

VDL 11/29/06
NRHP 11/15/06

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES
REGISTRATION FORM

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in *How to Complete the National Register of Historic Places Registration Form* (National Register Bulletin 16A). Complete each item by marking "x" in the appropriate box or by entering the information requested. If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer, to complete all items.

1. Name of Property

historic name Leander McCormick Observatory, Updated Nomination for National Significance
other names/site number VDHR #002-1759

2. Location

street & number 600 McCormick Road not for publication N/A
city or town Charlottesville vicinity N/A
state Virginia code VA county Albemarle code 003 zip code 22904

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended, I hereby certify that this nomination request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property meets does not meet the National Register Criteria. I recommend that this property be considered significant nationally statewide locally. (See continuation sheet for additional comments.)

[Signature] Date 11/29/06
Signature of certifying official
Virginia Department of Historic Resources
State or Federal Agency or Tribal government

In my opinion, the property meets does not meet the National Register criteria. (See continuation sheet for additional comments.)

Signature of commenting official/Title Date

State or Federal agency and bureau

4. National Park Service Certification

I, hereby certify that this property is:

- entered in the National Register
See continuation sheet.
- determined eligible for the National Register
See continuation sheet.
- determined not eligible for the National Register
- removed from the National Register
- other (explain): _____

Signature of the Keeper
Date of Action _____

5. Classification

Ownership of Property (Check as many boxes as apply)

- private
- public-local
- public-State
- public-Federal

Category of Property (Check only one box)

- building(s)
- district
- site
- structure
- object

Number of Resources within Property

Contributing	Noncontributing	
<u> 3 </u>	<u> 0 </u>	buildings
<u> 0 </u>	<u> 0 </u>	sites
<u> 0 </u>	<u> 0 </u>	structures
<u> 0 </u>	<u> 0 </u>	objects
<u> 3 </u>	<u> 0 </u>	Total

Number of contributing resources previously listed in the National Register N/A

Name of related multiple property listing (Enter "N/A" if property is not part of a multiple property listing.)

 N/A

6. Function or Use

Historic Functions (Enter categories from instructions)

Cat: <u> Education </u>	Sub: <u> Research Facility </u>
<u> Domestic </u>	<u> Single Dwelling </u>
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Current Functions (Enter categories from instructions)

Cat: <u> Education </u>	Sub: <u> Research Facility </u>
<u> Domestic </u>	<u> Multiple Dwelling </u>
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

7. Description

Architectural Classification (Enter categories from instructions)

Late Gothic Revival _____
 Queen Anne-Eastlake _____

Materials (Enter categories from instructions)

foundation brick _____
roof _____ metal _____
walls _____ brick _____
_____ other _____

Narrative Description (Describe the historic and current condition of the property on one or more continuation sheets.)

8. Statement of Significance

Applicable National Register Criteria (Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing)

- A Property is associated with events that have made a significant contribution to the broad patterns of our history.
- B Property is associated with the lives of persons significant in our past.
- C Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- D Property has yielded, or is likely to yield information important in prehistory or history.

Criteria Considerations (Mark "X" in all the boxes that apply.)

- A owned by a religious institution or used for religious purposes.
 - B removed from its original location.
 - C a birthplace or a grave.
 - D a cemetery.
 - E a reconstructed building, object or structure.
 - F a commemorative property.
 - G less than 50 years of age or achieved significance within the past 50 years.
-

Areas of Significance (Enter categories from instructions)

Education, research facility
 Architecture

Period of Significance 1884--1953 _____

Significant Dates 1884

Significant Person (Complete if Criterion B is marked above)

Cultural Affiliation _____

Architect/Builder Wilson Brothers

Narrative Statement of Significance (Explain the significance of the property on one or more continuation sheets.)

9. Major Bibliographical References

Bibliography

(Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets.)

