is composed primarily of research fields, with only six buildings. The farm is divided into two sections by the Little Paint Branch Creek, running north to south. The original road system is intact and provides a framework for the field organization by circulating around, between, and through fields. The South Farm is surrounded by a variety of adjacent land uses, including Interstate 495/95, the woodlands, an apartment complex, and a religious/cultural facility. A chain link fence defines the property line on the South Farm, but is only visible in a few locations.

- **TOPOGRAPHY/GRADING:** The South Farm consists of hillsides and flat bottomlands. The grade changes from +-100-feet above sea level to a maximum of +-225-feet above sea level, gradually increasing from east to west. The highest point on the farm is in the northwest corner above the former Heitmuller House. The grades have been manipulated in some areas; this is indicated by remnant segments of diversion terraces, an erosion control technique, visible today in the northwest quadrant of the farm. These terrace segments have likely been allowed to erode over time, due to changes in farming techniques.

  The research fields drain into existing tile drainage systems that appear to empty into Little Paint Branch Creek. A levee has been constructed on both embankments of the Creek. The levee appears to be highest on the southwest side of the Creek. A ridge top drainage divide west of the Creek is approximately 1200 feet above the old Heitmuller House.

| TOPOGRAPHY/GRADING | CONTRIBUTING/NON-CONTRIBUTING |
|---|---|
| Diversion Terraces | Contributing |
| Little Paint Branch Creek Levee | Contributing |
| Ridge/Drainage Divide | Contributing |

- **VEGETATION:** Vegetation on the South Farm varies from woodland to ornamental landscape plantings. Along the northwest, west, southwest and south perimeter, woodlands, comprised of primarily deciduous trees, define the edge of South Farm and provide enclosure.

  Along the far west boundary of the site, two evergreen stands of approximately 20 to 25 Leyland Cypress *(X Cupressocyparis Leylandii)* have been planted at the fence line to screen the homes on adjacent land. However, there is no vegetation planted to screen the fence lines next to the adjacent apartment complex, the Knight's of Columbus building, I495/95, or the golf course. On the land west of Little Paint Branch Creek, there are nine (check) single specimen shade trees which appear to delineate

**Landscape Characteristics and Features continued:**

six cultivated fields. Four of these trees are on the slopes. These shade trees were existing as early as 1937, as shown on aerial photography.

As part of the research experimentation on the South Farm, a small fruit orchard was planted in the upper portion of the northwest slopes. Aerial photography shows that an orchard was standing in this location as early as 1937, and was designated as an orchard zone by the 1943 Soil Conservation Service (SCS) Plan. Currently, many of the trees in this planting are not mature.

Growing in the same corner of the Farm as the Leyland Cypress planting, is another small planting of ornamental trees in a geometric pattern. These trees are planted in four rows of 20. As shown on the Maryland forestry map, this corner segment of the South Farm had once been a portion of the culled hardwood stand, extant prior to 1912. The 1943 SCS Plan recommended that the land be used for contour cultivation; the woodland was removed by 1957. On the southwest slopes, four rows of five to six cherry trees have been established, also in a geometric pattern. This grouping stands alone in the middle of cropland.

Most of the land on the South Farm is open and devoted to agricultural experimentation with different types of crops. Crops are grown on both the lowland areas of the east, and the lowland and hillside slopes of the west. The hillside slopes face east toward Little Paint Branch which permits good air circulation and the proper amount of sunlight. Rows of vegetation run parallel and perpendicular to the slope.

The riparian vegetation in and around the Little Paint Branch stream bed is fairly young. Sycamore *(Platanus occidentatlis)* is the primary shade tree, with an associated understory of native shrubs, groundcovers and vines. According to 1937 and 1957 aerial photography, the Creek has had very little vegetation growing along its bank. The only substantial planting in this area is south of the western bridge abutment. This land is mounded and consists primarily of large American hollies *(Ilex opaca)* and White Pines *(Pinus strobus)*. This grove, documented as early as 1937, appears to have been part of a larger planting. At least two evergreen azaleas are growing within this area and are located at the western outside edge of the grove.

The character of the remnant landscape around the Heitmuller House site is ornamental. In the former front yard, south of the house site, species of Dogwood *(Cornus florida)*, Privet *(Ligustrum)*, Mahonia *(Mahonia )*, Iris *(Iris)*, Red Cedar *(Juniperus virginiana)*, Persimmon, and Red Maple *(Acer rubrum)* are present. To the north of the circular drive, three large Willow Oaks *(Quercus phellos)* flank the former house site. One Willow Oak is significantly larger and probably pre-dates the recently demolished residence. An out-building was also located on this site. It stood to the east of the house and southwest of a thick planting of American Holly trees. These Hollies have been planted tightly together as a hedge and now form a dense enclosure that screens views to the northeast. Evergreen trees, such as Spruce *(Abies)*, Arbovitea *(Thuja)*, Holly *(Ilex)*, and Juniper *(Juniperus)* were planted directly north of the house site, have grown to full maturity. This vegetation also screens the fields. Ornamental plantings are being installed around the new residence, which stands approximately 100 feet west of the Heitmuller House site, on an open hillside. These include small shade trees and shrubs.

Two evergreen azaleas are growing in the woodland area to the south of Service Building "D". It is not clear whether these were, historically, the only plantings in this location or if they are the only remaining elements of a larger group of plantings.

**Landscape Characteristics and Features continued:**

| VEGETATION FEATURES | CONTRIBUTING/NON-CONTRIBUTING |
|---|---|
| Fields/Cropland | Contributing |
| Woodland edge (NW, W, SW, S) | Contributing/Non-Contributing |
| Remnant Landscape of Heitmuller House | Contributing |
| Small Fruit Orchards | Contributing |
| Ornamental Geometric Tree Planting | Non-Contributing |
| Geometric/Row planting of Cherry Trees | Contributing/Non-Contributing |
| Riparian Creek vegetation | Non-Contributing |
| Single Specimen Trees | Contributing |
| Ornamental Shrub Planting/new residence | Non-Contributing |

- **RESPONSE TO NATURAL FEATURES:** Various farming techniques have dictated the use of tile drains, drain inlets and outlets, and erosion control. Terraces have been used to direct water on the hillside to control erosion. The terraces consist of a channel, located at the bottom of a slope, protected by a filter strip of sod. To collect water, tile drains were installed with inlets constructed along the roads. Two large drainage ditches, located on the western portion of the farm, run down slope perpendicular to the Creek, and then empty into Little Paint Branch. These ditches have been allowed to fill in with vegetative growth in order to slow runoff before entering the Creek. Openings in the levee, on the west side of the Creek, occur where these two ditches reach the Creek. At the Creek's edge, the vegetation is young. This young vegetation has also provided animal habitats: heron and evidence of beavers were seen along the stream.

  A new trail under construction by the golf course, along the southern property line, and is the only permitted community use at the South Farm. Access is limited to BARC personnel in all other areas, due to spraying of the fields with pesticides and fertilizers.

- **CIRCULATION:** South Farm is comprised of paved roads (South Farm Road and a portion of Orchard Loop), gravel roads, and dirt roads (also called farm lanes). The only trail at the South Farm is in the southern portion and is under construction for use by the adjacent golf course. The paved roads which originate at the entrance off of Cherry Hill Road, provide the primary circulation for the Farm. The gravel and dirt roads branch off from the paved roads and traverse between the fields. These dirt roads were designated by the SCS Plan. They provide a framework for access to the fields by allowing circulation around, through, and between the fields.

  The road circulation indicated in the 1943 SCS Plan is mostly intact. According to this Plan, South Farm Road and the north segment of Orchard Loop (old South Farm Road) were existing prior to development by the USDA, and are still intact today. A portion of the south segment of Orchard Loop (old Terrace Road) also pre-dates the USDA's involvement on the land. This portion of Orchard Loop courses between the southwest slopes and lowlands, then continues to a small woodland forest on the north side of the golf course. All of the southern road segments from 1943 are intact today.

  One of the primary roads at the South Farm, South Farm Road, originates from Cherry Hill Road, bisects the eastern portion of the site, and then connects with Orchard Loop, another primary road, after crossing Little Paint Branch Creek. At the intersection with South Farm Road, Orchard Loop travels both north

**Landscape Characteristics and Features continued:**

and south. The north segment (formerly known as a segment of South Farm Road) first heads north, and then turns west, up the slope, past the new residence. At the top of the slope, Orchard Loop makes a sharp turn and continues down the slope to the southeast. The south segment of Orchard Loop, historically known as Terrace Road, is paved up to the road formerly known as South Farm Service Road, and then becomes gravel once it heads into the south fields. Old South Farm Service Road branches from old Terrace Road, approximately 400-feet south of the bridge, and provides access into the service building complex.

Paint Branch Levee Road (formerly known as Levee Road) is currently the only named dirt road/farm lane on the South Farm. It follows the east side of the Creek. Six farm lanes are located on the east side of the Creek, three that follow the perimeter (two historically known as Levee Road and East Line Road) and three located in the central area of the farm (two historically known as Contour Road and Central Road). Four farm lanes are located on the west side of the Creek. One road connects to Orchard Loop and dead ends after the ornamental tree planting in the far west corner. Another farm lane loops through the woodland adjacent to Service Building "D". This roadway is very rough. Thirdly, a farm lane connects to Orchard Loop below the former Heitmuller House site, and extends into the northern bottomlands, west of the Creek. According to the 1937 aerial photography, this farm lane has been in place since as early as 1937. Lastly, a farm lane connects with Orchard Loop (old Terrace Road) east of the geometric Cherry tree planting, and courses south toward a woodland stand, north of the golfcourse. A new dirt road connects at this woodland location and continues along south/southeast towards the levee and the golf course. This newly constructed segment is a non-contributing element. In this southern location, BARC is providing a pedestrian golf trail that links the golf course with Paint Branch Stream Valley Park. Two small pedestrian bridges have been installed to cross Little Paint Branch.

Access roads are provided for all buildings except the Pump House, which is located approximately 50-feet from Orchard Loop. A deteriorated paved driveway remains at the Heitmuller House site.

The concrete bridge over the Creek is constructed with steel beams, concrete abutments, and steel railings. The bridge spans approximately 50-feet in length and is 30-feet wide.

| CIRCULATION FEATURES | CONTRIBUTING/NON-CONTRIBUTING |
|---|---|
| Paved Roads - South Farm Road, Orchard Loop (historically South Farm Road and Terrace Road) | Contributing |
| Gravel Roads | Contributing |
| Dirt/Farm Lanes - Paint Branch Levee Road, old Contour Road, old Central Road, old East Line Road | some Contributing |
| Bridge | Non-Contributing |
| Bridge Crossing Location | Contributing |

- **LAND USES:** Experimental cultivation is the primary land use on site. Orchard research is a secondary agricultural land use. Five service buildings are associated with these fields and four are organized in a cluster. A small amount of land is dedicated to residential use.

- **CLUSTER ARRANGEMENT:** Most of the extant historic buildings on the South Farm are part of a small cluster of utilitarian, service-related buildings located in the southwest quadrant of the site. These buildings are roughly sited around the main South Farm service building, Building 060. All of the

**Landscape Characteristics and Features continued:**

buildings in this grouping were constructed between the early-1940s and the mid-1950s for service-related functions. Reflecting their farm operations usage, the buildings are utilitarian in appearance; all are simple, unembellished buildings of unpainted concrete-block construction.

The historic buildings located on the South Farm are architecturally and practically related to the service complex located at the northwest boundary of the North Farm. Most of the larger buildings at both sites were constructed circa 1941-43 using monies from the Arlington relocation project. The buildings on both sites were completed in an expedite fashion using utilitarian concrete-block construction. Because of the distance between the two farms and the large cultivated area on each, service areas were clearly necessary in both the South and North Farms. To some extent the square footage of certain types of space was simply divided between the two areas. (For instance, 720 square feet of paint shop space was thought to be needed on the South Farm and 960 square feet of such space was thought to be needed on the North Farm.) In other cases, however, the site for a specific service function/buildings appears to have been largely arbitrary. For more information regading specific historic buildings on the South Farm, see individual Building Survey forms which follow this form.

- **STRUCTURES:** There are a total of six buildings on the South Farm. Buildings more than 50 years old include: Building 057 (Pump House), Building 060 (Service Building "D"), Building 061 (Gas Station), Building 062 (Threshing Barn), and Building 063 (Cold Storage Cellar). Buildings less than 50 years old include: Building 055 (Residence).

- **SMALL SCALE FEATURES:** The ongoing research activities at the South Farm contribute distinct small scale features to the landscape. Weather stations, electrical wiring, research hothouses, wood boxes, generator boxes, partially buried PVC piping, and campers or trailers are found in active experiment areas. Many of these features have been installed at experiment areas at the beginning of the spring season and will most likely be removed at the end of the growing season in late fall/early winter.

  The boundary fence of chain link is the primary fence at the South Farm. This fence, topped with parallel lengths of barbed wire, appears to be continuous. In most cases, the fence is hidden by vegetation. To provide a barrier between the fields and the new golf course trail, a black chain link fence is now under construction. A small fragment of fence remains at the Heitmuller House site and appears to lie on the eastern property line of this former homestead. This fence is constructed with timber poles, 4-feet above ground, and is connected by barbed wire. The fence fragment is overgrown with a wild rose *(Rosa sp.)* vine which is pulling the wire off the poles.

  Informational signage is primarily located in the vicinity of the experimental field areas. These signs describe the type of research occurring in particular field plots. Signs are labeled as "Groundwater Research Project/Effect of Tillage Practice on Pesticide Movement," "Sustainable Agriculture/Field Crop Demonstration," and "Soybean Response Zone/Screening Soybean Zone." Access signage is located at the entrance and limits admittance to personnel. However, there is no guard stationed at the unlocked gate. (check if gate is locked during off-hours) The entrance signage also mentions that spraying may have occurred in the test fields.

  The primary overhead electric utility line enters from Cherry Hill Road and passes through the east side of the site following the route of South Farm Road. This line is secured by timber poles. It crosses the Creek south of the bridge and then splits, with one line going north along Orchard Loop to the former homestead/new residence site, and the other line going south along the loop road to Service Building "D." These secondary lines also provide electricity through feeder lines to the experimental field areas.

  Fire hydrants are located near the building sites and at the woodland edge adjacent to Service Building "D." These woodland fire hydrants may have been installed for forest fire protection.

**Landscape Characteristics and Features continued:**

Two bluebird boxes are found in the northern lowland on the western portion of the site. These boxes have been attached to the timber utility poles.

Drain inlets and outlets can be seen in the swales along all roadways. These inlets/outlets are approximately __ feet apart (field check) and are sunken. The inlets and outlets are visible and are typically covered with rusted steel plates. In one location, on the inside edge of Orchard Loop near the bottom of the slope northwest of the bridge, steel tubing was used as a cover. This outlet is not sunken.

| SMALL SCALE FEATURE | CONTRIBUTING/NON-CONTRIBUTING |
|---|---|
| Experiment Areas | Contributing |
| Experiment Features | Non-Contributing |
| Drain Tiles/Inlets/Outlets | To be Determined (check dates with T. Badger) |
| Utility poles | To be Determined (check dates with T. Badger) |
| Informational Signage | Non-Contributing |
| Bluebird boxes | Non-Contributing |
| Chain Link Fence | Contributing |
| Remnant Post Fence at old Homestead Site | Contributing |

- **VIEWS AND VISTAS**: The South Farm is almost entirely surrounded by either vegetation or structures, making it difficult to view into the site. The farm is barely visible from I-495/95, the golf course, the religious facility, the apartment complex, and Cherry Hill Road. From within, a panoramic vista can be seen looking south from the new residence covering most of the farm. Expansive primary vistas are also available from both the ridge top in the northwest corner, above the residence, and the bottomland in the southwest and south central corners.

**Significance:**

The land that comprises the South Farm was acquired by the Bureau of Plant Industry between 1941 and 1943 with funds appropriated for the relocation of Arlington Farms. Arlington Farms, which had been the center of the Bureau of Plant Industry's Washington-area research activities since 1900, was considered prime land by the War Department and pressure to release the Arlington land had increased dramatically as defense activities expanded in the late 1930s. On October 9, 1940, an appropriation in the Department of War's budget was approved to provide $3,200,000 for the relocation of Arlington Station. The appropriation was used for the acquisition of 606 acres of additional land (including all of the South Farm) and for the construction of a number of buildings on both the South and North Farms. The Bureau of Plant Industry began the transfer of operations to lands that had been identified as suitable for crop work in Beltsville.

The South Farm was originally intended for testing fertilizer and crops such as tobacco, cereal grasses, and forage as shown on a 1941 plan drawn by the Bureau of Plant Industry. This plan allocated plots of land for the cultivation of Lespedeza, Grasses, Corn, Cabbage, and Crimson Clover. However, by 1943, the USDA requested a complete study of farming practices under use at Beltsville, headed by the Soil Conservation Service's Chief, H.H. Bennett. This study was initiated to improve farming techniques at the Beltsville farms in conjunction with the recommendations that USDA researchers were providing to American farmers. According to the 1943 Plan's recommendations, the two farms were to be used for "extensive and intensive investigations relating to plant breeding, physiology, cultural requirements, and propagation of plants used for fruits, vegetables, ornamental, drugs and other purposes." This "extensive and intensive" research at the South Farm required an improvement of drainage techniques on the land, characterized by terraces, contour cultivation, woodland management, and drainage ditches. Both Plans specified certain tracts of land for the research of orchards and woodland management.

Although research techniques and farming methods have changed during the past 50 years, elements from both the 1941 Bureau Plan and the 1943 SCS Plan are visible today. Among these are the circulation system, the arrangement and pattern of fields, woodlands and orchards, and the allocation of land for agricultural research.

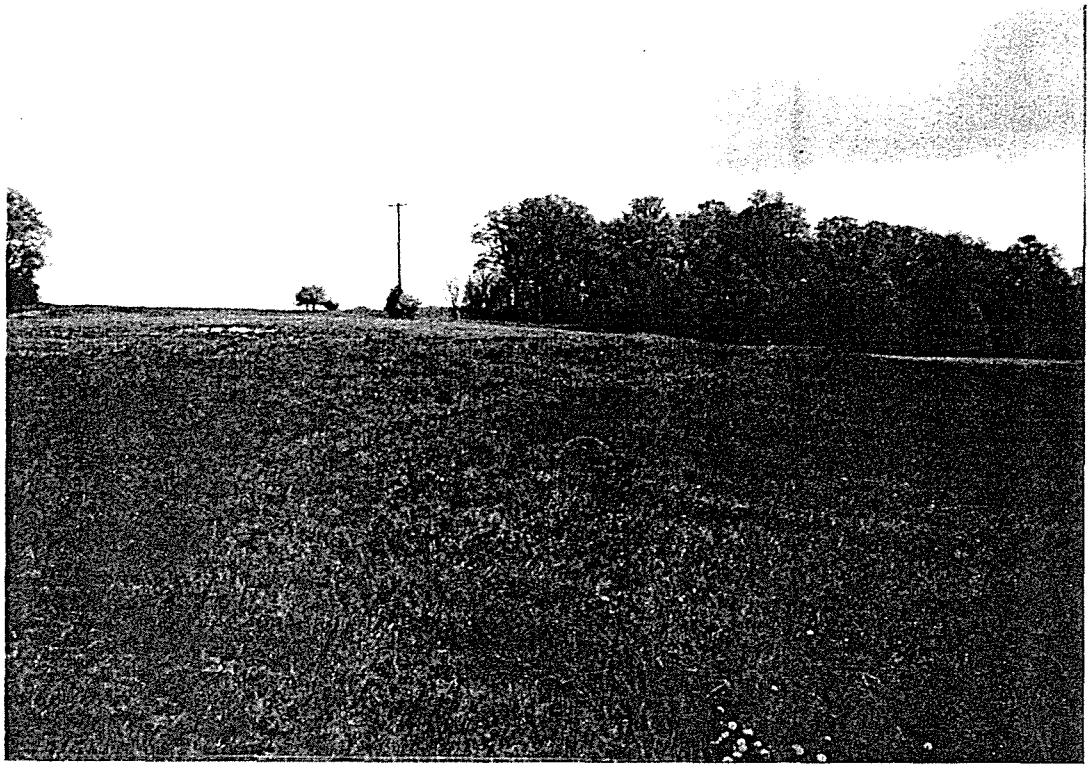


PHOTO ID: Diversion Terraces, looking southeast, 4/97

PHOTO ID: Little Paint Branch Creek Levee, looking north, 4/97

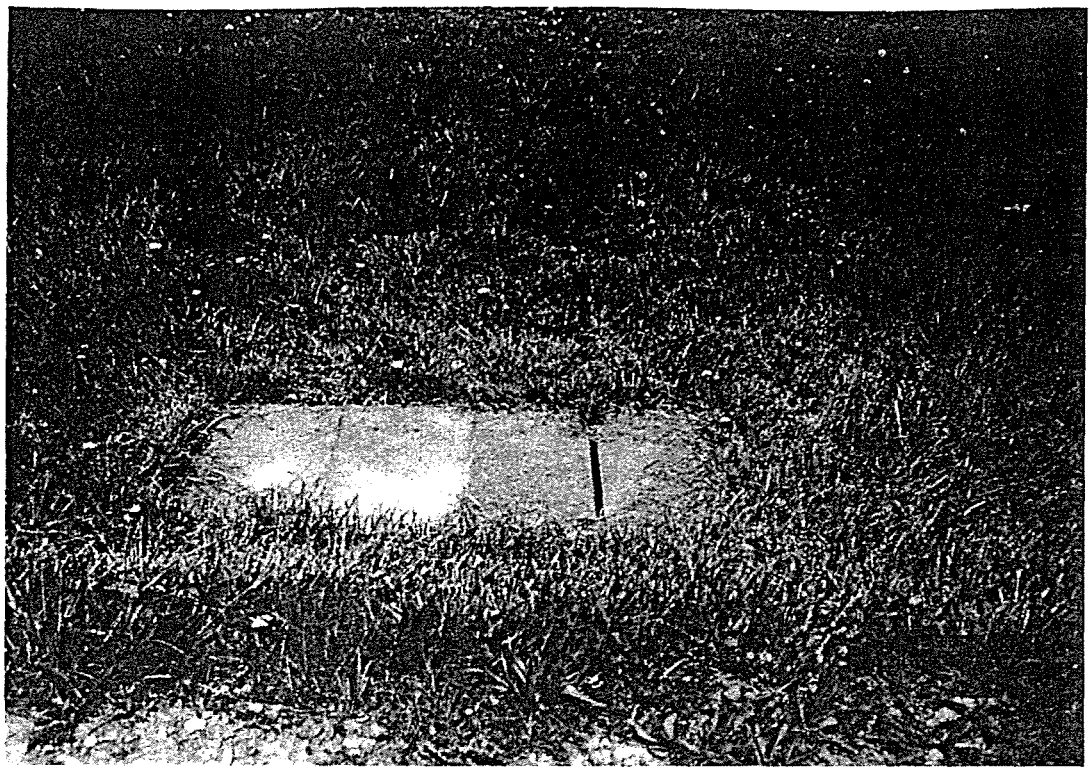


PHOTO ID: Drain Inlet, 4/97

PHOTO ID: Ripararian Creek Vegetation, southwest side of creek, 4/97

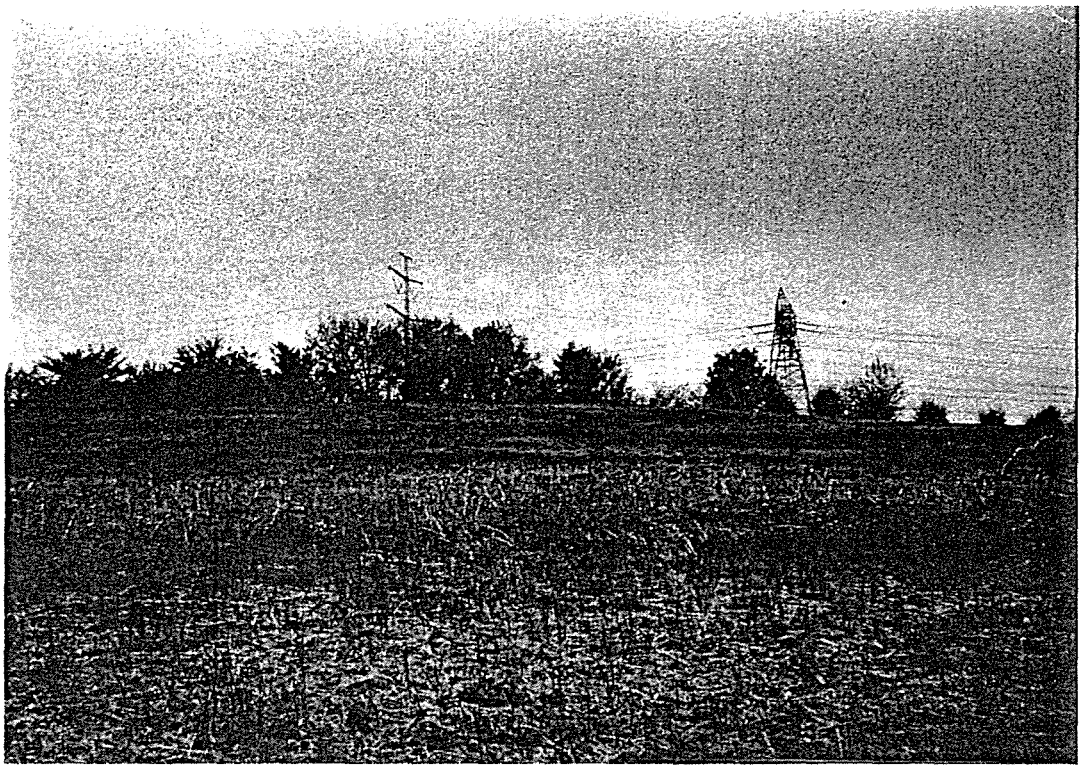


PHOTO ID: Small Fruit Orchard/High Transmission Line, looking northwest, 4/97

PHOTO ID: Ornamental Geometric Tree Planting, western corner of Farm, 4/97

PHOTO ID: Geometric/Row Planting of Cherry Trees, southwest corner of Farm, 4/97

PHOTO ID: Single Specimen Trees, looking north, 4/97

PHOTO ID: Evergreen Screens of Leyland Cypress, looking south, 4/97

PHOTO ID: Remnant Landscape of Heitmuller House/Holly Massing, looking north, 4/97