Previous documentation on file (NPS)

preliminary determination of individual listing (36 CFR 67) has been requested.

previously listed in the National Register

previously determined eligible by the National Register

designated a National Historic Landmark

recorded by Historic American Buildings Survey # _____

recorded by Historic American Engineering Record # _____

Primary Location of Additional Data

State Historic Preservation Office

Other State agency

Federal agency

Local government

University

Other

Name of repository: University of Virginia

10. Geographical Data

Acres of Property 1.27 acres

UTM References (Place additional UTM references on a continuation sheet)

	Zone Easting	Northing	Zone Easting	Northing
1	17	717432	2	_____
3	_____	_____	4	_____

See continuation sheet.

Verbal Boundary Description (Describe the boundaries of the property on a continuation sheet.)

Boundary Justification (Explain why the boundaries were selected on a continuation sheet.)

11. Form Prepared By

name/title Gwendolyn K. White, Intern, University of Virginia, School of Architecture

Organization: _____ date _____

street & number: 437 Monticello Blvd. telephone 703 535 8662

city or town Alexandria state VA zip code 22305

Additional Documentation

Submit the following items with the completed form:

Continuation Sheets

Maps

A USGS map (7.5 or 15 minute series) indicating the property's location.

A sketch map for historic districts and properties having large acreage or numerous resources.

Photographs

Representative black and white photographs of the property.

Additional items (Check with the SHPO or FPO for any additional items)

Property Owner

(Complete this item at the request of the SHPO or FPO.)

name University of Virginia

street & number P. O. Box 400726 telephone N/A

city or town Charlottesville state VA zip code 22904-4726

Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C. 470 et seq.).

Estimated Burden Statement: Public reporting burden for this form is estimated to average 18.1 hours per response including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Chief, Administrative Services Division, National Park Service, P.O. Box 37127, Washington, DC 20013-7127; and the Office of Management and Budget, Paperwork Reductions Project (1024-0018), Washington, DC 20503.

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**National Register of Historic Places
Continuation Sheet**

**McCormick Observatory
Albemarle County, VA**

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7. Description:

Summary Description:

Set on the crest of a small mountain called Observatory Hill, the Leander McCormick Observatory, built in 1884 was the fulfillment of the desire of Thomas Jefferson, founder of the University of Virginia, to include astronomy in the curriculum. The round brick structure with Romanesque Revival architectural details resembles a medieval chapter house. It holds in its dome a Clark telescope. The dome was designed specifically for the site and is significant for its ease in rotation. The original brick structure was comprised of the dome room and a two bay workspace to the north. Two additions were made to the observatory, the first, between 1930 and 1945, included a classroom and two small offices. The second addition was constructed in 1972 and was built at a ninety-degree angle to the original section. The additions do not detract from the original observatory design, which retains its historical context. The brick Queen Anne-Eastlake-style Alden House, which served as the home of the observatory director, was completed in 1883 and is sited just down the hill from the observatory.

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**McCormick Observatory
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Detailed Description:

The original observatory consisted of the round dome room and a two-room rectangular section of five-course common bond brick that held the library and a workroom. The brick building has walls of five-course common bond featuring alternating blind and fenestrated round-headed arches separated by large buttresses trimmed with stone. The entrance was on the short end of the extension with a triangular pediment over the arched doorway. A marble panel over the door is inscribed "Leander McCormick Observatory 1884." The roof of the dome is metal. Eight double-hung arched windows serve the dome room. There is an exterior door situated directly across from the door leading into a vestibule that leads to the library.

The main access to the observatory was changed when an addition was made sometime between 1930 and 1945. It is now between the observatory and library. When this change was made the arched pediment was not replaced but the marble insert was moved to its present position over the entrance. The observatory itself has undergone few changes since its construction. The original canvas still covers the interior of the dome. There are three openings in the dome that allow for a complete view of the sky and also lighten the weight of the dome. A motor now operates the dome's openings and rotation, but the original gears are still in place. The original wooden ladder with observation chair that moves around the telescope on a track remains in working order. It is moved around the room with a system of pulleys. The hardwood floors have been covered with linoleum tiles and the plaster walls have also been covered with modern panels, but the original fabric is still intact and could be restored. The Alvan Clark telescope is in the middle of the room and is in original condition except for the manual gears that once operated it have been connected to a motor since the 1960s. The telescope was originally driven by weights, like a grandfather clock. The lens of the telescope has been removed for cleaning only once since its installation.

The library has two windows and contains the original bookshelves and cabinets that held the photographic plates. Originally the library contained clocks, chronographs, and seismographs. The small workroom has two windows and built-in bookcases. All portions of the observatory have original hardware including ornate brass door hinges and doorknobs. A basement under the original portion of the observatory held a dark room for processing the photographic plates (that began to be used around 1914), a toilet and storage areas.

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McCormick Observatory
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Section 7 Page 3

Changes and additions to the observatory included the construction of a darkroom in the basement in 1913 and a water line was laid to the observatory in 1914. In the early 20th century, during the tenure of Samuel Mitchell, the second director of the observatory, a small brick building housing a small telescope was created. It has a single doorway and no windows. The roof opens to allow operation of its telescope. Sometime between 1930 and 1945 an addition was added to the structure to provide more classrooms and two small offices. The exterior is also of brick and is the same height as the original section. The basement area under this addition is now used to display a collection of old astronomical equipment. In 1972, a one-story addition was built at a 90-degree angle to the rest of the structure.

Alden House is a two-story Queen Anne/Eastlake-style brick house with gable roof. Construction of the house began in 1882 concurrent with the building of the observatory. Charlottesville architect and builder, George Spooner, built the house. Alden House is constructed of brick laid in five-course common bond and has a three-course brick water table. An arched window is in the gable and a dormer has wooden tracery work. The house is entered from a large Eastlake-style porch through a double door into a wide central passage. There are four principal rooms on each floor. It served as the home of the director until the 1960s and was then subdivided into two separate apartments, one on each floor. The stair was originally located in the central hall, but was removed during the remodeling and another one built on the other side of the house accessed from an exterior door. The two largest rooms on either side of the front door have pocket doors. Each room, including the passage, had a coal fireplace. Many of the coal grates are still in place. The wooden exterior shutters have all been removed but are stored in the cellar. The cellar appears to have never been finished but there are traces of a stair that possibly led to the exterior before the side entrance was added for the second floor apartment. The attic space is accessible by a stair and has arched windows and exposed rafters.

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McCormick Observatory
Albemarle County, VA

Section 8 Page 4

Summary Statement of Significance:

The Leander McCormick Observatory was built in 1884 on the crest of a small mountain west of the University of Virginia. Its construction fulfilled the desire of the University's founder, Thomas Jefferson, to include astronomical study in the school's curriculum. The use of a Romanesque Revival design for the observatory illustrates the serious enthusiasm for advanced scientific study in the late nineteenth century. The rotating dome was the first of its kind at the time of its installation and was created by Worcester Warner and Ambrose Swasey, who patented their design. The dome was noted for the ease with which it made a 365-degree rotation and for the three openings in it that allowed for a complete view of the sky. The dome served a 26¼-inch refracting telescope with lenses cast in France by Manois & Sons and ground by Alvan Clark & Sons of Cambridgeport Massachusetts. The telescope was donated to the University by Leander McCormick of the McCormick Harvesting Machine Company of Chicago. It was one of the best telescopes in North America when it was installed and has been responsible for significant astronomical research and star identification. Well over a century later, the telescope is still in use and has required cleaning only once.

Criteria Statement:

The McCormick Observatory is eligible for the National Register under **Criterion A in the area of education**. When installed in 1884, this telescope was one of the best in the country. The acquisition of so fine a piece of equipment for the University of Virginia brought to fruition the dreams of Thomas Jefferson, the University's founder, for the inclusion of astronomy in the curriculum. Its establishment in 1884 when interest in astronomy and astronomical research was booming is illustrative of how American university and college offerings were expanded in the late 19th century to include facilities and programs for advanced scientific study. The McCormick Observatory was on the leading edge of astronomical study and was responsible for important research and discoveries as late as the 1980s and 1990s until the development of satellite astronomy. The Observatory is also eligible under **Criterion C for architecture**. The sturdy Romanesque Revival structure with its large dome illustrates the serious nature of the study of astronomy at the University of Virginia in the late 19th century. The building contains much of its original hardware including the dome apparatus and the telescope itself. The dome design was the first of its kind and was patented by its manufacturers. The genius of their design is evident in the ease with which the dome and telescope still operate today.