PHOTO ID: Remnant Landscape of Heitmuller House/Evergreen Planting, looking east, 4/97

PHOTO ID: South Farm Service Road/Building 060/Fire Hydrant, looking west, 4/97

PHOTO ID: Old Terrace Road, looking north, 4/97

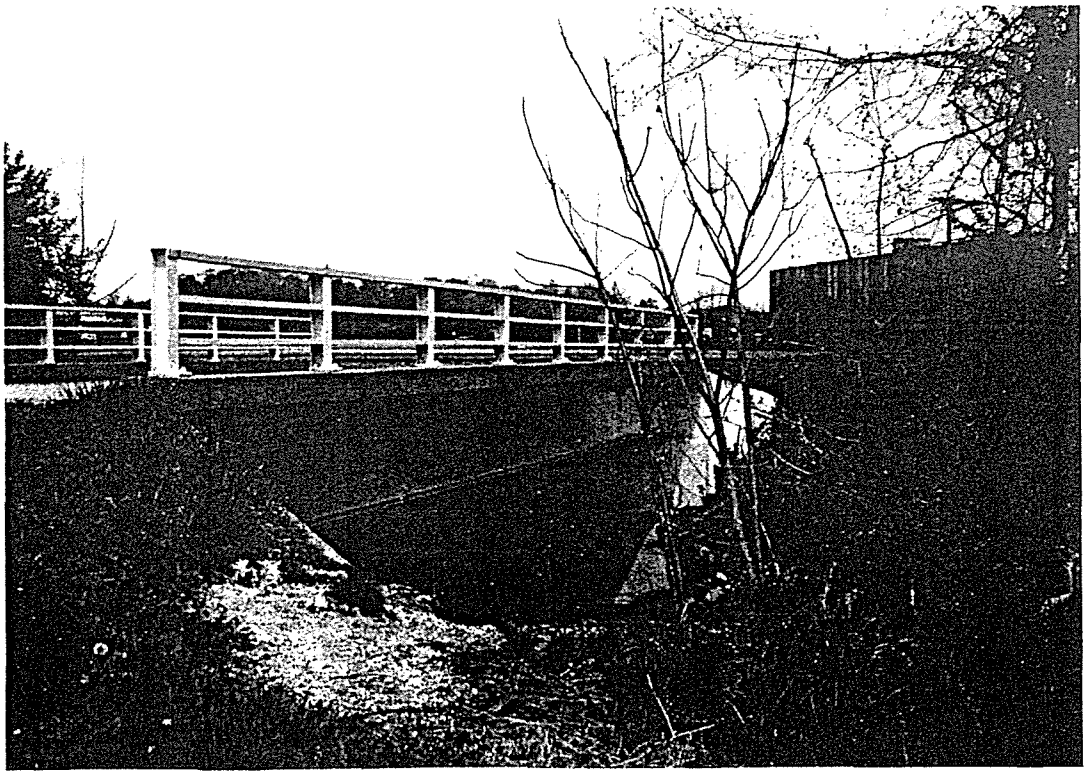


PHOTO ID: Bridge, looking east, 4/97

PHOTO ID: Vista from Heitmuller House site, looking south, 4/97

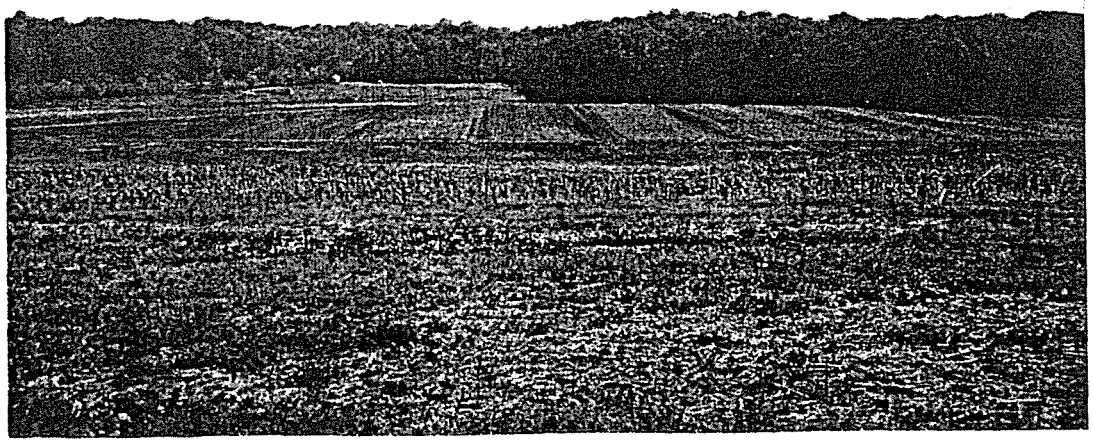


PHOTO ID: Vista over Cultivated Fields from Northwest Ridge Top, looking southeast, 4/97

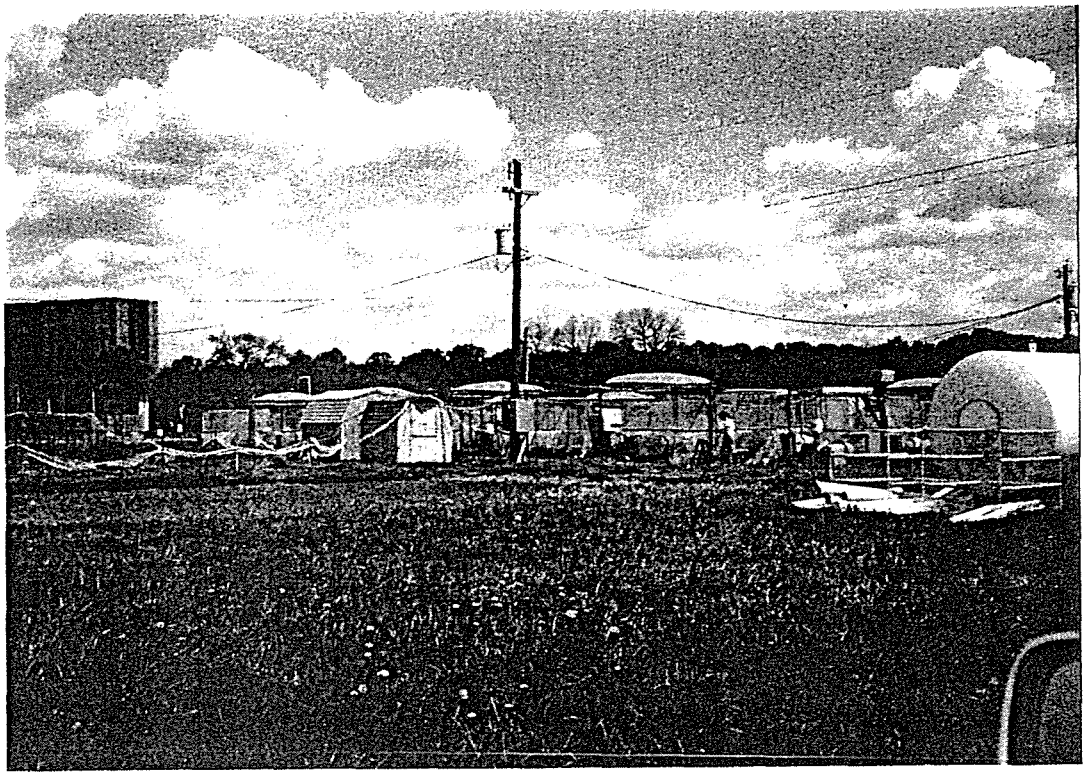


PHOTO ID: Experiment Areas/Experiment Features, southeast quadrant of Farm, 4/97

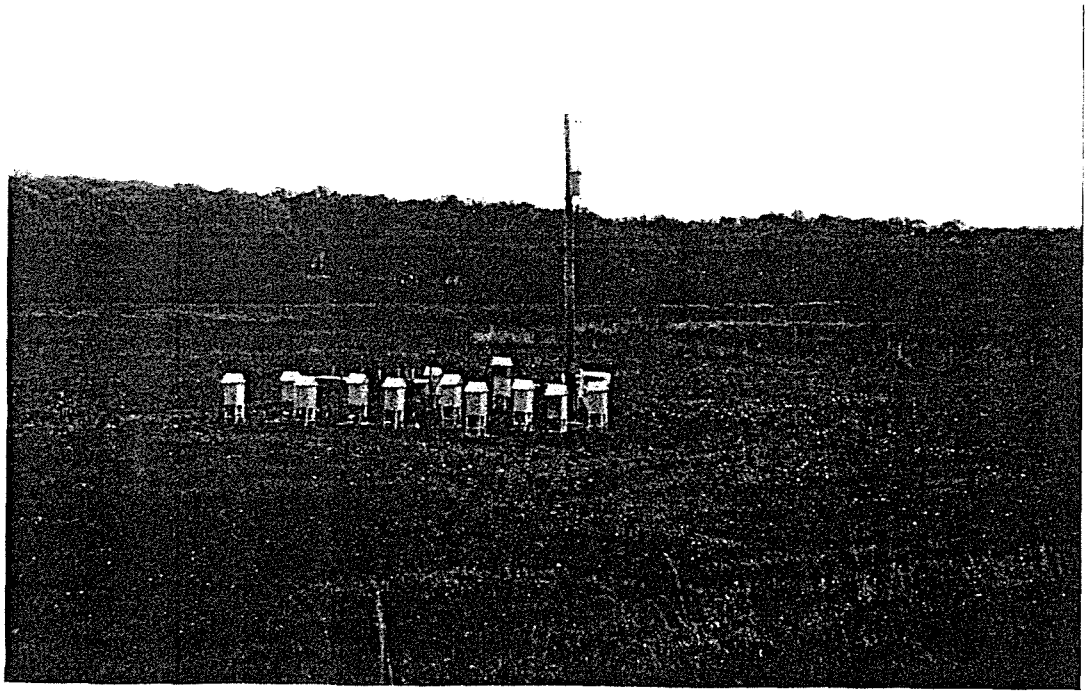


PHOTO ID: Experiment Features, west/northwest quadrant of Farm, 4/97

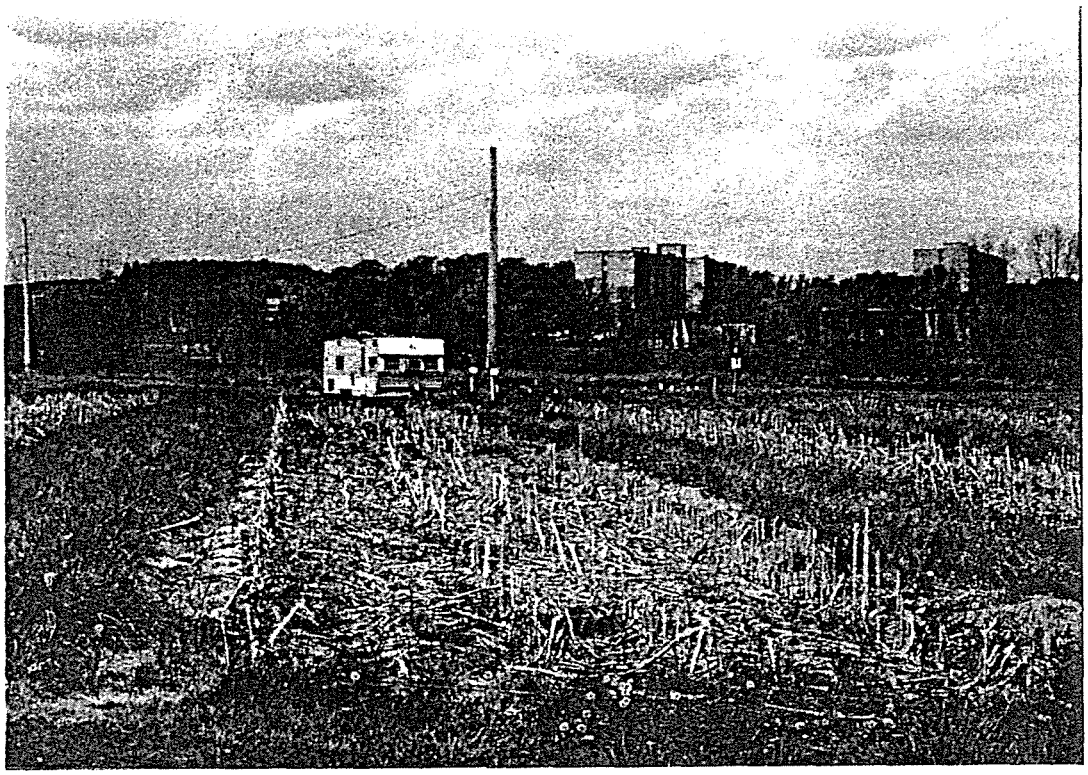


PHOTO ID: Experiment Features, west/southwest quadrant of Farm, 4/97


PHOTO ID: Informational Signage, looking west, 4/97

PHOTO ID: Remnant Fence Post at Heitmuller House site, looking east, 4/97

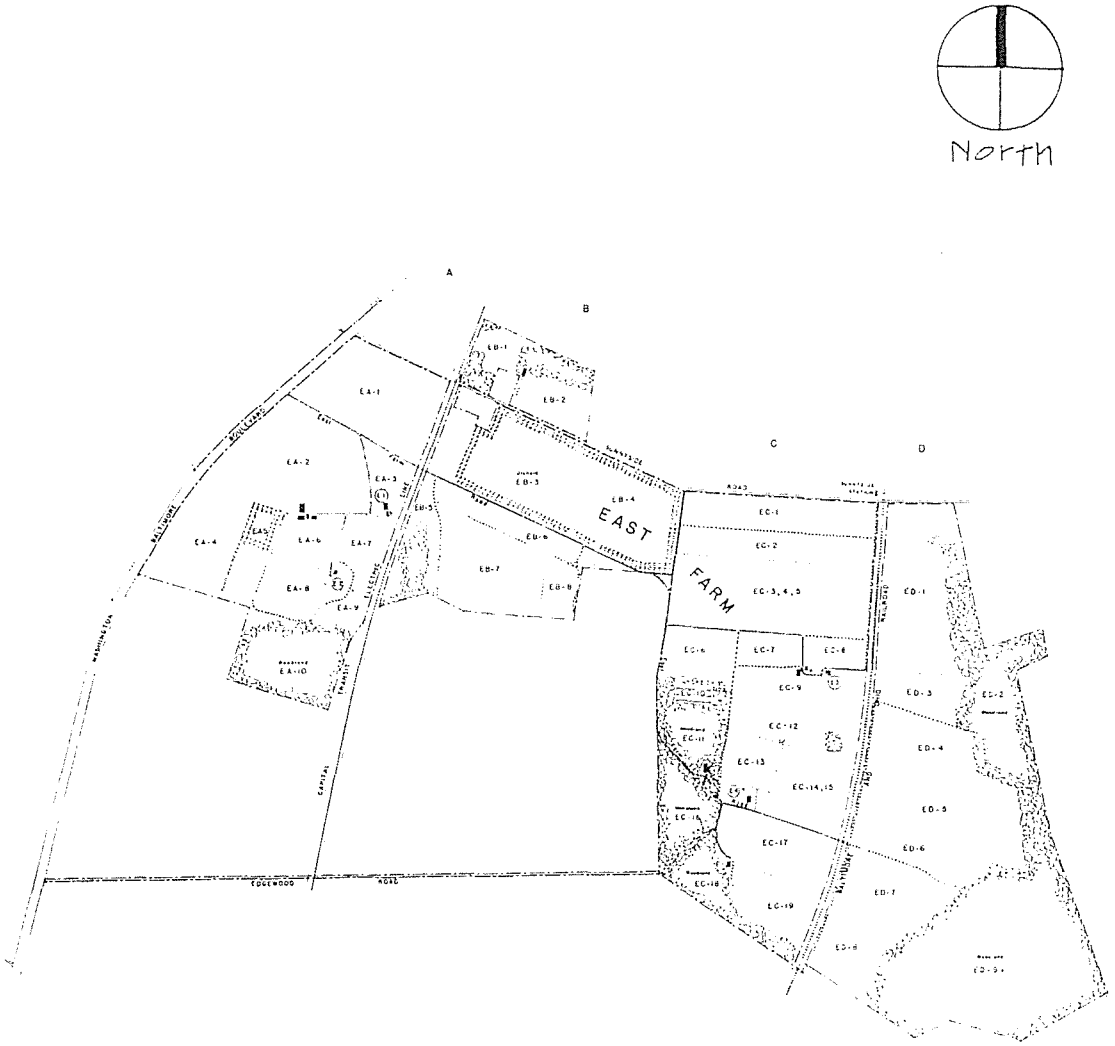
# BELTSVILLE AGRICULTURAL RESEARCH CENTER – BELTSVILLE, MD
# SURVEY FORM: LANDSCAPE

GENERAL

| | | |
|---|---|---|
| Field Area: Linkage Farm | Cluster: | Landscape Unit: |
| Acreage: 460 Acres | Location: MHT # PG: | |
| Master Plan Page/Grid:4,5,+10 | | |
| Boundaries: US Rt. 1 (N); Sunnyside Ave.(E); Highway Admin. (W); Rhode Island Ave. (thru middle); Edmonston Road (S) | | |
| Historic Owner/Designer/Administrator's Name: Bureau of Plant Industry, USDA | | |
| Historic Use/Current Use: | | |
| Historic Name/Current Name: Bureau of Plant Industry Linkage Farm | | |
| Dates of Land Acquisition: 1938/1940 | Design:1938-present | |
| Construction: 1938-present | | |

PHOTOGRAPH

Photo ID: 1937 Aerial Photograph, NARA Cartographic Division, RG 145, Can 2070




PLANT INDUSTRY STATION

BELTSVILLE — MARYLAND

BUREAU OF PLANT INDUSTRY, SOILS, AND AGRICULTURAL ENGINEERING
AGRICULTURAL RESEARCH ADMINISTRATION
UNITED STATES DEPARTMENT OF AGRICULTURE

MAP ID: East Farm (Linkage Farm) Bureau of Plant Industry, USDA, 1943.

**Overall Description of Unit**

See Continuation Sheet
Sheet

**Landscape Type**

| | |
|---|---|
| Designed: X | Historic: |
| Vernacular: | Ethnographic: |

**Landscape Characteristics and Features**

See Continuation Sheet
Sheet

**Assessment of Condition**

The road system is good. The paved roads are stable and the pavement appears to be intact. None of the gravel or dirt/farm roads is washed out. The drainage system from the 1940s and late 1960s is still intact and appears to be in operating condition. Indian Creek is flowing without any obvious obstructions. The perimeter woodland forests are in good condition with no visible signs of serious deterioration. Some fields are undergoing research and/or crop rotation. The National Agricultural Library grounds are very good. The Brown family cemetery is under serious threat from vandalism and poor maintenance.

**SIGNIFICANCE** (Period of significance: National Register significance level)

| |
|---|
| See Continuation Sheet |

**PRELIMINARY NATIONAL REGISTER ELIGIBILITY ASSESSMENT**

| | |
|---|---|
| Individually Eligible: Brown Family Cemetery | |
| Eligible as Contributing to which Historic district: | |
| Non-Contributing to this Historic district: | |
| Relevant Evaluation Criteria:<br>A: | |
| B: | |
| C: | |
| D: | |
| Retains Integrity: Yes: | No: X |

**MAJOR SOURCES OF INFORMATION**

| |
|---|
| See Continuation Sheet |

| |
|---|
| Explain: Significant changes to landscape. National Agricultural Library and USDA admin. complex |

| | | |
|---|---|---|
| Name of Surveyor: Jennifer Smith | Affiliation: RHI | Date: June 10, 1997 |
| Justin Dollard | RHI | June 20, 19 |

**Overall Description of Unit:**

At 460-acres, the Linkage Farm is the second smallest segment of BARC. Linkage Farm connects the North Farm and the Central Farm. The farm is discontiguous and consists of a 310 acre west tract and 150 acre east tract. The west tract of Linkage Farm is positioned between U.S. Rt. 1, Sunnyside Road and I-495. Rhode Island Avenue divides this tract. Mixed use development occurs along the north side of Linkage Farm, residential along the southeast, Sunnyside Park and the Maryland State Police Barrack Q along the southwest, US Route 1 and North Farm on the west, and the WMATA Greenbelt Metro Station on the east side. The west tract is portioned between Powder Mill Road, the Baltimore and Ohio Railroad, Edmonston Road, and I-495. Sunnyside Road divides this tract.

Four different types of land uses occur at the Linkage Farm, crop research, the USDA National Agricultural Library, the partially constructed, new USDA administration complex, and managed forest. The administration complex occupies 1/3 of the site adjacent to the WMATA Greenbelt Metro Station. This area of the Linkage Farm is not included as part of the survey. The Library occupies another approximate third of the site and the remainder of Linkage Farm includes research fields, remanent orchard trees, and mowed grasses. Some of the grass areas are currently used as forest management or wildflower displays.

Acquired in 1938 for U.S. Horticultural Station's expansion, the west tract of Linkage Farm, then referred to as the "East Farm," consisted of the 262.87 acre "University of Maryland" tract and 48.05 acre "Toomb's Tract" owned by the Resettlement Administration. At the time of its purchase, four residences, the Brown family cemetery, and 13 utility buildings existed at the Linkage Farm. A network of dirt roads served the residences and one improved road, East Farm Road, linked the Washington and Baltimore Turnpike (US Route 1) with the Capital Transit Electric Line rail alignment (Rhode Island Avenue). This linking road survives today, but no longer serves as a thoroughfare. None of the buildings survive today. Although heavily damaged, the Brown cemetery remains and its use appears to begin in 1862. A 1861 map of the area confirms the Brown family dwelling location on what is now Linkage Farm. Remnant trees associated with the cemetery and the Brown dwelling also survive.

The Bureau of Industry originally used the Linkage Farm for orchard, crop, and pasture research. By 1970, the National Agricultural Library's construction substainially reduced available land for field research.

In the 1940s a second discontiguous parcel was acquired east of the initial expansion site. This 150 acre, densely forested, riparian parcel contains a Granary complex. The Granary was built in 1936 to support the Dairy Bureau at Central Farm. Archeological investigations at Indian Creek, which runs through this parcel, indicate human occupation to the Prehistoric and Archaic periods.

**Landscape Characteristics and Features:**

- **SPATIAL ORGANIZATION:** The Linkage Farm is a simple landscape defined primarily by the gently rolling hills filled with specimen trees, the research fields east of Rhode Island Avenue, and the National Agricultural Library fronting on U. S. Rt. 1. The farm is bounded by U. S. Rt. 1 to the west, Sunnyside Avenue on the north, Edmonston Road on the east, and I-495 on the south. A sizable, discontiguous parcel east of the Metro Station and adjacent Central Farm is bounded by Powder Mill Road on the north, Edmonson Road on the east and southeast, Baltimore and Ohio Railroad on the west, Capital Beltway on the southwest and a US Courthouse on the south. The west side of Linkage Farm is divided spatially into three zones by Rhode Island Avenue and the CSX Railroad, both coursing through the site from north to south. Research fields, grass and wildflower fields, and the Library are the three land uses of the site. The grassy/wildflower area to the north and south sides of the Library, provide a foreground for the 1970's high-rise building. A stormwater management pond is also associated with the Library and is located on the western side of the building. Two parking areas service this facility which are located in low lying areas to the west and south of the building. These parking areas are not visible from Rt. 1.

The research fields of the Linkage Farm are located between Rhode Island Avenue and the entrance into the new office complex under construction. Currently, experimental corn fields exist and access is restricted due to pesticide use.

Spatially, the grounds at the library use varied mowing patterns to create subtle differences in grass height, creating a sense of enclosure between a cultivated landscape near the library, and uncultivated areas of the old, overgrown orchard trees and the Brown dwelling site. Access roads, parking lots and a picnic area at the library further refine the texture of this spatial difference.

The Brown site is spatially differentiated through surviving corner lot trees, trees around the house site, and trees around the cemetery. The corner lot trees help define what remains of a sizable yard or lot, visible on a 1937 aerial photography. The cemetery is further delineated by wood posts with rope barriers. An entrance from the surviving linkage road (described earlier) is clearly visible. A wood post with an angled head sits at the entrance, possibly used to mount an interpretative sign or marker.

At the east tract of Linkage Farm the Granary Complex is composed of four buildings set in relationship to their individual function. A large lawn borders the complex, its access road and Powder Mill Road. A chain link fence, in front of the complex, divides this lawn into an outer two-thirds and an inner third. Two large Sycamore trees stand at the opposite sides of the lawn, near the complex.

- **TOPOGRAPHY/GRADING:** The Linkage Farm is a relatively level landscape. The average elevation is 150-feet above sea level, with only two primary high spots. Along Rt. 1, the elevation starts at approximately 170' and decreases to approximately 150' at Rhode Island Avenue. Within this area, the Library is located in the higher ground, with the parking areas situated at lower elevations near the stormwater pond. In the northwest corner of the research fields, the grade elevation starts at approximately 160-feet above sea level and decreases to approximately 125-feet near the new USDA complex site. Within the research fields, a ridge line occurs parallel to the paved roadway coursing through the fields from east to west.

Indian Creek nearly divides the east tract of Linkage Farm's forest lands in half. Topography in this area, slopes gently to the creek bed. The elevation beings at 100' feet at intersection of Edmonston and Powder Mill Roads and slopes to approximately 80' at Indian Creek.

Currently, one pond is located at the Linkage Farm, and acts as a stormwater management pond for the Library building. This pond is located on the south side of the building, and empties into a small creek coursing southeast into the wooded corner of the site. A network of drainage swales and channels appear to feed the pond.

Ditches and swales exist along bordering and internal roads. Some minimal surface regarding was probably required for the internal roads at the library and parking lot.

| TOPOGRAPHY/GRADING | CONTRIBUTING/NON-CONTRIBUTING |
|---|---|
| Drainage ditches and channels | Non-Contributing |
| Stormwater management pond | Non-Contributing |
| Ridge/drainage divide | Non-Contributing |
| Internal roads | Contributing/Non-Contributing |
| Parking Lot | Non-Contributing |

• **VEGETATION:** Vegetation at the Linkage Farm is not complex. Foundation plantings at the Library, open grass/wildflower meadows, specimen trees, and woodland are the primary types of vegetation. The land and vegetation surrounding the Library provides a serene and complimentary landscape, with gentle rolling hills of native grasses and wildflowers. This unique "front lawn" also includes approximately 40 specimen deciduous and evergreen trees dispersed throughout, including Cherry trees *(Prunus sp.)*, Sycamore *(Platanus occidentalis)*, Pine *(Pinus sp.)*. These specimen trees located north of the Library are planted in groupings of like species and arranged in either rows or clusters. Specimen trees are also used to define the edge of both parking lots. These trees are primarily evergreen and include Blue Spruce *(Abies sp.)*.

Woodland does not surround the entire Linkage Farm, like the woodland perimeters of the North and South Farms. The two woodlands of the Linkage Farm are located south of the Library and along Sunnyside Avenue between Rt. 1 and Rhode Island Avenue. Both of these forest include deciduous and evergreen trees and underbrush which effectively screen the adjacent land uses of traffic on Sunnyside Ave. and the highway maintenance yard (and/or park) to the south. A third woodland exists at the discontiguous parcel between the Metro Station and Edmundston Road. Indian Creek meanders through the woodland. These woodlands appear on a 1912 forest areas map produced by FW Beasley.

The grass and wildflower meadows of the Linkage Farm surround the Library site between Rt. 1 and Rhode Island Avenue. These meadows are defined by grass mowing strips located adjacent to parking lots and roadways. Various species of wildflowers are in flower at the time of surveying which range in color from white to pink to light blue.

There is one planting bed used at the Linkage Farm which is located at the east entrance from Rhode Island. Avenue. This bed includes Saltspray Rose *(Rosa rugosa)*, various shade trees, and Barberry *(Berberis thunbergii)*.

A 1937 aerial photograph indicates that two-thirds of Linkage Farm lands contained substantial orchards prior to acquisition by the USDA. The remain third was field crop and woodland. By 1943, orchards only remained in the north central portion of Linkage Farm. At present, remanent apple and cherry trees appear to stand at the library grounds.

Experimental field crops of corn exist at the north central section of Linkage Farm.

A small amount of riparian vegetation occurs on both sides of the pond edge. This vegetation consists of deciduous shade trees, understory brush, and cattails. Riparian vegetation occurs along Indian Creek. Wetland indicator plants exist in unmown drainage swales the ditches along bordering roads.

At the cemetery a grove of Mulberry (*Morus sp*), Pine (*Pinus sp.*) Eastern Red Cedar (*Juniperus virginiana*), and Bald Cypress (*Taxodium distichum*) surround the grave markers. The Mulberry and Bald Cypress appear the oldest and may survive from the period of significance.

Large Mulberry, Pine and Sycamore trees also mark the Brown house site. Scattered and clustered Pine trees outline what remains of a sizable yard or lot.

Sycamore and scattered ornamentals occur at the Granary Complex lawn.

| VEGETATION | CONTRIBUTING/NON-CONTRIBUTING |
|---|---|
| Library grounds | Non-Contributing |
| Fields/cropland | Contributing |
| Woodlands on east end and on south edge | Contributing |

| | |
|---|---|
| Ornamental trees in fields | Contributing/Non-Contributing |
| Remnant fruit orchard trees | Contributing |
| Brown cemetery trees | Contributing/Non-Contributing |
| Remnant Brown site trees | Contributing |
| Riparian vegetation at library grounds | Non-Contributing |
| Riparian vegetation at Indian Creek | Contributing |

• **RESPONSE TO NATURAL FEATURES:** Swales and channels drain the area around the library grounds to stormwater management pond. A survey plan from 1938 indicates that the University of Maryland installed an extensive drainage system in this area. Another plan of the same year shows improvements the Bureau of Plant Industry made to this system. It is unclear how much of the drainage system remains. The experimental corn field does not appear to contain drainage improvements. A 1943 Soil Conservation Service plan for BARC stated that the area was "sandy and badly eroded on the steeper slopes. It would be difficult to arrange [drainage] outlets for terraces or for a diversion terrace." Consequently, the SCS recommended contour planting and cultivation. This practice continues today.

• **CIRCULATION:** Circulation at the Linkage Farm includes paved roadways and paths for vehicular and pedestrian circulation. The vehicular circulation is divided into four sub areas: access to the Farm, circulation around the Library site, circulation around the research fields, and designated parking areas . Access to the Linkage Farm is provided from U. S. Rt. 1, Rhode Island Avenue and Sunnyside Avenue. The primary entrance into the Linkage Farm is from U. S. Rt. 1 into the Library site. This entrance is serviced by a traffic light and provides access to a looped drop off at the building entrance and to the south parking lot. This road then curves northeast and proceeds through the rear, or east, parking lot and connects to Rhode Island Avenue. Traffic is allowed to enter and exit through this entrance off of Rt. 1. Further north and south on Rt. 1, two secondary entrances to the Library site are blocked and no entry is permitted. The entrance to the north is to a gravel road coursing through the grass meadow which links to Rhode Island Avenue, which is also blocked. One paved road courses along the east/west ridge line of the research fields, accessed from Rhode Island Avenue and a secondary road off of Sunnyside Avenue. This road alignment is the only access for the research fields, and is currently restricted by locked gates.

Parking lots are provided at the Library site, and occur in two locations. These lots are located to the east and south sides of the Library. Both lots are paved with asphalt and utilize curb stops.

"Cut-through" traffic occurs at the Linkage Farm by providing a shorter distance from Rt. 1 to Rhode Island Avenue. Unfortunately, the narrow and circular two lane road does not appear equipped to handle this additional traffic and consequently BARC has installed a speed bump near the east parking lot.

Pedestrian circulation occurs at the Linkage Farm in the Library site, providing access to the Library from parking lots and roadways. The walk to the main entrance from the east parking lot is asphalt aggregate. The lot is lit by steel bollards. This walk is a combination of wide steps and sloped walks. The walk leading from the south parking lot to the entrance is concrete. This walk also loops around the south side of the building and links to the east parking lot. An asphalt path links the east parking lot to the pond which crosses the narrow creek by a small arching asphalt bridge. Finally, a path exists from the east entrance, along Rhode Island Avenue to the south, and connects to the Sunnsyside Park playground.

A small, asphalt road leads off Powder Mill Road to the Granary. An asphalt service area surrounds the Granary Complex.

| CIRCULATION | CONTRIBUTING/NON-CONTRIBUTING |
|---|---|
| Sunnyside Road, East Farm Road, Rhode Island Avenue (on alignment of Capital Transit Electric Line), Powder Mill Road, and unnamed roads at east end of the farm | Contributing |
| Library entrance roads | Contributing |
| Pedestrian walkways | Non-Contributing |

• **LAND USES:** Four land uses occur at the Linkage Farm: the National Agricultural Library; research experimentation in the fields; the new USDA Office Complex, and woodlands. (Note that the new complex will not be surveyed as part of this study). The Library is open to both the general public and to USDA staff, so there is a mix of people accessing this site, compared with the other farms used primarily by only USDA researchers and staff. A small amount of land is dedicated to research field use, which is located between Rhode Island Avenue and the new complex entrance drive. There are no research laboratories or out-buildings associated with this field.

Research fields represent a historically significant land use for Linkage Farm. Unfortunately, only a small strip of fields remain production at the farm's central portion between the library and the new administrative complex.

• **STRUCTURES:** There are five buildings at Linkage Farm (not including the new USDA office complex). The National Agriculture Library, the Granary (085), Granary Office/Heating Plant (085A), Granary Garage (085B), and Granary Storage (085C). Historical significance is associated with the Granary. See the Structures Survey for more information.

• **SMALL SCALE FEATURES:** Site Features at the Linkage Farm are few and not very noticeable. Lighting and picnic furnishings are the two primary features apparent at the Farm; fencing is a secondary feature. Both of the parking lots are lit with six double globe overhead post lights mounted on concrete bases. Additionally, walkways from the parking areas to the building entrances are lit with common commercially available steel bollards.

Directional signage exists at the library complex entrances, near the parking lots, and near the library building itself.

Near the pond edge, 3 picnic tables are located to provide outdoor seating. During the field survey staff or visitors of the Library used these tables. Adjacent to the picnic area, trash receptacles are also located.

Fencing at the Linkage Farm is not used extensively like it is on the North and South Farm. There is no fence used along the Rt. 1 perimeter or along the west side of Rhode Island Avenue. The research fields however, are fenced; metal reinforcing bar posts with attached 5" square wire; and barbed wire running the length of the top. At the time of the survey, access to the research field was restricted with locked gates at both the Rhode Island entrance and from the new office complex entrance. Similar to the North Farm, partial split rail fencing is used at the corners of grass/wildflower meadows to designate mowing areas.

One large standpipe is located near the western edge of Rhode Island Avenue and the southern Sunnyside Park site. This pipe stands approximately four feet tall and projects approximately three to four feet to the

west.

At the Brown cemetery small scale features include wood posts with rope barrier fencing, a wood post with an angled head, and approximately seven to nine grave markers. These markers are heavily damaged from wind-thrown trees and vandalism.

| SMALL SCALE FEATURES | CONTRIBUTING/NON-CONTRIBUTING |
|---|---|
| Directional signage | Non-Contributing |
| Lighting post and fixtures | Non-Contributing |
| Picnic tables | Non-Contributing |
| Fencing and post | Non-Contributing |
| Stand pipe | Non-Contributing |
| Grave Markers | Contributing |

• **VIEWS AND VISTAS:** From the ground level, a panoramic vista can be seen of the administrative area of the North Farm. The Library tract is the most recognizable feature of the Linkage Farm, visible from both Rt. 1 and Rhode Island Avenue. Unlike the North and South Farms, views are not blocked to the library tract by chain link fencing or woodland, with the exception of the Sunnyside Avenue border. Other areas of the Linkage Farm are not as visible from the adjacent roadways, due to topography, fencing, the granary buildings, and loose vegetation at the road edge.

**Significance:**

The land that comprises the Linkage Farm was acquired by the Bureau of Plant Industry in 1938. The addition of 310.92 acres expanded the Bureau's ability to pursue orchard and field crop research. An additional 150 acres of woodlands, which surround Indian Creek, was acquired by BARC in the the early 1940s. This land includes archaeological resources at Indian Creek. In 1970, the National Agricultural Library was opened at Linkage Farm, adjacent U.S. Route 1. At present, a USDA administrative complex is being built along side the WMATA Greenbelt Metro. Both of these projects significantly altered Linkage Farm to the extent that non-contributing resources negate the historical integrity and significance of the site.

**Sources of Information:**

Final Phase III Cultural Resources Report, BJY and R&A, December 1995.

Beltsville Research Center Conservation Plan, USDA, November 1943.

"Topography of University of Maryland (Weaver) Tract for Underdain System," Bureau of Plant Industry,USDA 1938.

"Tentative Layout Underdain System, University of Maryland (Weaver) Tract," Bureau of Plant Industry,USDA 1938.

Map by Bureau of Plant Industry, Soils, and Agriculture Engineering, Agricultural Research Administration, USDA, 1943.

NARA Cartographic Division, RG 145 CAn 2070 Frames FG-132-177, FG-132-178, FG-135-17 thru 19

Aerial Mosaic/USDA/Agricultural Research Center, Compiled by Cartographic Division, Soil Conservation Service, 1957

Maryland Geological Survey, map of Prince George's Co.and District of Columbia showing Topography and Election Districts: G3843.P7.1903.M3 (1903), G3843.P7.1914.M3 (1914), G3843.P7.1927,M3 (1927), and G3843.P7.1936.M3 91936).

Maryland Department of Geology, Mines, and Water Resources, G3843.P7.1946.M3 (1946)

Map of Prince George's Co.and District of Columbia Forest Areas by Commercial Type, prepared by F.W.Besley, Maryland Board of Forestry, 1912.

BARC 1996 Master Plan Update, BJY, 1996.

PHOTO ID: USDA National Agricultural Library, looking west.

PHOTO ID: Library visitor parking lot and light fixtures, looking west.

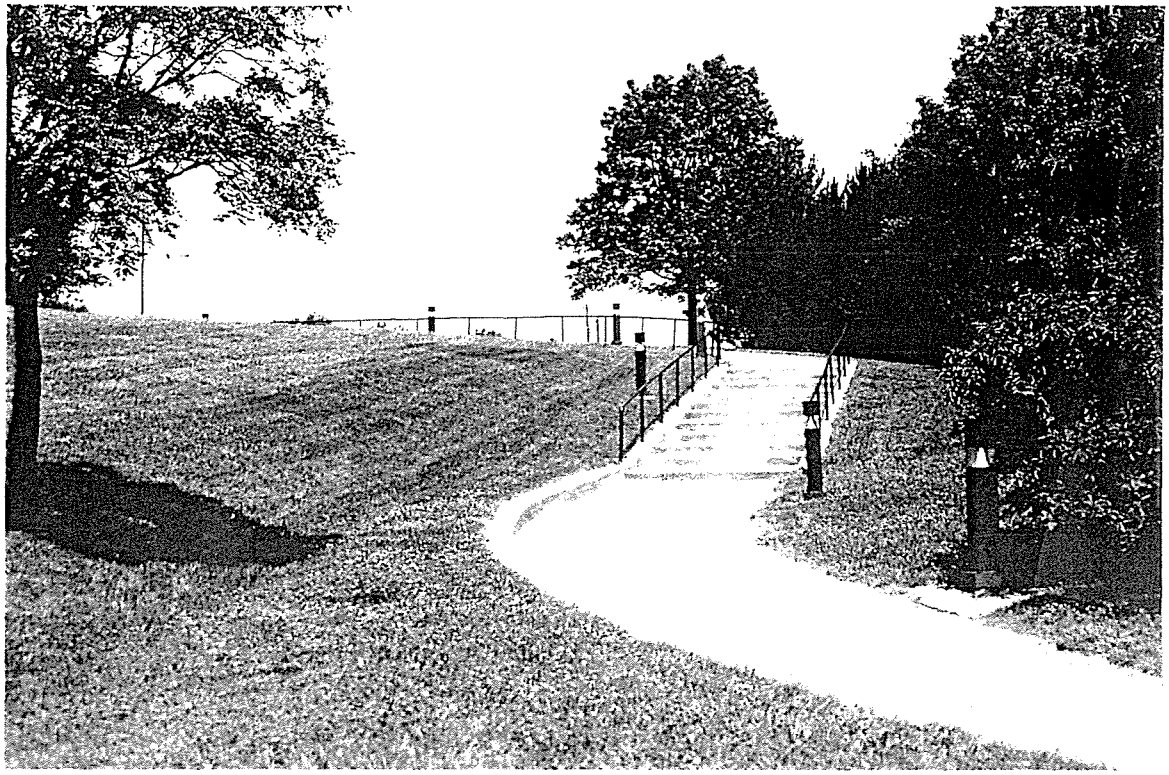


PHOTO ID: Pedestrian access from visitor parking and bollard lamps.

PHOTO ID: Sidewalk on south end of library grounds, looking west.

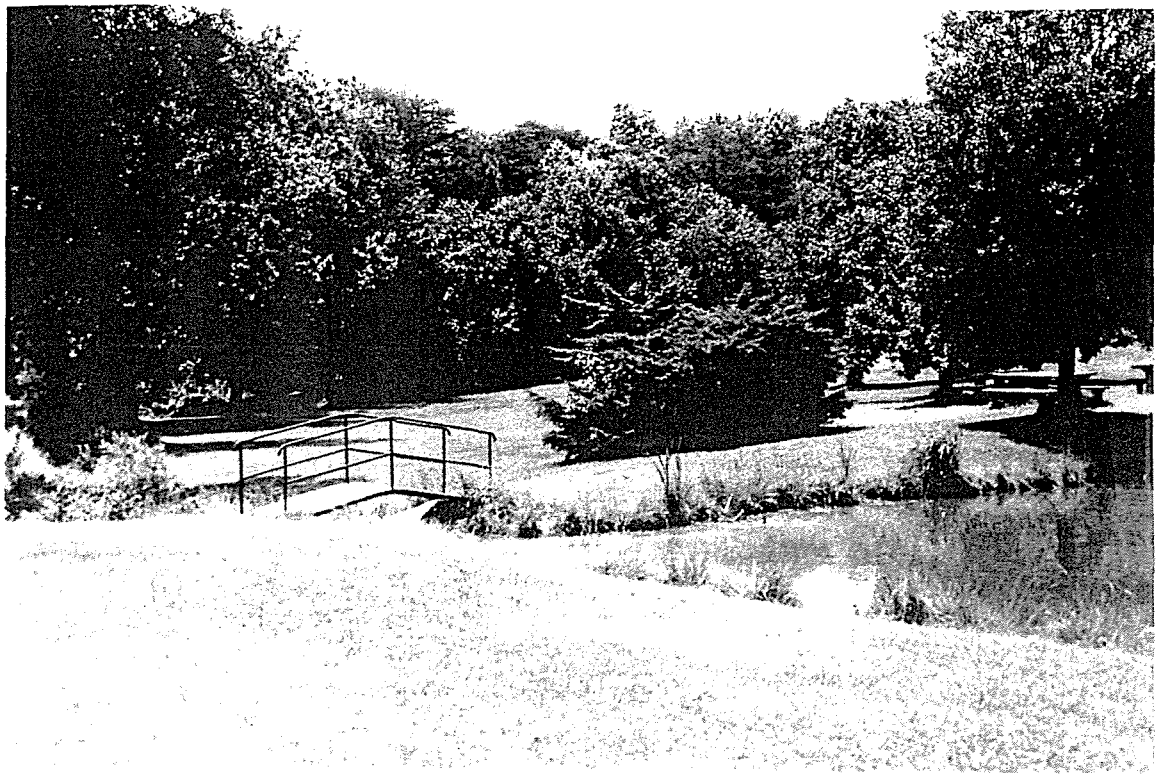


PHOTO ID: Picnic table area, access pond, and stormwater management pond, looking southwest.