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**McCormick Observatory
Albemarle County, VA**

Section 8 Page 5

Historical Background:

Thomas Jefferson's original plan for the University of Virginia's curriculum included astronomical study and it was his desire to have an observatory on the grounds. His initial suggestion was that the dome of the Rotunda be used as a planetarium by painting the interior blue and covering it with stars. He also considered renovating the Monroe Hill house to serve as an observatory. He prepared plans for an observatory in 1825 which would have been sited on the crest of a small mountain to the west of the grounds and eventually it was here that the Leander McCormick Observatory was built in 1884 on Mt. Jefferson, now known as Observatory Hill.

In 1830, R. M. Patterson arrived at the University of Virginia as the Professor of Natural Philosophy. Under Patterson's instructions, a small brick house was erected on a hill just south of Monroe Hill and equipped with a small telescope. He modeled it after the National Observatory in Washington. A building was constructed on the site around 1828, but lacked the necessary equipment for astronomical observations and was demolished in 1859.

Astronomy at the University of Virginia remained practically non-existent with no efforts to revive it until the mid-1860's when Rector Benjamin Johnson Barbour led the Board of Visitors to consider a new school in the University. By September 1866, the Board offered Matthew Fontaine Maury a professorship as the head of the new school of Practical Astronomy, Physics, Geology & Climatology. The post-Civil War years proved financially difficult for the University of Virginia as for most southern educational institutions and insufficient funds for the professorship forced Maury to decline the offer. Later efforts to erect an observatory and to bring the study of practical astronomy to the University were unsuccessful, until Leander J. McCormick offered to donate a telescope.

Leander James McCormick of Rockbridge County, Virginia, decided in 1870 to give the world's largest refracting telescope to a university in his home state. McCormick had developed the reaper with his brother Cyrus McCormick and he eventually took over the management of the McCormick Harvesting Machine Company. McCormick originally offered the telescope to Washington College (now Washington and Lee University) at Lexington in Rockbridge County, but Robert E. Lee, then president of the college, turned it down and suggested the University of Virginia instead. The University of Virginia accepted the gift and after a delay of several years the observatory, named for McCormick, was finally built in 1884. Professor Charles Venable, head of the School of

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McCormick Observatory
Albemarle County, VA

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Mathematics at the University kept up a correspondence with McCormick in the years between the offer and the telescope's delivery. The Chicago Fire which destroyed much of McCormick Harvesting Machine Company and the financial panic of 1873 delayed McCormick's gift.

Professor Ormond Stone served as the first director of the observatory from 1882 until 1912 and oversaw its construction. The Wilson Brothers, Civil Engineers and Architects, of Philadelphia, designed and built the observatory. Worcester Warner and Ambrose Swasey of Cleveland, Ohio were the manufacturers of the dome with its three six-foot apertures and circular track system that allowed it to be easily turned. The dome design was the first of its kind and was patented by Warner and Swasey. *Scientific American* reported in 1884 that "if this ease of motion continues as the dome grows old, it is certainly a remarkable piece of engineering work." Over 100 years later, the dome still revolves easily.

The 45-foot dome contained a 26 $\frac{1}{4}$ -inch refracting telescope. Mantois and Sons of France cast the glass for the lenses. It was then shipped to Alvan Clark & Sons of Cambridgeport, Massachusetts, who ground the lenses. Clark & Sons had also produced the lenses for the U.S. Naval Observatory's 26-inch telescope, about the same time, but that lens contained a major flaw. The delays in the production of the McCormick telescope allowed it to be produced with an additional correction to eliminate a similar flaw.