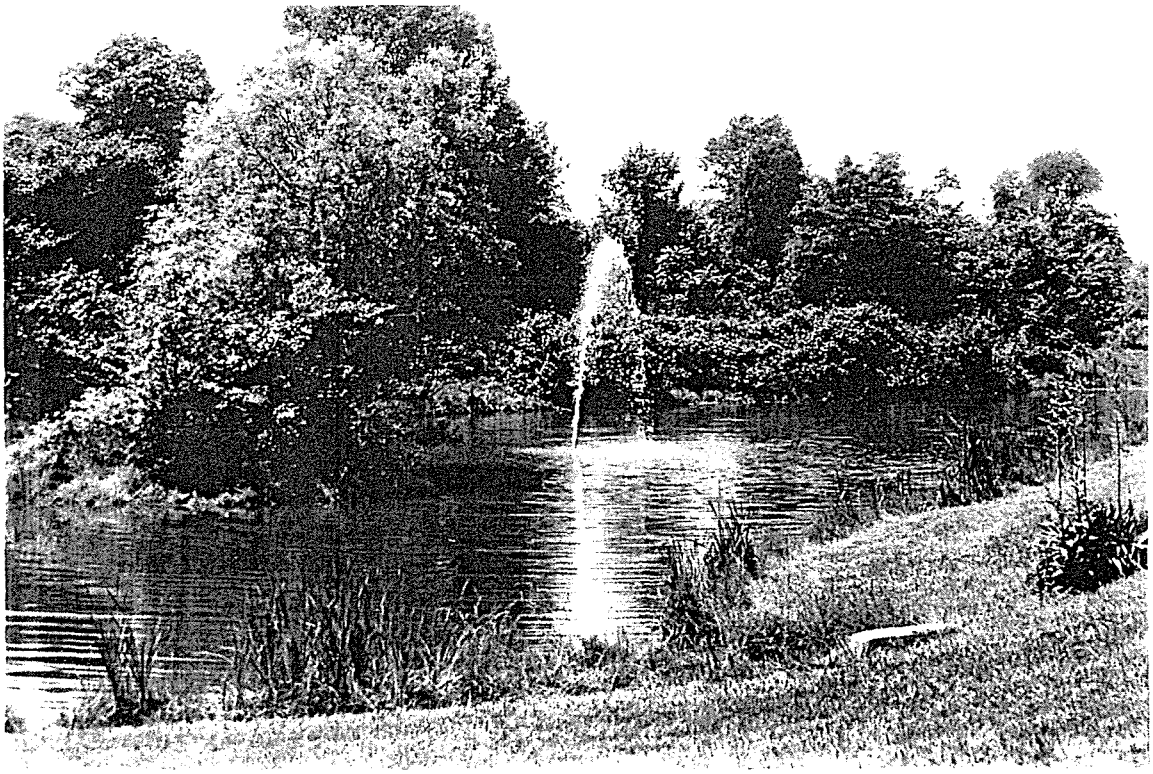


PHOTO ID: Stormwater management pond.

PHOTO ID: Mowing patterns and ornamental/specimen trees, looking north.

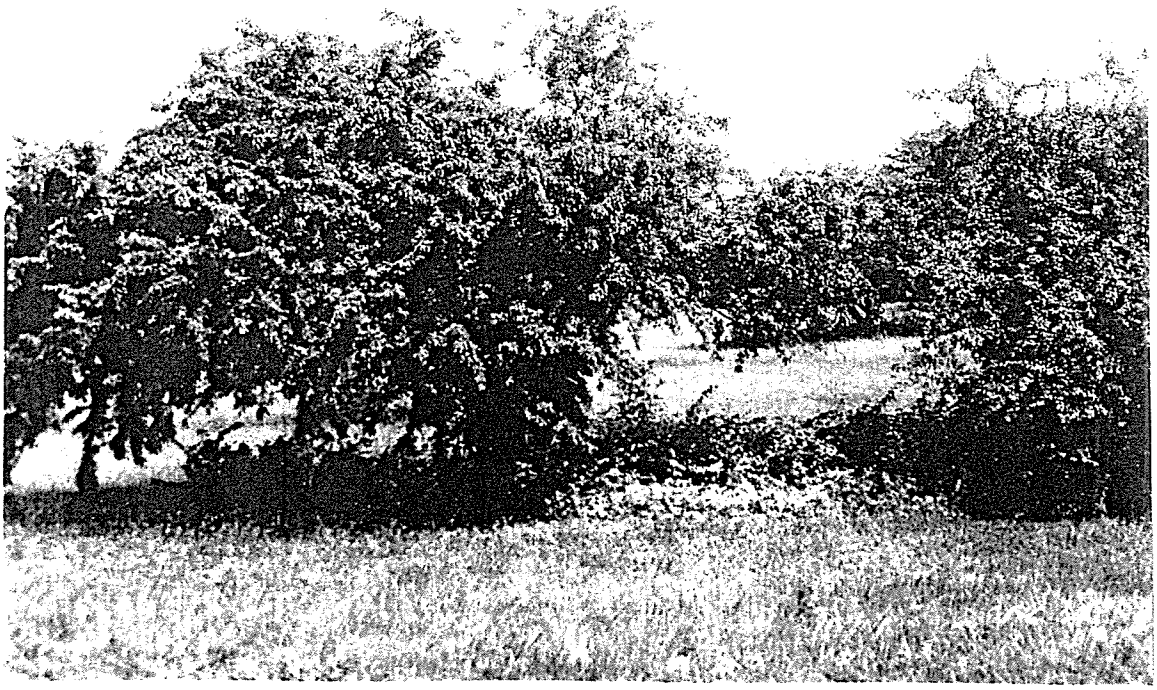


PHOTO ID: Remanent orchard trees near Brown family cemetary.

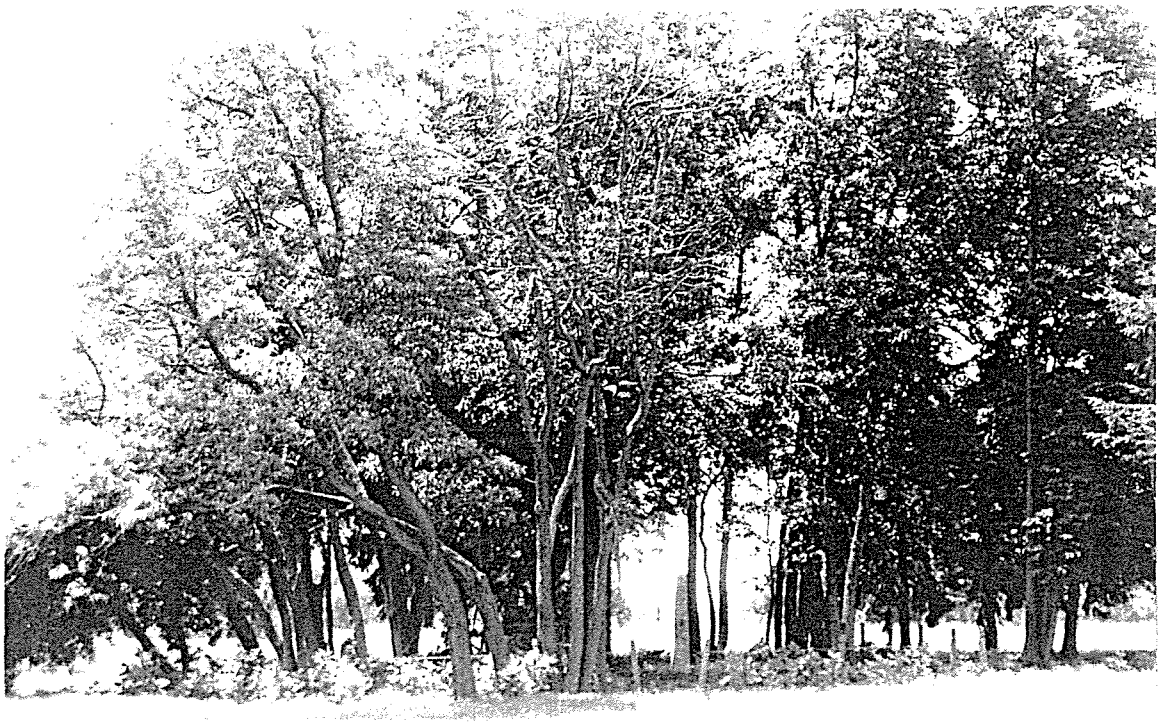


PHOTO ID: Brown family cemetery from East Farm Road, looking south.

PHOTO ID: Brown family cemetery.

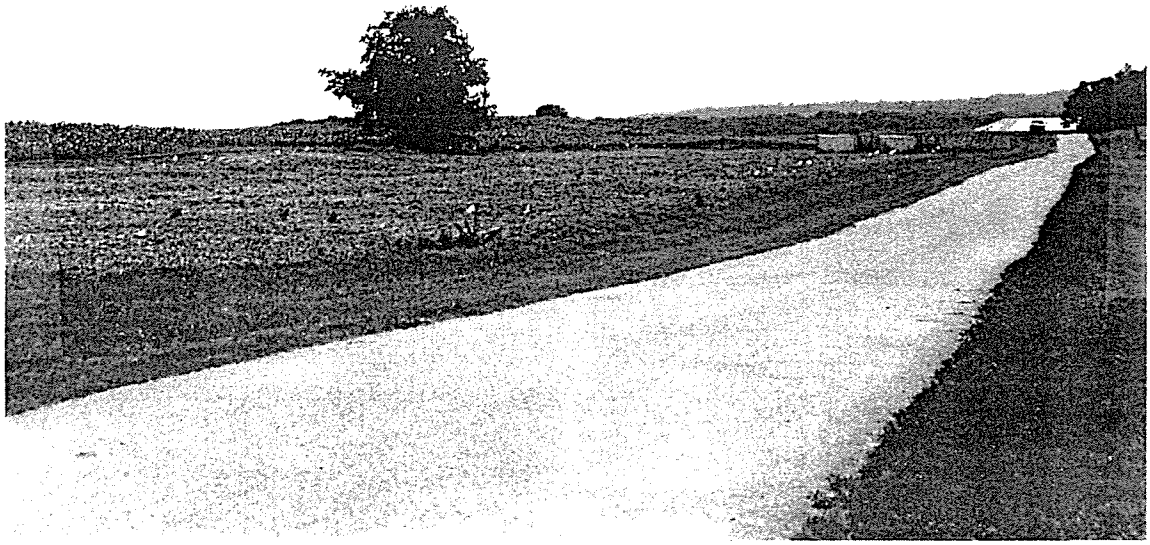


PHOTO ID: Experimental research fields at Linkage Farm, looking east.

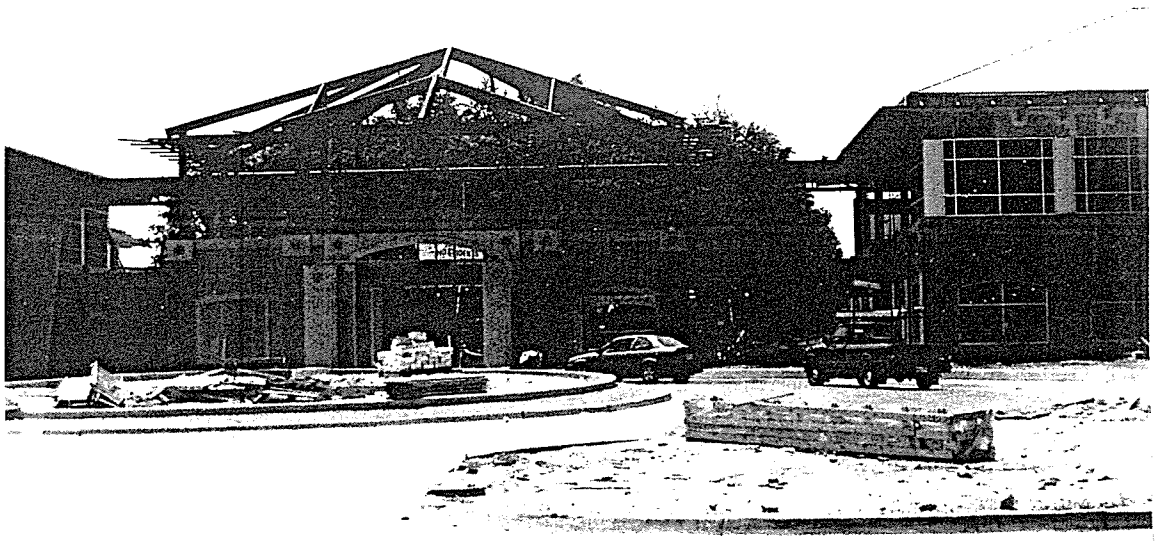


PHOTO ID: The new USDA adminstrative complex, looking south.

PHOTO ID: The new USDA adminstrative complex parking lot, looking north.

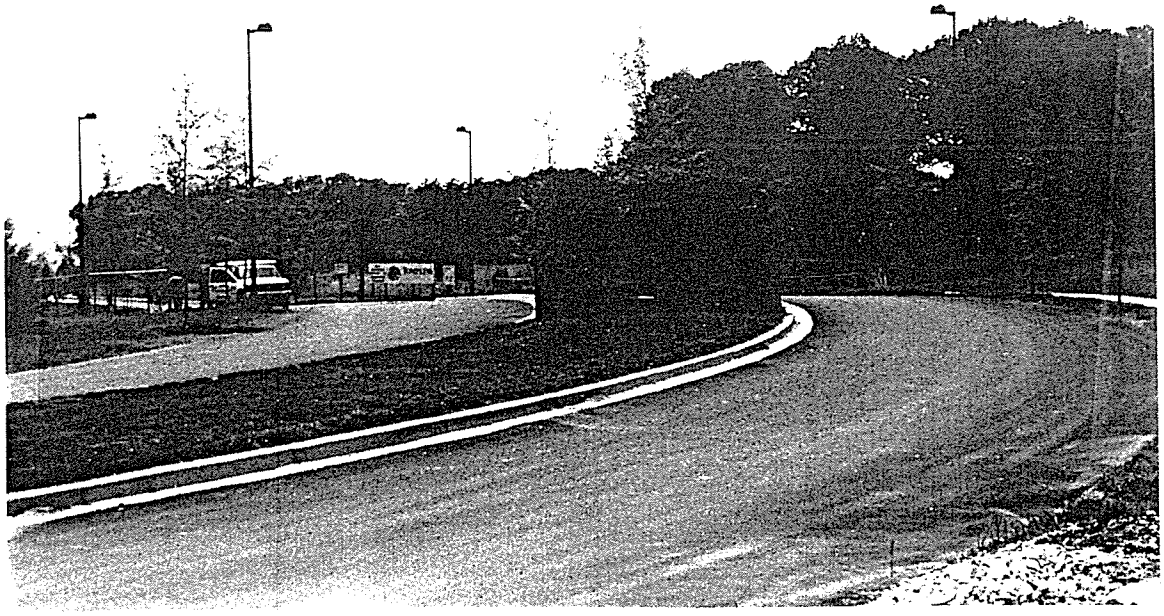


PHOTO ID: The new USDA adminstrative complex entry, looking south.

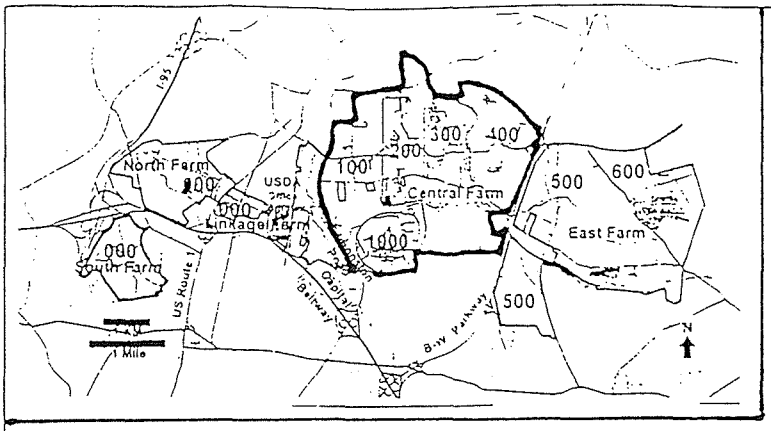
# BELTSVILLE AGRICULTURAL RESEARCH CENTER—BELTSVILLE, MD
# SURVEY FORM: LANDSCAPE

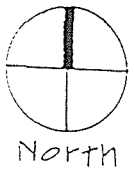
## GENERAL

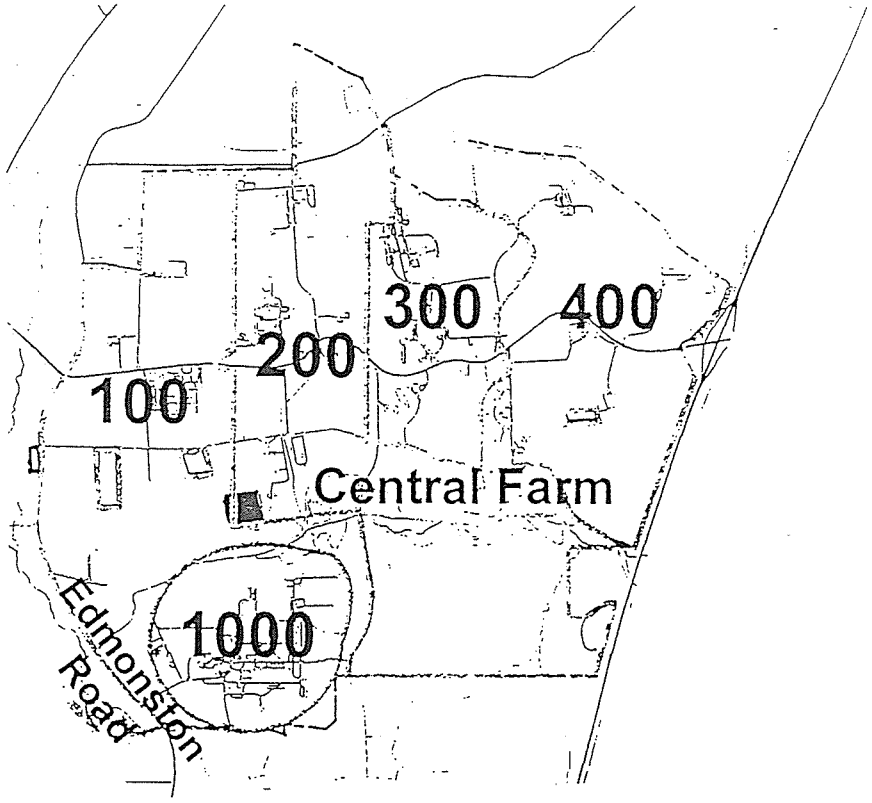
| | |
|---|---|
| Farm Area: CENTRAL FARM | |
| Cluster: | |
| Landscape Unit: | |
| Acreage: 2,253 Acres | Prince George's County Region #: |
| Boundaries: Powder Mill Road(E); Edmonston Road (W); Greenbelt (S); USSS/USDA Health and Human Services, Muirkirk (N) | |
| Location on Master Plan: | Page: Grid:1,2,5,6,11,+12 |
| Historic Owner/Designer/Administrator's Name(s):USDA | |
| Historic Use/Current Use: Animal Husbandry , Production Crops, Animal and Plant Research, Wildlife Management Area /Same | |
| Historic Name/Current Name: Central Farm | |
| Dates of: Land Acquisition: 1911-39 | Design: 1911-1934 / Construction: 1911-1944 |

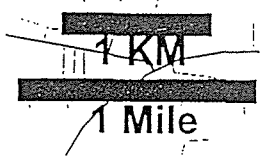
## PHOTOGRAPH

PHOTO ID: 1957 Aerial Photograph, Cartographic Division, Soil Conservation Service, 1957




MAP ID: Base Data from Beltsville Agricultural Research Center, 1996 Master Plan Update, Bernard Johnson Young, September 1996.

**Overall Description of Unit**

See Continuation Sheet
Sheet 5

**Landscape Type**

| | |
|---|---|
| Designed: X | Historic: |
| Vernacular: Historic Vernacular | Ethnographic: |

**Landscape Characteristics and Features**

See Continuation Sheet
Sheet 6 - 15

**Assessment of Condition Overall**

All roads appear in good condition. Forest buffers appear in good condition. Crops lands and pastures appear in good condition. While fence lines bordering most fields are intact. Those sections that line forest areas and disused pasture areas are mostly deteriorated. Drainageways and systems appear intact and well-maintained. Beaver Dam Creek is flowing without any obvious signs of obstruction. Wetlands, forests, and meadows appear protected/managed. Most buildings appear maintained and in fair to good condition. Some smaller animal sheds, storage, or service buildings appear in fair to poor condition.

**SIGNIFICANCE** (Period of significance; National Register significance level)

See Continuation Sheet
Sheet 15

**PRELIMINARY NATIONAL REGISTER ELIGIBILITY ASSESSMENT**

| |
|---|
| Individually Eligible: |
| Eligible as Contributing to which Historic District: |
| Non-contributing to this Historic District: |
| Relevant Evaluation Criteria:<br>A: Central Farm is associated with events related to long standing agricultural research on a national level and is also associated with events and federal programs initiated under the New Deal. |
| B: |
| C: Professionally designed master plan and farmyard layouts. |
| D: |

| | |
|---|---|
| Retains Integrity: Yes | No |
| Explain: | |

**MAJOR SOURCES OF INFORMATION**


- Final Phase III Cultural Resources Report, BJY/Robinson & Assoc., December 1995.
- 1996 Master Plan Update, Master Plan Report, Environmental Assessment, and Appendices-Volume II, BJY/Robinson & Assoc., December 1995.
- Beltsville Research Center Conservation Plan, USDA SCS, Nov. 1943.
- Bureau of Plant Industry, Soils, and Agricultural Engineering, Agricultural Research Administration, USDA, 1943.
- Aerial Mosaic/USDA/Agricultural Research Center, Compiled by Cartographic Division, Soil Conservation Service, 1957
- Maryland Geological Survey, Map of Prince George's Co. and District of Columbia showing Topography and Election Districts: G3843.P7.1903.M3 (1903), G3843.P7.1914.M3 (1914), G3843.P7.1927.M3 (1927), and G3843.P7.1936.M3 (1936).
- Maryland Department of Geology, Mines and Water Resources, G3843.P7.1946.M3
- Map of Prince George's Co. and District of Columbia Forest Areas by Commercial Type, prepared by F. W. Besley, Maryland Board of Forestry, 1912.


| | |
|---|---|
| **Name of Surveyor/Company:** Justin Dollard (RHI) | **Date:** Sept.12, 1997 |

**Overall Description of Unit:**

The 2,981 acre Central Farm is located at the geographic center of the Beltsville Agricultural Research Center (BARC). The Central Farm is bordered to the north by single family homes along Odell Road. To the northeast, the United States Department of Health and Human Services and the United States Department of State share boundaries with the Central Farm. The facilities associated with these agencies are visually separated from BARC by a band of forests. The eastern boundary of the Central Farm is defined largely by the Baltimore-Washington Parkway. To the south is the City of Greenbelt, a New Deal era planned community. Edmonston Road and the Linkage Farm define the western edge of the Central Farm. Central Farm consists primarily of large, open farm fields and pastures at its west end and forests at its east end. Additionally, the Central Farm includes the majority of BARC research centers and support operations. Powder Mill Road is the primary route for vehicle circulation. Access points to Powder Mill Road exist at Edmonston Road and the Baltimore-Washington Parkway. Building areas for all of the Central Farm total 336 acres, waste water treatment 68 acres, roads and grass buffers 297 acres, research fields 84 acres, cropland 483 acres, pasture 443 acres, forest (research buffer) 950 acres, and wetlands 320 acres.

United States Department of Agriculture (USDA) jurisdiction over land today known as the Central Farm began in 1910. The USDA Bureau of Animal Industry (BAI) purchased in that year 475 acres of the Hall farm located on part of the colonial-era Snowden plantation. The Farm Dairy and Animal Husbandry Divisions relocated to Beltsville to establish an experimental farm. By 1912, this experimental farm consisted of new facilities and site improvements. In 1924, the dairy and husbandry operations separated into individual bureaus. The Bureau of Dairy Industry received 190 acres and continued experiments in dairy cattle breeding, and forage crop, silage, and milk research. The Bureau of Animal Industry continued its work in the areas of swine, poultry, and sheep research. Animal Industry retained approximately 285 acres of the original 475. The Pathology, Zoological, and Insecticide Divisions of the Bureau of Animal Industry had facilities at the site by the early 1930s.

During the beginning of the New Deal, USDA officials began the establishment of a national model experiment station for agriculture at Beltsville. By 1937, USDA land holdings exceed 12,000 acres and nine additional agricultural agencies moved or transferred operations to BARC. Much of the land acquisition for this expansion was funded under New Deal programs, the largest being the United States Resettlement Administration, Civilian Works Administration (CWA), and the Public Works Administration (PWA). New bureaus at the Central Farm included Entomology and Plant Quarantine, Human Nutrition and Home Economics, Agricultural Engineering, and cultural and Industrial Chemistry. The Food and Drug Administration was established at the site in 1934.

C.A. Logan, Superintendent, Office of Operations, notes in his *Brief History of the Agricultural Research Center* (1962), that "in addition to P.W.A. and C.W.A., a Civilian Conservation Corps camp was established in 1933." This camp was located at the north end of central farm. Later, during the New Deal era, a total of four CCC camps at BARC" completed a large amount of valuable work between 1933 and 1942 when the camps were disbanded" due to World War II. "These camps were used in clearing, draining of land, building fences and roads, and construction of many small sheds and other structures." According to information prepared by the Resettlement Administration, CCC workers also took courses in agricultural science and related fields, from the University of Maryland intended for immediate application at BARC.

Expansion on the BARC site reshaped a vernacular, rural landscape into the "largest

farm demonstration unit in the world," as stated by a U.S. Resettlement Administration report c.1937. Tracing the process of this landscape transformation at the Central Farm explicates its current patterns of land use and spatial organization. The site of Central Farm, and BARC generally, was originally part of an 18th colonial grant to Major Thomas Snowden. At that time the Central Farm area was a land of stream flood plains and gentle terrain of uplands and low hills. Savanna like barrens remained from Native American burning practices. Stands of hardwoods and dense wetlands remained along the edges of these barrens. This created what is known today as an edge condition, favored by foraging animals, like deer. In the 18th century tobacco farming dominated most farming practices. The Snowden plantation produced tobacco and iron ore. A remnant mining pit survives as a lake behind the Log Lodge (Building 302). Snowden's land holdings gradually changed ownership through marriage, inheritance, sale, and changes in crop production. By the 19th century tobacco farming depleted the area soil to the extent that smaller-scale grain and vegetable crops dominated.

The opening of the Baltimore-Washington Turnpike (US Route 1) and the Baltimore and Ohio Railroad by the mid 19th century created a larger distribution network for agricultural products in the area. Beltsville developed out of a rail stop and the surrounding population grew. At the site of the Central Farm a handful of farming families maintained agricultural land practices which extended into the early 20th century including the 475 acre Hall tract purchased by the BAI in 1910.

The Central Farm is part of larger, significant, agricultural research landscape composed of experimental farms. This landscape included two primary land uses: research and support. This landscape was, in its majority, established and expanded under the New Deal. While the administrative units and research program of the Central Farm experienced change, the overall agricultural research landscape remains in continuous use. Specific physical characteristics and resources of the Central Farm are described, documented and evaluated below in narrative. Specific resources that contribute to the integrity of the Central Farm, those which survive from the New Deal era and/or represent continuous primary land uses, are noted in table format. Selected photographs documenting existing conditions follow the narrative.

**Landscape Characteristics and Features continued:**

- **SPATIAL ORGANIZATION:** The spatial organization of open space, as cleared land, reflects the adaption of a rural, vernacular conditions to a New Deal program of national level agricultural research. Historic, fairly stable land use patterns created a matrix of forest cover with patches of fields and pastures. These land use patterns contribute primarily to the basic spatial organization of the Central Farm. As a result of clearing, open spaces for fields and pasture and building clusters are delineated by forest edges. Breaks in forest canopy correspond to these open spaces. The relationship of open space to forest canopy is easily determined from road views and aerial photographs. A secondary spatial organization at the Central Farm relates to the linear arrangement of the circulation network, fence lines, tree lines, and field edges.

Maps from 1861 indicate that Beaver Dam Road and Edmonston Road provided primary access from farmsteads to larger communities like Beltsville. Smaller, secondary roads intersected open spaces and forests alike. Service roads to fields and dwellings probably existed during this time as well. The intersection of primary, secondary, and service roads mark the lines between spatial edges between fields and fields, fields and pastures, forests and cleared areas. A similar network of road exists today, often following alignments associated with New Deal era improvements and vernacular conditions.

Vernacular fence lines most likely occurred between crops and pastures and different land tracts. Fence lines defined spatial differences in land use and ownership. At present fence

lines on the Central Farm delineate fields, old and existing pastures, residential and non-residential building clusters, animal pens, and forests. Portions of these fence lines may also survive from the New Deal era.

Five different building clusters at the Central Farm also contribute to overall patterns of the Central Farm spatial organization.

- **TOPOGRAPHY/GRADING:** Fairly even terrain, with low gentle rolls, characterizes the topography at the Central Farm. Slopes of less than 6% dominate. Beaver Dam Creek drains the fields and upland forests. Bottomlands create a wetland complex, which covers approximately 11% of the landscape. Crop and pasture lands tend to occur in areas of fair to good drainage. BARC development between 1933 and 1942 largely adapted existing agricultural conditions and roads to USDA bureau research agendas.

A 1943 Soil Conservation Service plan for BARC recommended the use of terraces, diversion terraces, and contour furrows to manage soil erosion caused by runoff. These grading practices altered the older agrarian landscape of the Central Farm by changing traditional plow lines and field patterns. Road grading also altered this landscape. Most roads appear to follow landform contours, field edges, and property lines.

Original alignments remain in portions of Beaver Dam Road (then County Road), which predates the Central Farm. The Dairy Farm roads, c.1910-1926, are the oldest road improvements at BARC, which required changes to existing topography. The construction of the Powder Mill Road in 1934, and c.1938-1946 Entomology Road, Poultry Road, Research Road, and BioControl Road had the largest impact. Powder Mill Road represents the extension and realignment of the East-West Highway after 1934 . New Deal era road ditching and construction, and land changes associated with creating road beds modified the Central Farm's topography. These alignments roads, and their associated ditching, largely survive intact.

Topography/grading resources which contribute to the integrity of the Central Farm are listed below:

| TOPOGRAPHY/GRADING | CONTRIBUTING/NON-CONTRIBUTING |
|---|---|
| Major Paved roads | Contributing |
| Minor service and field roads | Contributing/Non-Contributing |
| Drainageway and systems | Contributing |
| Beaver Dam Creek | Contributing |
| Field grading | Contributing/Non-Contributing |

- **VEGETATION:** Upland and bottomland, managed and unmanaged forests dominate 48% of the Central Farm landscape. The Beltsville Bottomland Forest is the largest habitat area found on the Central Farm. These forests provide buffer zones between BARC agricultural land uses and adjacent properties, contribute valuable habitat in wildlife management areas, and protect rare, indigenous understory plants. These areas were established quite early as research buffer zones and date to the completion of land acquisition and consolidation between 1933 and 1942.

Dominant trees which characterize upland forest include oaks (*Quercus sp.),* short leaf pine (*Pinus echinata*) and loblolly pine (*Pinus taeda*), and smaller stands of black gum (*Nyssa sylvatica*), sweet gum (*Liquidambar styraciflua*), beech (*Fagus grandifolia*), sassafras (*Sassafras albidum*), and tulip tree (*Lirodendron tulipifera*). Dominate understory plants of the

upland forest include clubmosses (*Lycopodium sp.*) and high blueberry(*Vaccinium corymbosum).* Bottomland forests are part of a larger wetland complex at BARC. At the Central Farm, the Beltsville Airport Bog and Beck Woods form part of this wetland complex. This complex consists of willow oak (*Quercus phelos*), sweet gum, river birch (*Betula nigra*), and red maple (*Acer rubrum*). Shrubs common to these areas includes spicebush (*Lindera benzoin*), buttonbush (*Cephalanthus occidentalis*), fetterbush (*Leucothe racemosa*), pepperbush (*Clethra anifolia*), and tussock sedge. St. Johnswort (*Hypericum mutilum*), Ludwigia, three-way sedge. Weak-stalked clubrush, rice cut-grass, broad-leaved arrowhead, cinnamon (*Osmunda cinnamomea*), and ladyfern (*Atyrium filix-femina*) characterize the understory and groundcover of the wetland complex. The Central Farm also contains four out of the five significant plant (and wildlife) habitat areas at BARC, as designated by the State of Maryland Department of Natural Resources Natural Heritage Program. Management plans exist to protect the Beltsville Seasonal Ponds and the Beltsville Bottomland Forest. A detailed summary description of each follows. The State of Maryland Department of Natural Resources' *Management Plans For Significant Plant and Wildlife Habitat Areas of Maryland's Western Shore Prince Georges County* informed the summaries below.

Beltsville Seasonal Ponds-This 95 acre area contains two small ponds which drain centripically. The northern pond is dominated by pin oaks, red maple, sweet gum, and minor stands of river birch. Buttonbush dominates the southern pond. A forested wetland of red maple and pin oak, with an open understory is located immediately north of the pond. Southeast of the southern pond an old clearing is dominated by fairly young pines. The forest which surrounds the two ponds is dominated by red maple, red oak, and white oak. East of the ponds, a small stream flows south through a swamp dominated by red maple with an understory of arrowwood, greenbrier, and sedges.

Beltsville Bottomland Forest- This forest contains 600 acres of broad bottomland deciduous trees. Red maple dominates in the wettest areas along Beaver Dam Creek where river birch is also common. Mixed hardwoods of oaks, red maple, and sweet gum, dominate slightly higher ground. Groundberry covers the floor areas of the broad marshy floodplain, accompanied by numerous wetland shrubs and herbaceous species. Red oak and willow oak dominate slopes above the floodplain. Club moss and numerous ferns carpet the forest floor.

A series of experimental sustainable meadows were planted at Central Farm in the last five years. These meadows represent a form of landscape management different than that associated with habitat preservation. The meadows also differ from the crop production landscape at BARC which serves a function, animal feed, rather than research. The sustainable meadows contribute to overall integrity of the Central Farm as an example of continuous use.

Corn dominates the production fields of the Central Farm. Interspersed among the corn fields were plots of forage crops. Continuous use of the Central Farm fields for forage and research dates to 1911. Similarly, surviving pastures associated with cattle and hog investigations date to this period. Old pastures, now in corn field production, tend to correspond to areas enclosed with barbed wire fencing. Fields, feed crops, and pasture at the Central Farm also support the Livestock and Poultry Sciences Institute. Major feed crops include corn and lespedeza. Most fields in cultivation between 1911 and 1947 contained corn and forage crops.

Vegetation resources which contribute to the integrity of the Central Farm are listed below:

| VEGETATION FEATURES | CONTRIBUTING/NON-CONTRIBUTING |
|---|---|
| Field and Research crops | Contributing |

| | |
|---|---|
| Pastures | Contributing |
| Drainage ditch vegetation | Non-Contributing |
| Beltsville Seasonal Ponds | Contributing |
| Beltsville Bottomland Forest | Contributing |
| Sustainable Meadows | Contributing |
| Ornamental plantings | Non-Contributing |

• **RESPONSE TO NATURAL FEATURES:** The Central Farm contains two major soil types, the Christiana-Sunnyside-Beltsville and the Bibb-Tidal Marsh soils associations. The Christiana-Sunnyside-Beltsville soils are fertile and well-suited to agriculture. The Bibb-Tidal Marsh soils exist along streams and in flood plains. These soils are wet and prone to flooding, limiting their use for agriculture. Slopes of less than 6% dominate the Central Farm topography. Beck Branch and Beaver Dam Creek drain the fields and upland forests. Significant bottomlands create a wetland complex which covers approximately 9% of its landscape. Historically, crop and pasture lands tended to occur in areas of fair to good drainage.

European settlers found a land of stream flood plains, gently rolling uplands and low hills. which contained wetlands, hardwood forests, and savanna-like barrens. Native American forest burning practices had created these barrens for grazing. The settlers readily adapted the barrens for crop cultivation and pasture. Houses and farmsteads outbuildings which pre-date BARC were predominately sited at higher elevation hills and knolls.

As described earlier, BARC expansion at the Central Farm largely followed existing vernacular land use patterns which predominately related to natural features. However, the USDA implemented drainage practices to increase productivity of areas with fair suitability for agriculture.

• **CIRCULATION:** Primary paved access roads into the Central Farm include: (1) adjacent or peripheral roads like the Baltimore-Washington Parkway, (2) central routes-Powder Mill Road, Beaver Dam Road, and Edmonston Road, and (3) secondary roads and numerous unpaved minor roads, penetrate into the Central Farm's fields, pastures and forests to provide access into forest areas, crops lands, and utilities. These roads have less presence, especially in the corn fields and forests. A formal entrance to the Central Farm exists on the west end of Powder Mill Road at its intersection with Edmonston Road. This formal entrance dates c.1933. Access points to fields and pasture occur predominately from Powder Mill Road and Beaver Dam Road. As noted above, original alignments remain in portions of Beaver Dam Road (then County Road), which predates the Central Farm. Surviving Dairy Farm roads, c.1910-1926, represent the earliest circulation patterns at BARC. The original roads and pathways in this cluster experienced realignments during New Deal era construction. Powder Mill Road represents the extension and realignment of the East-West Highway after 1934 originally planned by the design team of A.D. Taylor and Delos Smith. Robert T. Walker, a CCC landscape architect, produce road section and planting designs in 1935 . The construction of the Powder Mill Road after 1934, and c.1938-1946 Entomology Road, Poultry Road, Research Road, and BioControl Road and their secondary roads created a large circulation network which largely survives intact. The park-like Powder Mill Road alignment forms a visible spine which organizes four of five cluster arrangements at the Central Farm.

Circulation resources which contribute to the integrity of the Central Farm are listed below:

| CIRCULATION FEATURES | CONTRIBUTING/NON-CONTRIBUTING |
|---|---|
| Dairy Farm Roads | Contributing |
| Powder Mill Road | Contributing |
| Entomology Road | Contributing |
| Research Road | Contributing |
| BioControl Road | Contributing |
| Poultry Road | Contributing |
| Beaver Dam Road | Contributing |
| secondary cluster roads | Contributing/Non-Contributing |
| secondary and service roads | Contributing/Non-contributing |

**Landscape Characteristics and Features continued:**

● **LAND USES:** When tracing the development of the Central Farm's land use patterns, from Besley's 1912 *Map of Prince George's Co. and District of Columbia Forest Areas by Commercial Type* to a 1957 Soil Conservation Service aerial mosaic, a relative stable pattern emerges. Comparative analysis of open space, that is cleared land used for agriculture, during three different time periods helps to explain the nature of this particular spatial organization as an indicator of land use. In 1912 open space acreage represented about 50% of the Central Farm landscape and by 1957 this amount drops only to about 45%. Open space in 1996 accounted for 43% of the Central Farm land use pattern. It is not known how much land was cleared prior to 1912, but Besley's map indicates that a portion of land near Beaver Dam Creek Branch been cut over and replanted with hardwood seedlings. 1930s memos concerning the purchase of land note that sizable hardwood stands remained in wooded areas at the Central Farm site.

The Central Farm, as a planned landscape, began in 1934 and fourteen years after the acquisition of Hall Farm. During 1934 the Division of Animal Husbandry, part of the Bureau of Animal Industry, produced two land use plans under the direction of division chief E. W. Sheets. Both plans evidence the physical manifestation of several New Deal programs, including the Resettlement Administration, the Soil Conservation Service, the Public Works Administration, Civilian Works Administration, Civilian Conservation Corps, and the professional design of experimental farms.

The Division of Animal Husbandry employed the professional design team of landscape architect A.D. Taylor and architect Delos Smith. This team was working concurrently on the Beltsville Subsistence Homesteads, later becoming part of the Resettlement Administration, which was mostly located adjacent to the southern boundary of the Agricultural Research Center. Taylor had established a firm in Cleveland, Ohio and authored a major reference work, *Problems of Landscape Architecture in the National Forests.* Smith, an authority on early Colonial churches, designed the award-winning Montgomery County Courthouse in the early 1930s. Their plan, prepared in March 1934, titled "Sketch Study for Proposed Development of Property," focused mainly on what is now the Central Farm and the recently acquired farmstead lands for the East Farm.

The sketch study, basically a conceptual master plan, delineates the Bureaus of Dairy Industry, Animal Industry, Entomology, Chemistry and Soils, Agricultural Engineering, and the Animal Disease Station or 'Bethesda' Unit. The study also identifies specific site improvements for the Nutrition Laboratory, Poultry Performance Project, swine colony houses, and others.

A.D. Taylor carried out or supervised site plans for the Nutrition Laboratory, Poultry, the 'Bethesda Unit,' and minor improvements at the Bureaus of Dairy Industry and Animal Industry. The swine colony house layout of this plan was transferred to East Farm after 1941. H.F. Sehorn, a landscape architect of the Public Buildings Administration, prepared supplementary information for this plan on April 11, 1934.

The second land use plan, by H.F. Sehorn (possibly under the direction of A.D. Taylor), titled "Sketch Study for Tentative Allocation of Property," dated May 4, 1934 more clearly shows land use planning for the Central Farm. Of those allocations which survive include areas designated for the following: dairy, poultry, sheep, cattle, zoology, entomology and the animal husbandry laboratory.

During an inspection of BARC in June of 1941, the Under Secretary of Agriculture, Paul H. Appleby, noted serious erosion damage at BARC. Farming methods at BARC were to demonstrate and promote those preferred by the USDA on private agricultural lands. Appleby requested the Hugh H. Bennet, Chief of the Soil Conservation Service, head a committee to study the problems and develop a conservation plan. Under Bennett's oversight, a conservation plan was implemented at BARC beginning November of 1943. This conservation plan affected BARC as a complete demonstration unit, directing land use and erosion control practices. With the exception of some woodland overgrowth, the general land use patterns established during this time continue today. The conservation plan made general recommendations in the areas of the following at the Central Farm: pasture management, woodland management (forest buffers), surface drainage, croplands, and wildlife habitat.

In sum, land use at the Central farm supports research through a network of access and service roads, field corps, grazing pastures, and buffer forests. Eight different land uses occur at the Central Farm: building areas for all of the Central Farm total 336 acres, waste water treatment 68 acres, roads and grass buffers 297 acres, research fields 84 acres, cropland 483 acres, pasture 443 acres, forest (research buffer) 950 acres, and wetlands 320 acres.

**•CLUSTER ARRANGEMENT:**

Five major cluster arrangements at the Central Farm correspond directly to its evolution as a built landscape. Four date to the New Deal era expansion. A description of each follows. Where possible, the historical development of an individual cluster's landscape features or its portions are detailed. As the Central Farm contains the largest portion of buildings and individual bureau research activities, the Building Survey and context statements provide additional descriptions of its development.

100 Area Cluster- Bureau of Dairy Industry

The Bureau of Dairy Industry contains areas of research buildings, fields, and pastures, and an associated support system. The support system includes roads, buildings and structures, feed crops, and pastures . The topography generally slopes concentrically from two knolls, toward Indian Creek and Beaver Dam Creek. The particular support and research land use at the Bureau is continuous with its establishment in 1910 and enlargement through the New Deal. The field and pastures lend to the identity and character of the Bureau's evolving research programs. Crop maps, drawn between 1915 and 1925, delineate the planting of alfalfa, oats, rye, corn, sudan, cowpeas, and experimental clover pastures. The maps also indicate yields, crop rotation, use of cover plants, plowing and drainage techniques, and manure levels. The close proximity of pasture and fields to building clusters physically emphasizes the Bureau as an experimental farm, or agricultural research *landscape*, rather than a set of unrelated, autonomous elements. This landscape was primarily accessed through the North Dairy Road, South Dairy Road, and East-West Highway (Powder Mill Road). Small, secondary roads

serviced pastures and fields. Comparison of USGS, archive maps, and current master plan documents, indicate that the original primary and secondary road alignments survive.

The Bureau of Dairy Industry group (BARC Area 100) at Central Farm contains 76 buildings and structures. The clusters are organized in two primary groups and one secondary group. Views between building clusters and other portions of Central Farm exist larger in relationship to open fields and pasture. At the north end of the Bureau of Dairy Industry, at the end of North Dairy Road atop a small knoll, three residences (Buildings 193 B, D-E) are grouped around a common yard . This yard was originally associated with three barns adjacent to the west. The residences date to the early 1950s. The yard contains mown grass, ornamental shrubs, perennials, annuals, a dense canopy of mixed trees, vernacular gardens, and structures. Trees include oak, aspen, holly, willow oak, maple, and locust. The barns (Buildings 192C-E) date to 1939. Yards associated with the barns are in disrepair and used stock piling and burning waste. The waste stock pile is partially screened from Powder Mill Road by bamboo on it south side. The barns appear in fair condition. Two feed lots and shelters date to 1937 are located on the north side of the residences. Building 191, southwest of the barns, dates to 1933. This residence has a separate entry drive from North Dairy Road. Its landscape includes an entry walk, lawn, foundation and border plantings, holly, oak, willow oak, sweet gum, and a maple/willow oak screen on the west side, adjacent a production crop field.

The second primary group is the Dairy Research Facility located on the south side of Powder Mill Road (formerly the East-West Road) on relatively flat upland. The core building layout of this group dates to the 1910s with subsequent enlargement of the group through 1942. In 1913, the Acting Chief of the Bureau of Animal Industry requested landscape (planting) design assistance from F.L. Mulford of the Bureau of Plant Industry. The Bureau of Dairy Industry employed their own dairy engineers for site planning and design. The buildings are grouped around service roads, parking areas, lawns, and small courts. Functionally, the buildings cover a range of types and programs which includes barns, residences, laboratories, grain silos, storage facilities, and administrative uses. However, common building details and surface treatments produce a remarkable sense of a unity. The addition of lawns, courts, and planting create an intimate campus-like atmosphere. The overall landscape, as designed and planned during this period, survives largely intact. Latter additions, continued the use of small courts with lawn, trees, and foundation planting. This is especially evident between Buildings 177 A-C. Adjacent to Building 177A, a row of willow oaks date to c. 1935 when the plot was originally an animal pen for Building 174. This row of trees corresponds to the fence line associated with the animal pen.

Planting plans for the Dairy Research Facility date to the mid 1930s. Two plans were carried out by R. T. Walker of the USDA Bureau of Agricultural Engineering, Division of Plans and Service. The first is a 1935 planting plan for the East-West Highway (Powder Mill Road) which includes directly adjacent Bureau of Dairy Industry buildings, their "front" lawns, and entry drives. Trees, especially oaks, and the lawns survive intact. Replacement trees appear to follow this plan. Surviving portions of a 1937 planting designed by Walker were also observed at Building 157, the Dairy Products Laboratory. This includes oak trees, lawn, and some shrubs. Replacement shrubs, while different, follow Walker's layout. Additional plant material post-dating Walker appears in keeping with his intentions of creating lawn spaces defined by trees, foundation plantings, and perennial borders.

The secondary building group is the former Superintendent's House (Building 186) located west of North Dairy Road. The house dates to 1926 and has an associated barn (Building 188) built shortly thereafter. This house is presently used as BARC security headquarters. The house is situated on a prominent slope. A separate entry drive from Powder Mill Road to the Superintendents House is lined with Sweetgum and Oak trees. A paved

parking area post-dates the house. A landscape plan was originally prepared by F.L. Mulford of the Bureau of Plant Industry. It is not known to what extent this plan was carried out or if any plant material survives. At present the house is surrounded by lawn, a dense hedge row on its west side, specimen trees, and foundation plantings. The house sits prominently on a steep slope with views down to the Dairy Research Facility.

200 Area Cluster

This cluster includes Animal Husbandry Central Laboratory (Bldgs. 200 to 208), the Walnut Grange (Bldgs. 209 to 211), the Sheep area (Bldgs. 215 to 217), Sewage Treatment (Bldgs. 218), Beef Cattle area (Bldgs. 223 to 224), the Poultry area (Bldg. 236-281), water system (Bldg. 286 and 287), and the Hydrology unit and Laboratory (Bldg. 288). The Central Laboratory dates to c.1934 and includes a 'front' lawn adjacent the main laboratory Building 200; a campus green or court formed by Buildings 200, 202, and 203; parking lots; and entry drive to the cluster. The existing cluster partially follows a 1934 design by A.D. Taylor and Delos Smith. Park-like conditions of trees intersected with clipped lawn, two formal and ornamental planting areas characterizes the Poultry area. The trees were planted on a relaxed grid to provide shade to poultry houses. Two formal lawns exist at the northwest corner of the cluster at Buildings 268 and 269 and Buildings 267, 270, and 271. Ornamental plantings at the laboratory entrances along Poultry Road and at Building 281 follow planting plans from the period of significance. New Deal era improvements at the poultry cluster were designed under the supervision of A.D. Taylor in 1934.

300 Area Cluster

This cluster includes the CCC Log Lodge (Bldg. 302), Agricultural Engineering Laboratory (Bldg. 303) water system (Bldg. 305 and 316), BRC-Administration/Human Nutrition/Departmental Laboratory Group (Bldgs. 306-315), and the FDA/BAI/Zoology (Bldgs. 318-391). Zoology includes hog and sheep pens, poultry house groupings, fencing, minor service roads, and Zoology Road. The February 24, 1934 *North Portion Plan of Sheep Area* by F. Tilp and H.F. Sehorn's April 5, 1935 *Plan of Sheep Area Animal Husbandry Experimental Farm, Beltsville, MD*, appear to provide some of the initial layouts for this area. No planting plans appear to exist. However, a number of trees in the Zoology cluster may survive from the period of significance. The Departmental Laboratory Grouping landscape consists of trees at parking areas and surrounding the laboratories, grass areas, border and foundation shrubs and perennials. An aerial trace perspective of 1939 details building location, design, vehicle access, sidewalks, and plant massings. The general planting at present appears based on a planting plan dated June 20, 1940. Some Oaks at this building cluster survive from the period of significance. The layout of the North and Central Laboratories, Center Road, vehicle rotaries, pedestrian approaches, and grass panels match the 1939 plans. A parking lot south of the Central Laboratory dates to the period of significance but appears originally intended as a reserve for future building. Service roads east of the cluster leading to a water treatment plant, storage facilities, and a well also date to c. 1939.

400 Area Cluster

This cluster includes Plant Pest Control (Bldgs. 402-412), the USGS (Bldgs. 417-425), shop/service (Bldgs.426-431), Animal Barns (Bldgs. 432-435), the CCC shops (Bldgs. 445-450), the Radio Shed (Bldg. 452), water system (Bldg. 453), storage facility (Bldg. 454), and Entomology (Bldgs. 465-488). The Entomology landscape experimental plots for insect breeding and insecticide application, service roads, and parking lots. A large Elm adjacent

Building 476 and cut stone, used on adjoining steps from the lower, east parking lot to the building, date to the period of significance. The largest experimental plot observed is the "Rose Garden." Additionally, a large group of green houses also dates to the period of significance.

1000 Area Cluster/Animal Disease Station

Animal Disease Station includes Buildings 1000 through 1250. The landscape at the area is characterized by formal walks, lawns, service roads, entrance courts, and a grass court at Buildings 1040 through 1054. These buildings, the main laboratory group, were sited atop a prominent knoll at the Animal Disease Station. Formal plantings define the edges of this knoll. Landscape architect A.D. Taylor, possibly with architect Delos Smith, designed the original layout of this portion of the Animal Disease Station in 1934. A formal entry from Edmonston Road dates to the period of significance. Elsewhere, the cluster includes managed sheep pastures on the south end of the cluster as well as clipped lawns and clusters of Sweet Gum and Tulip Trees. Ornamental plantings that appear to survive from the period of significance include: an informal orchard on the west side of the main laboratory group knoll, trees along the main entry drive, and lawns and trees at former supervisor residences, Buildings 1070 and 1072. The remainder of the Animal Disease Station contains formal arrangements of pens, animal shelters, and fenced pastures organized by service roads, the majority of which date to the period of significance.

**•STRUCTURES:**

See the Structures Survey for more information.

**•SMALL SCALE FEATURES:**

Site features observed at the Central Farm include fencing, signs, a family vernacular cemetery, a CCC era amphitheatre, and numerous roadway and drainageway culvert heads. At present, fence lines on the Central Farm delineate fields, old and existing pastures, residential and non-residential building clusters, animal pens, and forests. It is possible that portions of these fence lines also survive from the New Deal era. Fence material is generally wire and barbed wire on metal and wood posts. Some cyclone security and electric fencing are used at the quarantine area. Wood or metal gates were observed in association with fencing. Signs mark road names at intersections, intersect building numbers, and Bureau identification at building clusters.

Small scale feature resources which contribute to the integrity of the Central Farm are listed below:

| SMALL SCALE FEATURE | CONTRIBUTING/NON-CONTRIBUTING |
|---|---|
| Fencing | Contributing/Non-Contributing |
| Signs | Non-Contributing |
| Culvert Heads | Contributing/Non-Contributing |
| Amphitheatre | Contributing |
| Cemetery | Contributing |

**•VEWS AND VISTAS:** Abundant open fields and rolling topography create numerous views between cluster arrangements along Powder Mill Road. Open views and vistas are a distinguishing characteristic of the Central Farm and appear to be an important consideration of its design and planning. The placement of four building clusters clearly indicate design intention and consideration of views and vistas. Building cluster 100 has significant views south from the Superintendent's House (186)to the Dairy Farm and east to the Central Laboratory group (Bldgs. 200 to 208). The Main Laboratory (200) faces south and overlooks a formal lawn, rolling pastures, and crop fields. This building is the most prominent visually throughout the Central Farm. Building 200 is seen from within the woodlands of building cluster 300 and the southern most end of the farm at building cluster 1000. Building cluster 1000 also has a prominently sited Main Laboratory (1040) on a knoll. South of the Main Laboratory, but on a higher elevation north-facing slope, the Superintendent's House (1070) and the Foreman's House (1072) both have significant views to the building cluster 1000 and to the 200 cluster main laboratory group.

**Significance:**

The Central Farm was acquired under New Deal policies and funding. Infrastructure improvements at the Central Farm occurred through Public Works Administration and Civilian Conservation Corps. The Central Farm served as a significant research site for the Central Farm also included study areas for the Resettlement Administration.

Central Farms physical development included the application of master planning principles by design, agricultural, and conservation professionals. This included the work of AD Taylor and Delos Smith, HF Seahorn of the Public Buildings Administration, Robert T Walker, CCC landscape architect, and Hugh H. Bennet of the SCS. The arrangement of buildings and the separation of distinct land uses shown on these plans continues to provide organizational structure to the Central Farm . The SCS conservation plan of 1943 is the most comprehensive. This plan essentially treated BARC as a one large experimental farm unit. The significance of the SCS plan lay in its overall application which affected subsequent and existing land use, layout and planning at the Central Farm.

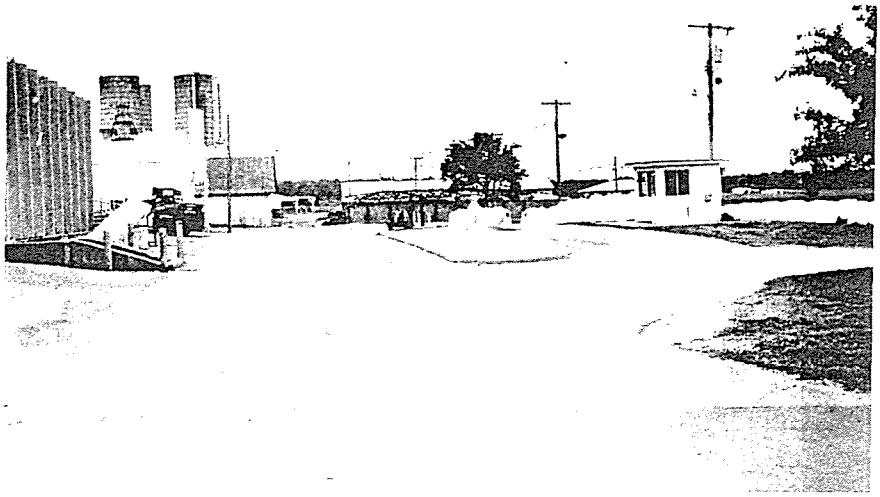


PHOTO ID: Dairy Farm cluster, looking east.

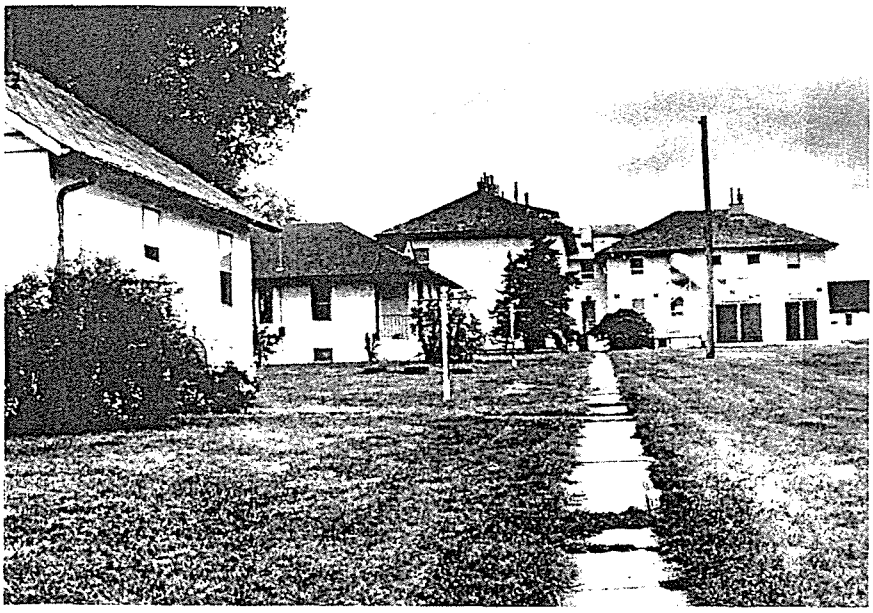


PHOTO ID: Dairy Farm cluster, looking east.

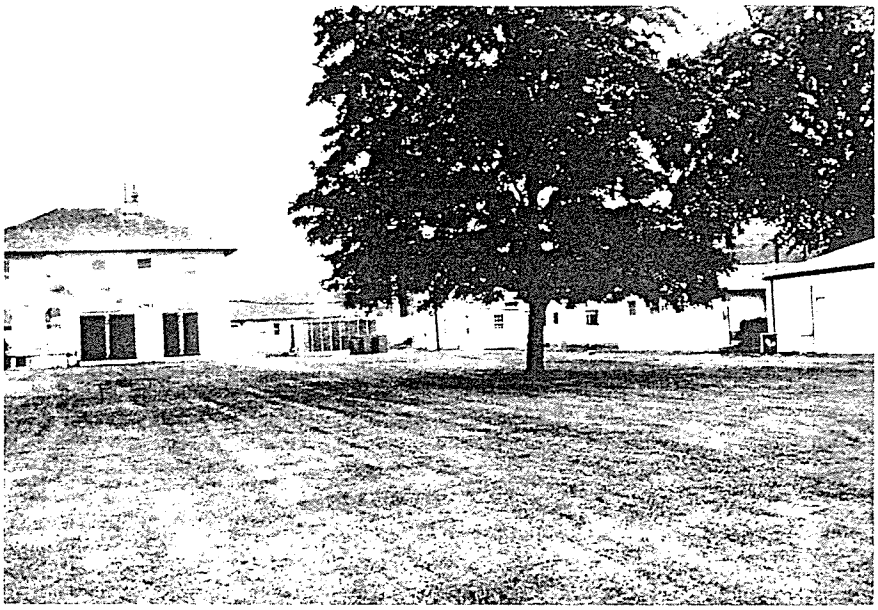


PHOTO ID: Dairy Farm cluster, looking east.

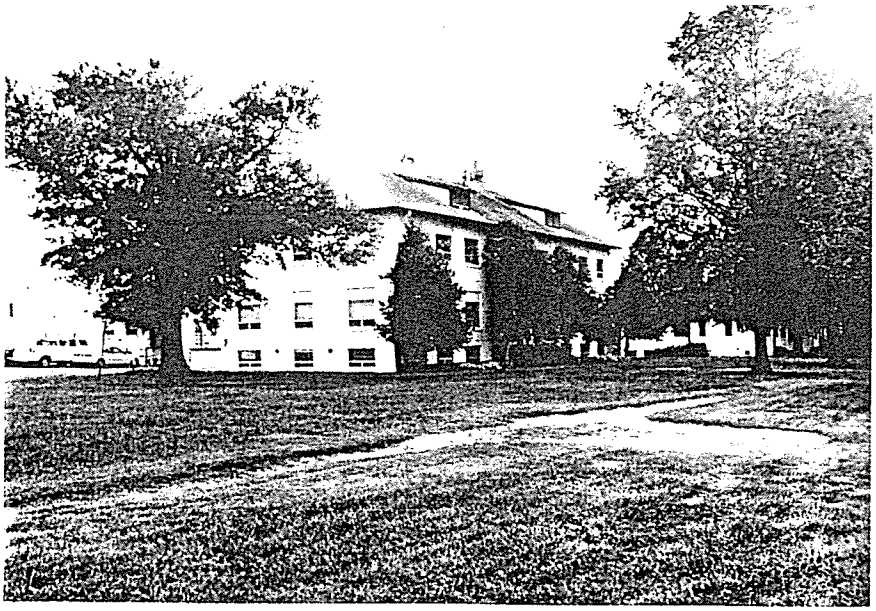


PHOTO ID: Dairy Farm cluster, looking west.

PHOTO ID:Dairy Farm cluster, looking south.

PHOTO ID: Dairy Farm cluster field, looking north.

PHOTO ID: Central Farm, looking east.

PHOTO ID: Central Farm, looking north.

PHOTO ID: Central Farm, looking south.

PHOTO ID: Poultry area, looking east.

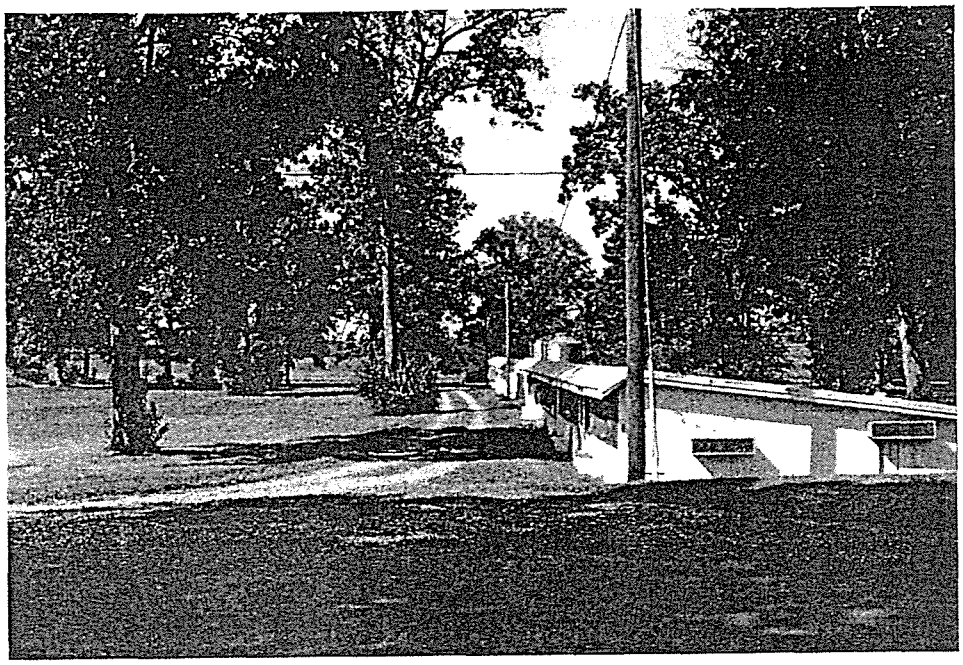


PHOTO ID:Poultry, looking north.

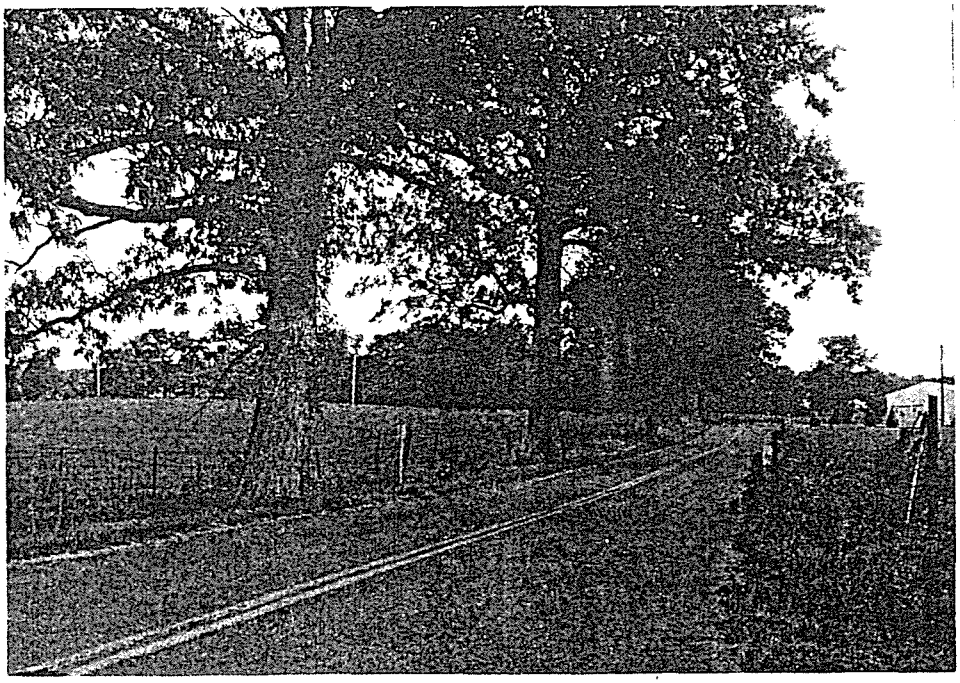


PHOTO ID: Beaver Dam Road, Central Farm, looking east.

PHOTO ID: Wetland Mitgation, Central Farm.

PHOTO ID: Pasture and road, Central Farm.

PHOTO ID: Production corn field, Central Farm.

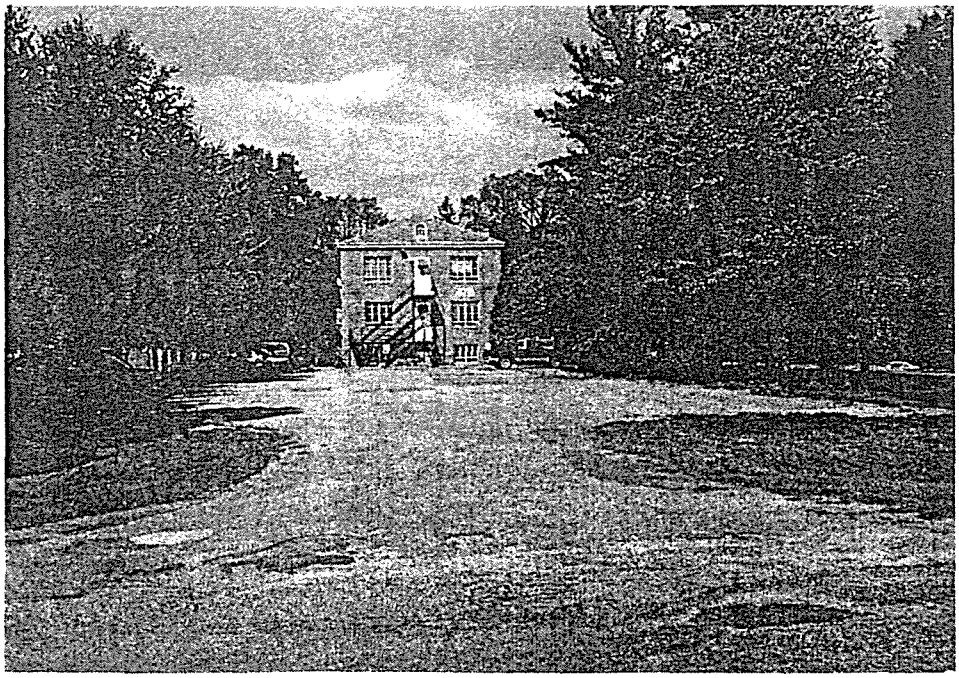


PHOTO ID: Entomology, Central Farm.

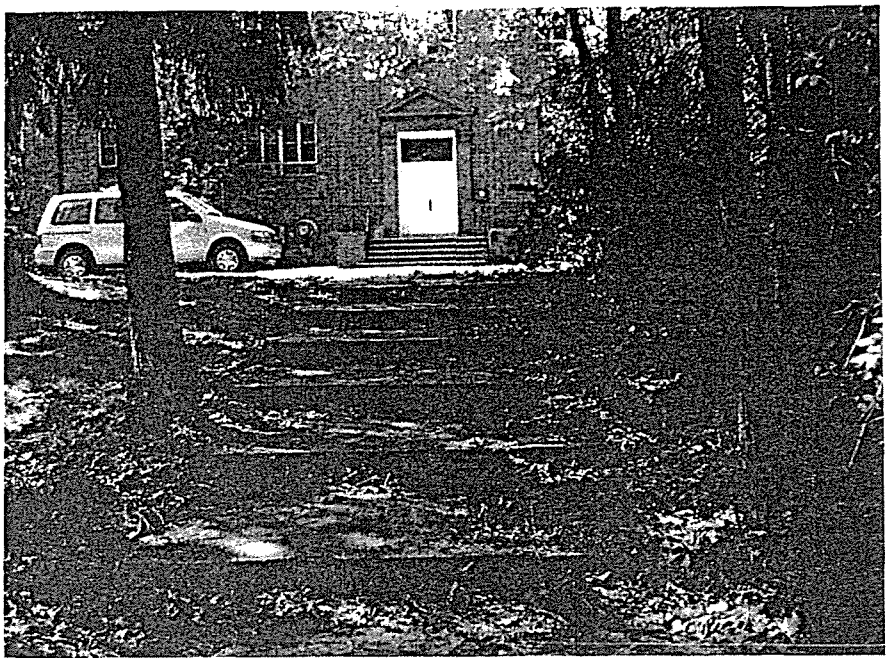


PHOTO ID: Stone stairs at Entomology.

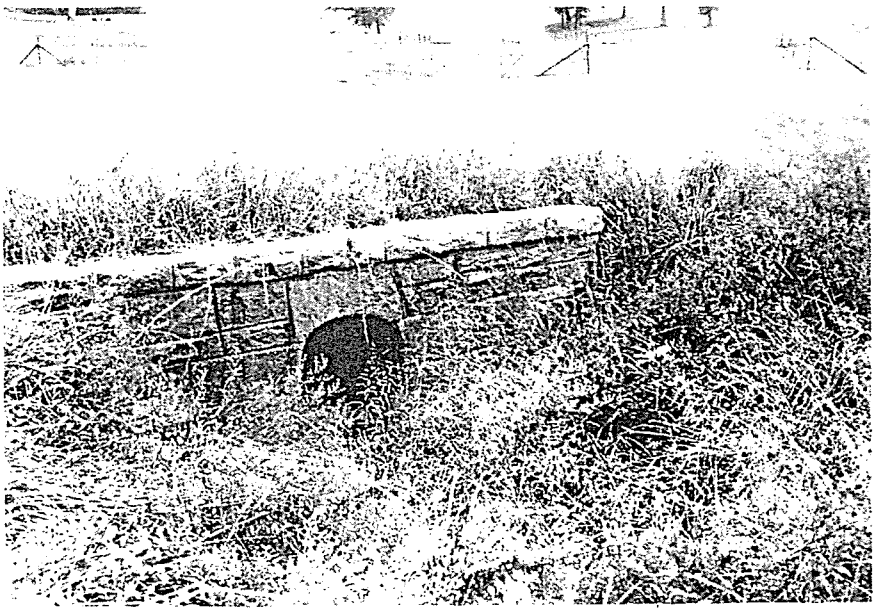


PHOTO ID: Typical culvert head, Central Farm.

PHOTO ID: Sheep grazing, Animal Disease Station, looking south.

PHOTO ID: Animal Disease Station, looking north.

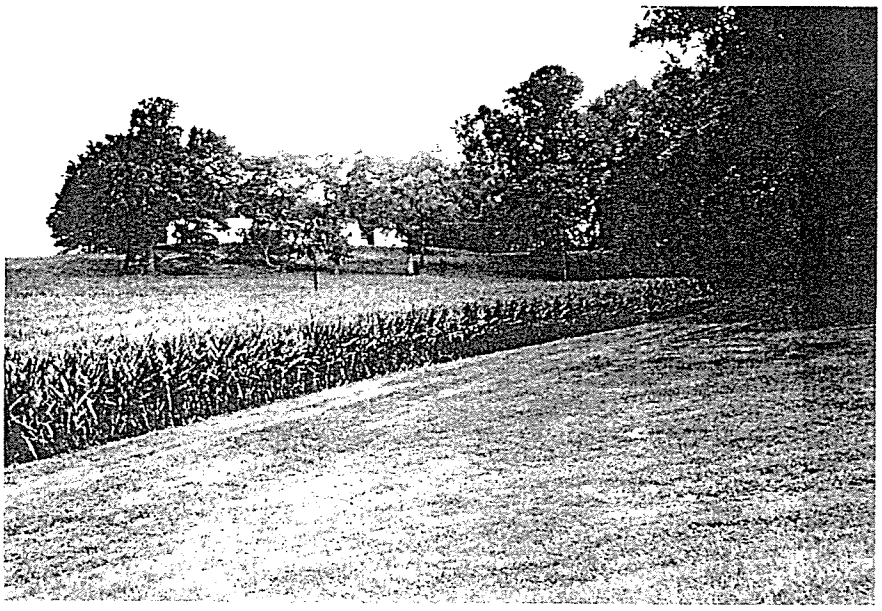


PHOTO ID: Production crops at the Animal Disease Station, looking east.

PHOTO ID: Building 1040 north entry stairs and lawn, looking south..

PHOTO ID: Animal Disease Station, laboratory court, looking north.

PHOTO ID: Animal Disease Station, Central Farm, looking north.

# BELTSVILLE AGRICULTURAL RESEARCH CENTER—BELTSVILLE, MD
# SURVEY FORM: LANDSCAPE

## GENERAL

| | |
|---|---|
| Farm Area: EAST FARM | |
| Cluster: | |
| Landscape Unit: | |
| Acreage: 2,253 Acres | Prince George's County Region #: |
| Boundaries: Powder Mill Road/USSS (N); NASA-GSFC (S); PRR (E); B-W Parkway (W) | |
| Location on Master Plan: | Page:7,12,13,15, 15a,+15b Grid:E4-6,F3-6,G3-5 |
| Historic Owner/Designer/Administrator's Name(s):Division of Animal Husbandry/LPSI, PSI, USDA | |
| Historic Use/Current Use:Animal Husbandry , Production Crops, Plant Research, Wildlife Managent Area /Same | |
| Historic Name/Current Name: Central/East Farm / East Farm | |
| Dates of: Land Acquisition: 1930-1939 | Design: 1934 / Construction:1933-1942 |

## PHOTOGRAPH

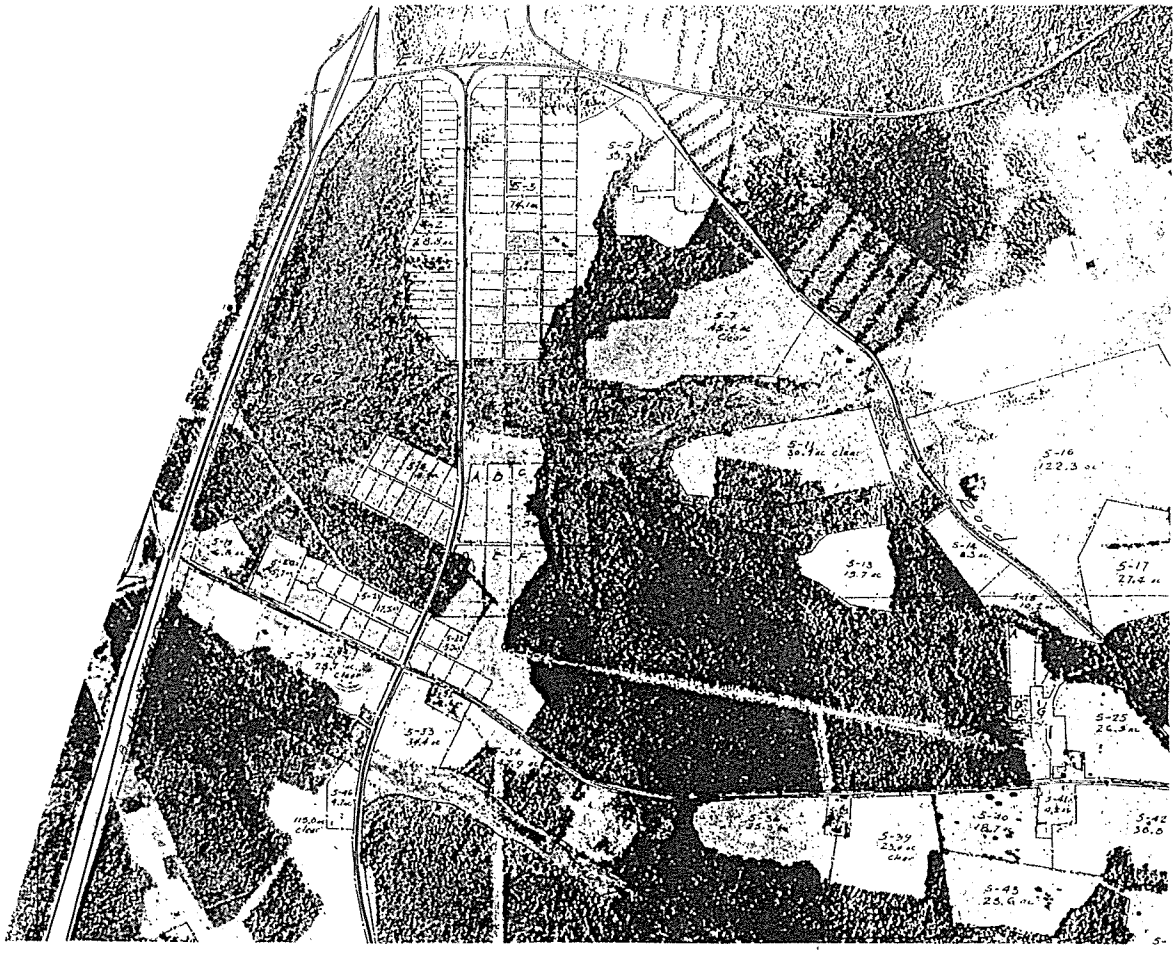
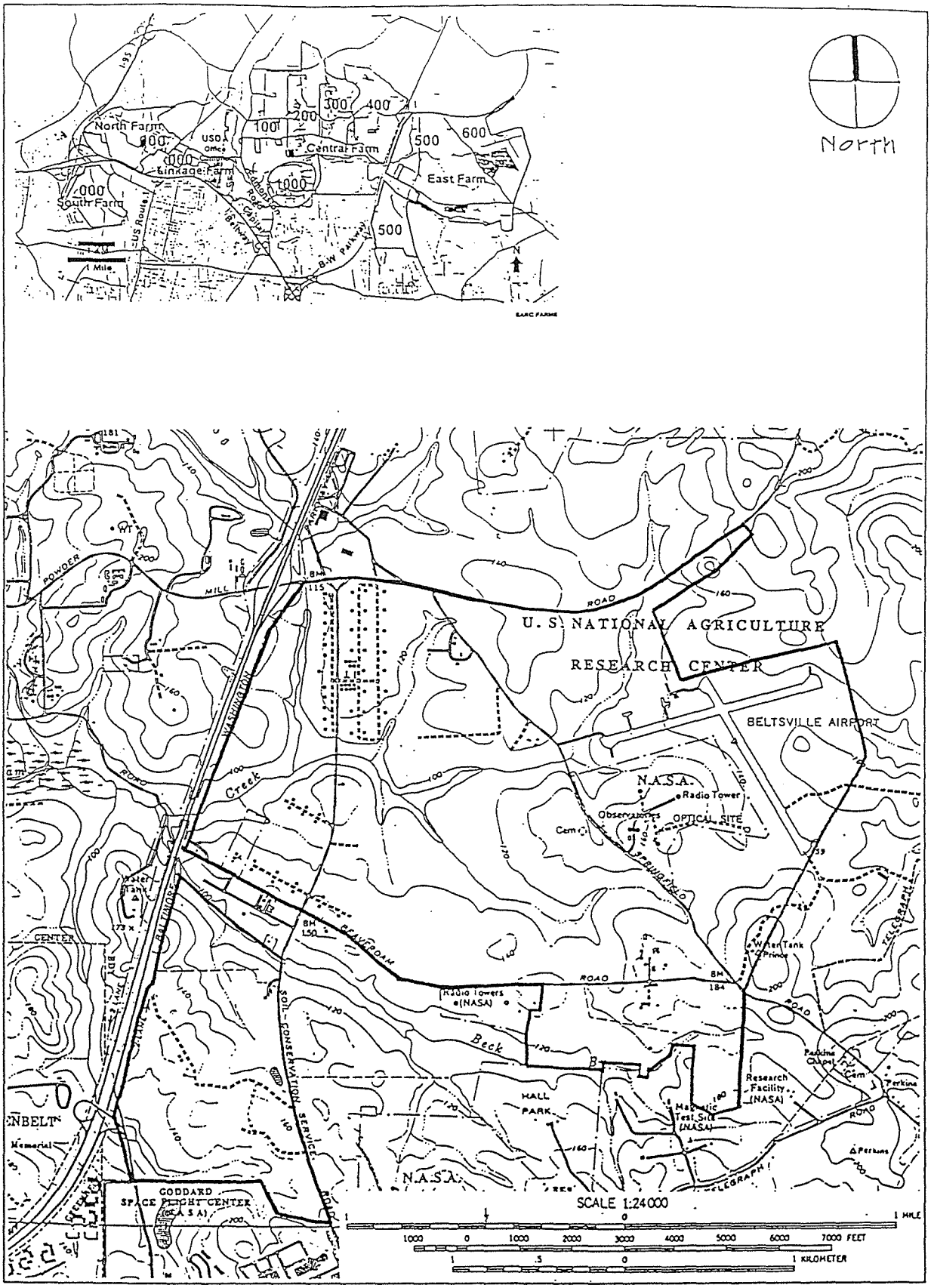


PHOTO ID: 1957 Aerial Photograph, Cartographic Division, Soil Conservation Service, 1957

LOCATION MAP




MAP ID: Base Data from USGS quad.

**Overall Description of Unit**

See Continuation Sheet
Sheet 5

**Landscape Type**

| | |
|---|---|
| Designed: x | Historic: |
| Vernacular: Historic Vernacular | Ethnographic: |

**Landscape Characteristics and Features**

See Continuation Sheet
Sheet 6 - 19

**Assessment of Condition Overall**

All roads appear in good condition. The Beltsville Airport has been abandoned and its paved landing strip left to deteriorate. Forest buffers appear in good condition. Crops lands and pastures appear in good condition. While fence lines bordering most fields are intact. Those sections that line forest areas and disused pasture areas are mostly deteriorated. Drainageways and systems appear intact and well-maintained. Beaver Dam Creek and Beck Branch are flowing without any obvious signs of obstruction. Wetlands, forests, and meadows appear protected/managed. Most buildings appear maintained and in fair to good condition. Some smaller animal sheds, storage, or service buildings appear in fair to poor condition. Building 540 at the Swine Investigation area is undergoing remodeling and modernization. The Main Dog Kennel (543) and Dog Area Shed (543A) are abandoned. A vernacular cemetery, commonly referred to as a slave burial ground, located on the west side of Springfield Road near the NASA Optical Site, is overgrown and not well maintained.

**SIGNIFICANCE** (Period of significance; National Register significance level)

| |
|---|
| See Continuation Sheet 19 |

**PRELIMINARY NATIONAL REGISTER ELIGIBILITY ASSESSMENT**

| | |
|---|---|
| Individually Eligible: Vernacular cemetery (possible slave burial grounds) | |
| Eligible as Contributing to which Historic District: | |
| Non-contributing to this Historic District: NASA and U of M sites | |
| Relevant Evaluation Criteria:<br>A: East Farm is associated with events related to long standing agricultural research on a national level and is also associated with events and federal programs initiated under the New Deal. | |
| B: | |
| C: Professionally designed master plan and farmyard layouts. | |
| D: | |
| Retains Integrity: Yes X | No |
| Explain: | |

MAJOR SOURCES OF INFORMATION


- Final Phase III Cultural Resources Report, BJY/Robinson & Assoc., December 1995.
- 1996 Master Plan Update, Master Plan Report, Environmental Assessment, and Appendices-Volume II, BJY/Robinson & Assoc., December 1995.
- Beltsville Research Center Conservation Plan, USDA SCS, Nov. 1943.
- Bureau of Plant Industry, Soils, and Agricultural Engineering, Agricultural Research Administration, USDA, 1943.
- Aerial Mosaic/USDA/Agricultural Research Center, Compiled by Cartographic Division, Soil Conservation Service, 1957
- Maryland Geological Survey, Map of Prince George's Co. and District of Columbia showing Topography and Election Districts: G3843.P7.1903.M3 (1903), G3843.P7.1914.M3 (1914), G3843.P7.1927.M3 (1927), and G3843.P7.1936.M3 (1936).
- Maryland Department of Geology, Mines and Water Resources, G3843.P7.1946.M3
- Map of Prince George's Co. and District of Columbia Forest Areas by Commercial Type, prepared by F. W. Besley, Maryland Board of Forestry, 1912.


| | |
|---|---|
| **Name of Surveyor/Company:** Justin Dollard (RHI)/Perry Wheelock | **Date:** July, 10 1997 |

• **OVERALL DESCRIPTION OF UNIT:** The 2,253 acre East Farm is located on the eastern third of the Beltsville Agricultural Research Center (BARC). Bordered on three sides by Federal properties or county parks, the farm is primarily forested, with several open areas for cultivation or animal husbandry. The East Farm consists of two tracts separated by private land and Beaver Dam Creek. The main tract is approximately 1700 acres. This tract is bordered on its west side by the Baltimore-Washington Parkway, on its north side by Powder Mill Road, its east side by the Patuxent Research Refuge, and its south side by Beaver Dam Road (previously called County Road), the National Resources Conservation Service, and Beck Branch Creek. This tract contains forests, crop lands, hog pens, a plant pathology and quarantine lab, and an approximately 250 acre University of Maryland agricultural extension facility. BARC also permits two properties, totaling 148 acres, on this tract for use by National Aeronautics and Space Administration (NASA). NASA operations on these permitted lands include the Optical Tracking and Ground Plane Test Facility and the Antenna Test Range.The smaller tract is directly south of the tract described above. This approximately 550 acre tract is bordered on its west side by the Baltimore-Washington Parkway, its north side by Beaver Dam Creek and private property, its east side by the Soil Conservation Service (SCS) Road, and its south side by the NASA-Goddard Space Flight Center. This tract contains research fields, cropland, pasture , forest land, wetlands, and two Soil Conservation Service buildings. Building areas for all of the East Farm total 23 acres, waste water treatment 16 acres, roads and grass buffers 286 acres, research fields 251 acres, croplands 298 acres, pasture 27 acres, forest (research buffer) 1,008 acres, and wetlands 196 acres.

United States Department of Agriculture jurisdiction over land known today as the East Farm began on April 29, 1930. On this date, the USDA Bureau of Animal Industry leased the Hayden farm of Prince George's county for a period of five years at "$1,500 a year for the first two years and $2,000 a year for the remaining three years." The farm consisted of 982 acres, of which 500 had been used for pasture and feed crops. The lease carried an option of purchase for $40,000 at anytime during its period. The farm contained "three dwellings, several barns, silos, feed and implement storage sheds, grain bins, and other outbuildings" to support an extensive dairy farm in a county where tobacco and grass dominated agriculture. The Bureau had conducted a fifteen year "search in the vicinity of the U.S. Animal Husbandry Experiment Farm," for a suitable experimental cattle investigation site. Finally on June 6, 1933, the Bureau's search committee issued a memo which determined that the Hayden Farm's "pastures and other existing facilities...could not be duplicated for a much larger sum" than the amount specified in the lease. Furthermore, the search committtee noted that

> the land is gently rolling and well adapted for beef-cattle and related experimental work for which it is and has been used. It is well fenced, has good drainage, well watered, and otherwise suited for this purpose. The tract was developed by a wealthy capitalist of Baltimore, who for some years used it as a general livestock farm. He had an estimated investment in land and equipment of $125,000.

Upon approval from Secretary of Agriculture the Bureau purchased the farm in December of 1933. This lease, and subsequent purchase, effectively enlarged the USDA's geographic presence and would lead to similar land acquisitions. Other farms purchased by the Bureau of Animal Industry included the 298 acre Knoblauch Farm in January 1934 and the 233 acre Maier Farm in April of 1934. The Resettlement Administration acquired the Hense and Knauer Farms in

1936 and 1937 as part of its "Greenbelt" town program. Both farms, and other lands, were later transferred to the USDA through as series of informal agreements between 1937 and 1939 which increased the total acreage of BARC by approximately 7,000 acres. After 1939, portions of East Farm were transferred to the Department of Interior (Patuxent Research Center) and back to Greenbelt, Maryland

Utilization and modification of the found vernacular conditions at Hayden Farm by USDA Bureau of Animal Husbandry typifies the evolution and change of landscape at the East Farm and of BARC generally. European settlers found a land of stream flood plains, gently rolling uplands and low hills. which contained wetlands, hardwood forests, and savanna-like barrens. Native American forest burning practices created these barrens to increase animal grazing. The settlers readily adapted the barrens for crop cultivation and pasture. By the nineteenth century a rural, vernacular landscape of post-colonial farmsteads had formed. The extent of forest cover directly related to land use intensity. In 1895, northern European emigrés August Herr and George Emmons acquired the land upon which Hayden Farm stands. George Emmons sold to Ernest Jenkins nearly 700 acres. Jenkins later purchased more land from adjacent farms and increased his total holdings to nearly 1000 acres. Jenkins established a dairy farm which he would later sell to James R. Hayden in 1924. Building 522, the original Jenkins residence, survives.

The East Farm is part of larger, significant, agricultural research landscape composed of experimental farms. This landscape included two primary land uses: research and support. This landscape was, in its majority, established and expanded under the New Deal. While the administrative units and research program of the East Farm experienced change, the overall agricultural research landscape remains in continuous use. Specific physical characteristics and resources of the East Farm are described, documented and evaluated below in narrative. Specific resources that contribute to the integrity of East Farm, those which survive from the New Deal era and/or represent continuous primary land uses, are noted in table format. Selected photographs documenting existing conditions follow the narrative.

- **SPATIAL ORGANIZATION:** The spatial organization of open space to cleared land reflects the adaption of a rural, vernacular conditions to a New Deal program of national level agricultural research. Historic, fairly stable land use patterns created a matrix of forest cover with patches of fields and pastures. These land use patterns contribute primarily to the basic spatial organization of the East Farm. As a result of clearing, open spaces of field and pasture are delineated by forest edges. Breaks in forest canopy correspond to these open spaces. The relationship of open space to forest canopy is easily determined from road views and aerial photographs. A secondary spatial organization at the East Farm relates to the circulation network, fence lines, tree lines, and field edges.

Maps from 1861 indicate that Beaver Dam Road and Springfield Road provided primary access from farmsteads to larger communities like Beltsville. Smaller, secondary roads intersected open spaces and forests alike. Service roads to fields and dwellings probably existed during this time as well. The intersection of primary, secondary, and service roads created spatial edges between fields and fields, fields and pastures, forests and cleared areas. A similar network of road exists today, often following alignments associated with New Deal era improvements and vernacular conditions.

Vernacular fence lines most likely occurred between crops and pastures and different land tracts. Fence lines spatially defined differences in land use and ownership. At present fence lines on the East Farm delineate fields, old and existing pastures, residential and non-residential building clusters, animal pens, and forests. Portions of these fence lines may also survive from the New Deal era.

Trees line portions of the Soil Conservation Service, Beaver Dam, and Springfield roads. The ages of these trees vary, but the oldest appear near the Hayden Tract, and include cedars (*Juniperus virginiana*) and oaks (*Quercis alba*). These trees, planted between the roads and field fences, marked property lines. However, the exclusive use of a cedars allee to line the beginning of Beaver Dam Creek Road, from Springfield Road, as it enters and crosses through the Hayden Farm tract, suggests a spatial differentiation as one progresses into Hayden Farm's interior. Pine and Hemlock trees along the Soil Conservation Service Road are wind breaks. The use of windbreaks in this area probably dates to allocation of land to the SCS in 1937. The windbreak trees create secondary enclosures of fields which contrast with the forest's primary enclosure. Evidence of this particular relationship is seen at the intersection of Beaver Dam Creek Road and the Soil Conservation Service Road near the Crider Memorial Garden. A more refined spatial organization occurs in cleared areas used for corn fields, forage crops and pastures. This is especially evident where corn fields abut lower, more open fields. Finally, several research fields are fenced or quardoned off as large rectangular plots nested in the larger field and pasture clearings.

Eight different building clusters at the East Farm also contribute to overall patterns of the East Farm spatial organization. Two formal spaces are the Swine Investigation area and the University of Maryland Agricultural Extension Station cluster. A discussion of the others takes place in the cluster section of this survey.

The Swine Investigation area is located near the intersection of Powder Mill Road and the Soil Conservation Service Road. The area was designed and planned between 1936 and 1937. The area was built out c. 1942 in an approximately 800' x 3000' rectangle and subdivided orthagonally into four rectangular plots. These plots are further subdivided into smaller rectangular plots for hog pens and various structures. The cluster area is divided in half by a north-south axis service road which terminates on the north at Powder Mill Road and on the south loops east to another road which borders corn fields. An access road from the Soil Conservation Service Road runs west-east between trailers, barns, hog houses and pens, and corn fields. All except one of the Swine Investigation structures and buildings lay on the west side of the service road. A smaller grid near the south end of the Swine Investigation area was used to organize hog houses and pens, two swine barns, and narrow access roads. Corn fields and one hog pen with a structure occupies the remaining two rectangular plots on the east side of the service road. Based on the 1936 plan and a 1944 SCS aerial photograph, it appears that the two rectangular plots put into corn production were originally laid out to accommodate hog pastures and possibly for expansion of the swine investigation area.

The University of Maryland Agricultural Extension Station, c.1987, contains one building and 15 structures. The building and structures lay south of Beaver Dam Road on an east-west alignment organized spatially around a service area and service road. The service road divides the service area along an east-west path, turns north between two equipment sheds, and then meets

Beaver Dam Road.

• **TOPOGRAPHY/GRADING:** Fairly even terrain, with low gentle rolls, characterizes the topography at the East Farm. Slopes of less than 3% dominate. Beck Branch and Beaver Dam Creek drain the fields and upland forests. Significant bottomlands create a wetland complex which covers approximately 9% of its landscape. Crop and pasture lands tend to occur in areas of fair to good drainage. BARC expansion between 1933 and 1942 largely adapted existing agricultural conditions and roads to USDA bureau research agendas. The Bureau of Biological Survey also used Beaver Dam Creek and its associated wetlands to establish a "Wildlife Demonstration Area." Minor changes in drainage were made to greater accomodate its breeding and habitat program.

A 1943 Soil Conservation Service plan for BARC recommended the use of terraces, diversion terraces, and contour furrows to manage soil erosion caused by runoff. These grading practices altered the older agrarian landscape of the East Farm. Road grading also altered this landscape. Most roads appear to follow landform contours, field edges, and property lines. Original alignments remain in portions of Beaver Dam Road (then County Road) and Springfield Road (Fairland Springfield Hill Road) which predate the East Farm and BARC. New Deal era road ditching and construction, and land changes associated with creating road beds modified the East Farm's topography. The construction of the Soil Conservation Service Road in 1938 and Powder Mill Road in 1934 had the largest impact. These roads, and their associated ditching, survive.

BARC developments at the Hayden Tract, Swine Investigation area, and the dog kennel required grading for the construction of buildings, the addition of minor paved/gravel roads and parking areas. These areas also required grade changes to accommodate stormwater runoff.

The Beltsville Airport runways date between 1933 and 1942. Major expansion and reconstruction of the airport occurred during World War II as part of the National Defense Program. This included acquisition of 186 acres from the Forest Service around 1941. In 1942 Civilian Conservation Corps provided labor for improvements, including land clearing, the construction of roads, trenching, and backfill for water and sewer lines and sewage disposal. However, "the extensive grading operations during the constuction of the airport created a serious erosion problem," as noted by C.A. Logan, Division Chief of Management and Operations in his 1962 *Brief History of the Agricultural Research Center*. Today portions of the landing field remain, but the airport is in general disrepair.

Topography/grading resources which contribute to the integrity of the East Farm are listed below:

| TOPOGRAPHY/GRADING | CONTRIBUTING/NON-CONTRIBUTING |
|---|---|
| Major Paved roads | SCS Road and Powder Mill Road Contributing |
| Secondary road to Airport | Contributing/Non-Contributing |
| Minor service and field roads | Contributing/Non-Contributing |
| Drainageway and systems | Contributing |
| Beaver Dam Creek and Beck Branch | Contributing |
| Field grading | Contributing/Non-Contributing |
| Beltsville Airport | Contributing/Non-Contributing |

• **VEGETATION:** Upland and bottomland, managed and unmanaged forests dominate 48% of the East Farm landscape. The Beltsville Bottomland Forest is the largest habitat area found on the East Farm. These forests provide buffer zones between BARC agricultural land uses and adjacent properties, contribute valuable habitat in wildlife management areas, and protect rare, indigenous understory plants. These areas were established quite early as research buffer zones and date to the completion of land acquisition and consolidation between 1933 and 1942.

Dominant trees which characterize upland forest include oaks (*Quercus sp.),* short leaf pine (*Pinus echinata*) and loblolly pine (*Pinus taeda*), and smaller stands of black gum (*Nyssa sylvatica*), sweet gum (*Liquidambar styraciflua*), beech (*Fagus grandifolia*), and sassafras (*Sassafras albidum*). Dominate understory plants of the upland forest include clubmosses (*Lycopodium sp.*) and high blueberry(*Vaccinium corymbosum).* Bottomland forests are part of a larger wetland complex at BARC. At the East Farm, the Beltsville Airport Bog and Beck Woods form part of this wetland complex. This complex consists of willow oak (*Quercus phelos*), sweet gum, river birch (*Betula nigra*), and red maple (*Acer rubrum*). Shrubs common to these areas includes spicebush (*Lindera benzoin*), buttonbush (*Cephalanthus occidentalis*), fetterbush (*Leucothe racemosa*), pepperbush (*Clethra anifolia*), and tussock sedge. St. Johnswort (*Hypericum mutilum*), Ludwigia, three-way sedge. Weak-stalked clubrush, rice cut-grass, broad-leaved arrowhead, cinnamon (*Osmunda cinnamomea*), and ladyfern (*Atyrium filix-femina*) characterize the understory and groundcover of the wetland complex. The East Farm also contains four out five BARC significant plant (and wildlife) habitat areas in Prince George's County as designated by the State of Maryland Department of Natural Resources Natural Heritage Program. Management plans exist to protect Beck Woods, the Beltsville Airport Bog, the Beltsville Bottomland Forest, and Beltsville Forest and Meadow. A detailed summary description of each follows. *Management Plans For Significant Plant and Wildlife Habitat Areas of Maryland's Western Shore Prince Georges County* informed the summaries.

Beck Woods- While this forest was perviously logged, it was never plowed and retains its basic hydrological system and soil structure associated with Beck Branch stream. This includes

low lying bottomlands, wetlands, a lake, and emergent marshes. Colonial and post-colonial logging, however did alter the forest composition. This 274 acre woods contains a middle-aged upland forest dominated by pitch pine, virgina pine, and mixed oaks. Understory species include black gum, sweet gum, beech, and Ssassafras. A dense shrub layer of highbush blueberry covers a large portion of the upland forest. Large populations of clubmoss carpet much of the slopes. To the north, near the lake, the upland forest gives way to to more mesic specieis such as water oak, river birch and red maple. St. John's-wort, ludwigia, Three-way sedge, and a rare sedge grow in the lake's drawdown area. Upstream from the lake, a wide emergent marsh contains weak-stalked clubrush. Water lily grows in the marsh's open water channels. Red maple, willow oak, and sweet bay dominate the canopy of hardwood swamps which border the marsh. Rice cut-grass, broad-leaved arrowhead, cinnamon fern, and several sedges occur in the herbaceous layer. Further up the Beck Branch a red maple and buttonbush broad shrub swap lies between the two branches of the stream. Beck Woods contain deep, muck soils which support hummocks of buttonbush and fetterbush with interlaying carnivorous bladerworts.

Beltsville Airport Bog- This 163 acre wetland complex contains two large non-forested wetlands. Upstream, within a Beech-oak forest, an approximately 200' x 100' freshwater marsh. The marsh is dominated by mannagrass, ricecut-grass, and other grasses and sedges. Wetland trees and shrubs surround the marsh. Southern Pond Lily growns in open water channels. Approximately one-half mile below the marsh is a complex of wooded swamps, mesic woods, and thickets surrounding-a large central shrub swamp with numerous spagous, bog-like openings. This swamp supports numerous dominant wetland plant species like sweet peperbush, red maple, and tussock sedge. Two rare plants, button sedge and twining bartonia, grow in this swamp. The forest west of the bog is dominanted by mixed oaks, virginia pine, and pitch pine.

Beltsville Bottonland Forest- This forest contains 600 acres of broad bottomland decidous trees. Red maple dominates in the wettest areas along Beaver Dam Creek and Beck Branch, where river birch is also common. Mixed hardwoods of oaks, red maple, and sweet gum, dominate slightly higher ground. Groundberry covers the floor areas of the broad marshy floodplain,accompanied by numerous wetland shrubs and herbaceous species. Red oak and willow oak dominate slopes above the floodplain. Club moss and numerous ferns carpet the forest floor.

Beltsville Forest and Meadow- Two branches of Beaver Dam Creek flow through this area east to west. The forest and meadow covers 472 acres. The bottomland forest is composed of red maple. Slightly uphill american holly, pines and oaks form the forest canopy. Mixed oaks, especially red and black oaks, with virginia and pitch pines common in some stands, dominate the upland forest. A powerline right-of-way crosses the southern portion of the site to create a dry, sandy, meadow of grasses, sedges, and herbaceous plants. A forested non-tidal wetland dominated by red maple, sweet bay, and black gum exists at the southeastern corner of the site. The powerline crossing at this wetland created two boggy, sphagous openings. The date of the powerline right-of-way is not known.

As noted earlier, various species of trees line the roads of the Soil Conservation Service, Beaver Dam, and Springfield roads. Species include cedars (*Juniperus virginiana*), oaks (*Quercis sp.*), pine, (*Pinus sp.*) hemlock (*Tsuga canadensis*), american sycamore (*Platanus occidentalis*). Similarly trees were observed along fence lines and remnant fence lines. A prominent allee of Cedars marks the Hayden Farm entrance at the intersection of Beaver Dam and Springfield roads.

Additionally windbreaks of hemlock and pine exist along the SCS road and Beaver Dam Road.

When the SCS road was built in 1938, numerous highway planting research tests plots were installed along its length. The exact locations are not known at this time. However, construction documents dated November 11, 1938 show that the plots tested solid sodding, strip sodding, seeding and various plant mixtures. Further research will be needed to determine the significance of this research and if any of the planting survives. The banks of Springfield Road, Beaver Dam Road, and the Soil Conservation Service Road appears to contain surviving plant species reccomended by a 1943 Soil Conservation Service Beltsville Reserach Center Conservation Plan. These species included bush lespedeza, mapleleaf viburnum, virginia creeper, honeysuckle, and native vegetation such as vaccinium. A more in depth survey will be needed to verify if any survives. The SCS also recommended planting weeping lovegrass or similar in drainage ditches throughout BARC. It is not known if this planting was carried out or survives.

Corn dominates the production fields of the East Farm. Interspersed among the corn fields were plots of forage crops. East farm also contains Plant Science Institute research fields and a plant quaratine area at the former Beltsville airport. Continuous use of the East Farm fields for forage and research dates to 1933. Similarly, surviving pastures associated with cattle and hog investigations date to this period. The most extensive pastures exist at the Swine Investigation area. Old pastures, now in corn field production, tend to correspond to areas enclosed with barbed wire fencing. Fields, feed crops, and pasture at the East Farm support the Livestock and Poultry Sciences Institute. Major feed crops include corn and lespedeza. Most fields in cultivation between 1933 and 1947 contained corn and forage crops. These fields supported the Division of Animal Husbandry. Research fields are currently used by the Plant Sciences Institute.

Ornamental plantings occur at six sites: the Hayden tract, Hense house, Maier house, Swine Investigation area, and the abandoned Dog kennel (not fully accessible). The Hayden Tract also contains a small area of interpretive plots of research vegetation. However this plot appears unkept and most of the plant missing or overgrown with weeds and turf grass.

Two sustainable meadows were planted at the East Farm in the last five years. The Springfield Road meadow is located at the intersection of Springfield Road and Powder Mill road on the SW corner. The Airport meadow is located at the extreme SE end of the Beltsville Airport.

Vegetation resources which contribute to the integrity of the East Farm are listed below:

| VEGETATION FEATURES | CONTRIBUTING/NON-CONTRIBUTING |
|---|---|
| Field and Research crops | Contributing |
| Pastures | Contributing |
| Drainage ditch vegetation | Non-Contributing |
| Windbreaks and hedgerows | Contributing |
| Cedar Allee at Hayden Tract | Contributing |
| Beck Woods | Contributing |
| Beltsville Airport Bog | Contributing |
| Beltsville Bottomland Forest | Contributing |
| Beltsville Forest and Meadow | Forest Contributing/Meadow Non-Contributing |
| Sustainable Meadows | Non-Contributing |
| Ornamental plantings | Non-Contributing |

**•RESPONSE TO NATURAL FEATURES:**

The East Farm contains two major soil types, the Christiana-Sunnyside-Beltsville and the Bibb-Tidal Marsh soils associations. The Christiana-Sunnyside-Beltsville soils are fertile and well-suited to agriculture. The Bibb-Tidal Marsh soils exist along streams and in floodplains. These soils are wet and prone to flooding, limiting their use for agriculture. Slopes of less than 3% dominate the East Farm topography. Beck Branch and Beaver Dam Creek drain the fields and upland forests. Significant bottomlands create a wetland complex which covers approximately 9% of its landscape. Historically, crop and pasture lands tended to occur in areas of fair to good drainage.

European settlers found a land of stream flood plains, gently rolling uplands and low hills. which contained wetlands, hardwood forests, and savanna-like barrens. Native American forest burning practices had created these barrens to increase animal grazing. The settlers readily adapted the barrens for crop cultivation and pasture. Houses and farmsteds outbuildings which pre-date BARC were predominately sited at higher elevation hills and knolls.

As described earlier, BARC expansion at the East Farm largely followed existing vernacular land use patterns which predominately related to natural features. However, the USDA implemented drainage practices to increase productivity of areas with fair suitability for agriculuture. The Biological Survey's Wildlife Demonstration Area was located in the Beaver Dam Creek wetlands and forests adjacent the Maier Farm as a direct response to natural features.

- **CIRCULATION:** Primary paved access roads include the Baltimore-Washington

Parkway, Powder Mill Road, Beaver Dam Road, the Soil Conservation Road, and Springfield Road. Two paved secondary roads and numerous unpaved minor roads, penetrate into the East Farm's fields, pastures and forests to provide access into forest areas, crops lands, and utilities. These roads have less presence, especially in the corn fields and forests. A formal entrance to the East Farm does not exist and access points to fields and pasture occur predominately from Springfield Road. Original alignments remain in all roads including the two which predate the East Farm and BARC: Beaver Dam Road (then County Road) and Springfield Road (Fairland Springfield Hill Road). Powder Mill Road dates to a 1934 the Soil Conservation Service Road dates to 1938.

Circulation resources which contribute to the integrity of the East Farm are listed below:

| CIRCULATION FEATURES | CONTRIBUTING/NON-CONTRIBUTING |
|---|---|
| Beaver Dam Road | Contributing |
| Springfield Road | Contributing |
| SCS Road | Contributing |
| Powder Mill Road | Contributing |
| Secondary and service roads | Contributing/Non-Contributing |

• **LAND USES:** When tracing the East Farm landuse patterns, from Besley's 1912 *Map of Prince George's Co. and District of Columbia Forest Areas by Commercial Type* to a 1957 Soil Conservation Service aerial mosaic, a relative stable pattern emerges. Comparative analysis of open space, that is cleared land used for agriculture, during three different time periods helps to explain the nature of this particular spatial organization. In 1912 open space acreage represented about 60% of the East Farm landscape and by 1957 this amount drops to about 55%. Open space in 1996 accounted for 47% of the East Farm land use pattern. It is not known how much land was cleared prior to 1912, but Besley's map indicates that a small portion of land at Beck Branch had been cut over and replanted with hardwood seedlings. A secondary relationship of open space to dwelling sites also indicates a fairly stable pattern of land use. A 1861 map of Prince George's County shows that at least 10 named farmsteads existed in the area that comprises the present day East Farm. Beasely's map of 1912 indicates approximately 10 predominate dwelling sites. Interpretation of 1957 aerial mosaic reveals that approximately 12 sites of building clusters existed. Today an equal number remain in the general area, excluding NASA facilities.

The East Farm, as a planned landscape, began in 1934 just after the acquisition of Hayden Farm. During that year the Division of Animal Husbandry, part of the Bureau of Animal Industry, produced two land use plans under the direction of division chief E.W.Sheets. Both plans

many BARC programs, particulary the Bureau of Biological Survey. By July 1939, the Bureau was transferred to the Department of Interior and the continuation of open intellectual, exchange sought by Patuxent superintendents. The resulting transfer of the Bureau made its land available to the Bureau of Animal Industry. The Swine Investigation Area was established on the northeast portion of the Wildlife Demonstration Area sometime after 1939 and the majority of its hog houses built in 1942.

The East Farm also included a portion of the original 1,700 acres allocated to the Soil Conservation Service (SCS) in 1937. Bounded on the north by Beaver Dam Road and on the east and south by Good Hope and Branchville Roads the SCS tract included areas for pasture management, woodlot management, a lake-hydraulic laboratory, methodology, natural gully healing, studies of tree, shrub, amd grass root systems, engineering and agronomic studies, an illustration farm, and a nursery. At present SCS plots and a nursery exist near BARC at the intersection of the Soil Conservation Service Road and Beaver Dam Road. The use of varied evergreen and coniferous tree plantings for windbreaks was observed in this area.

During an inspection of BARC in June of 1941, the Under Secretary of Agriculture, Paul H. Appleby, noted serious erosion damage at BARC. Farming methods at BARC were to demonstrate and promote those preferred by the USDA on private agricultural lands. Appleby requested the Hugh H. Bennet, Chief of the Soil Conservation Service, head a committee to study the problems and develop a conservation plan. Under Bennett's oversight, a conservation plan was implemented at BARC beginning November of 1943. This conservation plan affected BARC as a complete demonstration unit, directing land use and erosion control practices. With the exception of some woodland overgrowth, the general land use patterns established during this time continue today. The conservation plan made general recommendations in the areas of the following for the East Farm: pasture management, woodland management (forest buffers), surface drainage, croplands, and wildlife habitat.

The East Farm also includes the abandoned Beltsville Airport located in the northeast corner of the farm near the intersection of Powder Mill Road and Springfield Road. Originally operated by the Department of Commerce's Bureau of Commerce, the contains BARC research fields operated by the Plant Sciences Institute (PSI). The Department of Commerce built the landing field in 1933 on the Jenkins Farm. A plan of that year shows an area marked "Emergency Landing Field Site Number 57B." Major expansion and reconstruction of the airport occurred during World War II as part of the National Defense Program. This included acquisition of 186 acres from the Forest Service around 1941. In 1942 Civilian Conservation Corps provided labor for improvements, including land clearing, the construction of roads, trenching, and backfill for water and sewer lines and sewage disposal. After the war, it appears that BARC regained jurisdiction of the airport. The Air Force Reserve Officer Training Corps used the airport for flight instruction in the 1960s. Today the Plant Sciences Institute uses the airport for a quarantine area. Sod is also stored at the site.

In sum, landuse at the East farm supports research through a network of access and service roads, field corps, grazing pastures, and buffer forests. Eight different land uses occur at the East Farm. Building areas for all of the East Farm total 23 acres, waster water treatment 16 acres, roads and grass buffers 286 acres, research fields 251 acres, croplands 298 acres, pasture 27 acres, forest (research buffer) 1,008 acres, and wetlands 196 acres.

- **CLUSTER ARRANGEMENT:** The East Farm contains 55 buildings or structures, and eight cluster groups. The majority of these are animal houses and laboratory and service buildings. Two residences also exist: the Hayden House (522) and Maier House (531). Ornamental landscaping exists on the East Farm in association with these residences. Building clusters at the East Farm largely relate to their orginial affiliation with the Division of Animal Husbandry which started at BARC in 1911. These clusters include support buildings and structures for swine investigations, dual-purpose cattle investigations, a dog kennel, and forage crop investigations. Other building clusters, remenants of the Hayden Farm, the Maier Farm, and the Hense Farm, predated the development of BARC. The Bureaus of Biological Survey, Plant Industry, and the Soil Conservation Service also adapted vernacular building or created new clusters to accomodate their research needs.

Eight building clusters at the East Farm largely related to their affiliation with the Division of Animal Husbandry which started at BARC in 1924. These included support buildings for swine investigations, dual-purpose cattle investigations, a dog kennel, and forage crop investigations. Other building clusters predated the development of BARC. These clusters included the Hayden Farm, the Maier Farm, and the Hense Farm. Three ornamental landscapes exist on the East Farm in association with these residences. The Bureaus of Biological Survey and Plant Industry and the Soil Conservation Service also created or used building clusters to accomodate research needs.

Farmstead Water Research (506 and 506a) This small cluster, sited off the Soil Conservation Service Road, consists of a one-story concrete-block building, parking area, and garage. The cluster is associated with SCS research that began at BARC in 1937. This cluster was orginally part of the SCS methodolgy unit. Construction of the Baltimore-Washington Parkway isolated the building cluster from Soil Conservation Service operations. The building cluster was then used by the Bureau of Plant Industry, Soils, and Agricultural Engineering. After 1953 the portion of the cluster were transferred or shared with the Soil Conservation Service.

- **STRUCTURES:** The East Farm contains 55 buildings and/or structures. The majority of these are animal houses and laboratory and service buildings but also included two residences, the Hayden House (522), Maier House (531). See the Structures Survey for more information.

- **SMALL SCALE FEATURES:** Very few site features were observed at the East Farm. These include fencing, signs, and a vernacular cemetery. At present fence line on the East Farm delineate fields, old and existing pastures, residential and non-residential building clusters, animal pens, and forests. It is possible that portions of these fence lines also survive from the New Deal era. Fence material is generally wire and barbed wire on metal and wood. Some cyclone security and electric fencing was observed at the Airport quarantine area. Wood and metal gates were observed in association with fencing. Signs include road names at intersection, building numbers and Bureau identification at building clusters.

A cemetery exists near the NASA facility at Springfield road. It is undocumented on ARS/BJY maps but shown on USGS maps. However, a 1934 survey for the Wildlife

Demonstration Area, described earlier, identifies an "Old Negro Cemetery," east of the Maier Farm. It is unclear if this cemetery lies within the BARC jurisdiction. The cemetery sits on a small hill. A fairly steep, unimproved road provides access to the it. The cemetery contains several rudimentary burial markers consisting of small stones and a few formal headstones. At least three appear to be fairly recent additions. The oldest date observed was 1909. Mike Combs, a former BARC employee, stated that he believes slaves from the Snowden plantation were buried in the cemetery and that the cemetery belongs to residents of Muirkirk, a community north of BARC.

Small scale feature resources which contribute to the integrity of the East Farm are listed below:

| SMALL SCALE FEATURE | CONTRIBUTING/NON-CONTRIBUTING |
|---|---|
| Fencing | Contributing/Non-Contributing |
| Signs | Non-Contributing |
| Cemetery | Contributing |

•**VIEWS AND VISTAS:** Beacause of the density and scale of woodlands at the East Farm, these conditions were not observed.

**Significance:** The East Farm was acquired under New Deal policies and funding. Infrastructure improvements at the East Farm occurred through Public Works Administration and Civilian Conservation Corps. The East Farm served as a research site for the Bureau of Biological Survey, Bureau of Animal Industry, Bureau of Plant Industry, and Soil Conservation Service. The East Farm also included study areas for the Resettlement Administration.

Significant research efforts at East Farm included those involving plant material for erosion control by the SCS, dual-purpose cattle development by the Bureau of Animal Industry, and feed crop experiments by the Bureau of Plant Industry. The SCS tested potential highway plantings along the Soil Conservation Service Road.

East Farms physical development included the application of master planning principles by design, agricultural, and conservation professionals. This included the work of AD Taylor and Delos Smith, HF Seahorn of the Public Buildings Administration, Robert T Walker, CCC landscape architect, and Hugh H. Bennet of the SCS. The arrangement of buildings and the separation of distinct land uses shown on these plans continues to provide organizational structure to the East Farm . The SCS conservation plan of 1943 appears the most comprehensive. This plan essentially treated BARC as a one large experimental farm. The significance of the SCS plan lay in its application as a master plan overlay which affected subsequent and existing land use, layout and planning at the East Farm.