The telescope was then sent to Charlottesville by rail and carried up Mt. Jefferson by horse-drawn wagon. The building was completed in 1884 when the telescope was installed. The formal dedication of the observatory took place on Thomas Jefferson's birthday, April 13, 1885. The keynote speaker was Professor Asaph Hall from the United States Naval Observatory who placed the significance of the McCormick Observatory telescope in the context of a booming scientific era. Charles M. Blackford of the University's Society of the Alumni celebrated the completion of the observatory as the realization of Thomas Jefferson's dream for the University.

The finished observatory consisted of the dome room and computing rooms with a library, clocks, chronographs, seismographs and other equipment. The observatory has been expanded several times for increased use and to provide broadened programs. An additional small observatory, a windowless brick building with a roof that slides off onto a rack, houses a second telescope nearby.

A two-story brick residence for the director was built to the northeast. A small wooden transit

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**McCormick Observatory
Albemarle County, VA**

Section 8 Page 7

house and dome to the southwest and a wooden cottage down the hill to the northwest completed the original complex. The frame buildings no longer exist.

According to Dr. Edward Murphy, Professor in the Department of Astronomy at the University of Virginia and historian for the observatory, the McCormick telescope, when installed, was the largest telescope of its kind in the United States, and second largest in the world (only surpassed by a telescope in Vienna). Over the span of eighty some years until satellite astronomy came into use in the 1980s and 1990s, the visual refractor telescope at the McCormick Observatory was responsible for fully one-third of the approximately 10,000 stars identified up to that time by astronomers in the world.

In the late 1960s, a new facility was constructed on Fan Mountain nineteen miles south of Charlottesville, because of the increase of light at night around Charlottesville. The original observatory is now used to train undergraduates and graduate students in observational astronomy. It is also open to the public several nights each month.

Alden House, named for the third director of the observatory, Harold Alden, was built to be the residence of the observatory director. The Rectors and Visitors of the University appropriated \$5,000 for its construction in 1882. Leander McCormick provided additional funds for the house. George W. Spooner, architect and builder of Charlottesville, built the house, based loosely on designs drafted by Wilson Brothers, who built the observatory. The house was ready for habitation by fall of 1883. The house continued to serve as the residence of the director until the 1970s. It is still used for University housing.

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McCormick Observatory
Albemarle County, VA

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Major Bibliographical References:

Dabney, Virginius. *Mr. Jefferson's University: A History*, Charlottesville: University Press of Virginia, 1981.

Department of Astronomy, University of Virginia website:
<http://www.astro.virginia.edu/research/observatories/26inch/history/building.html>.

Lakadat, Adrienne and Elizabeth Hughes. *Leander McCormick Observatory*, Charlottesville: University of Virginia, School of Architecture, 1990.

Murphy, Edward, Ph.D., Assistant Professor, Department of Astronomy, University of Virginia. Comments to DHR State Review Board member, Madison Spencer.

Olivier, Charles F. "History of the Leander McCormick Observatory Circa 1883 to 1928"
Publications of the Leander McCormick Observatory of the University of Virginia, Vol. XI, Part XXVI, Charlottesville, Virginia, 1967.

Wilson, Richard Guy and Sara A. Butler. *The Campus Guide: University of Virginia*. New York: Princeton University Press, 1999.

Verbal Boundary Description

The nominated property (a 1.27-acre parcel) is identified as parcel 07600-00400 on the tax maps of Albemarle County, Virginia.

Boundary Justification

The land included in the nomination includes all the historic features directly associated with the McCormick Observatory.

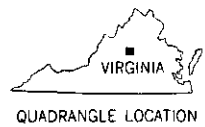


2'30"
4213
SHADWELL 6 MI. TO U.S. 15
16 MI. TO U.S. 15
McCormick
Observatory
Albemarle Co., VA
UTM Reference:
Zone 17
E: 717432
N: 4212094
4211
SHADWELL 6 MI. RICHMOND 70 MI.
4210
4209000m N.
38°00'
78°30'

32'30" 716 717 718 719000m E 78°30'

ROAD CLASSIFICATION

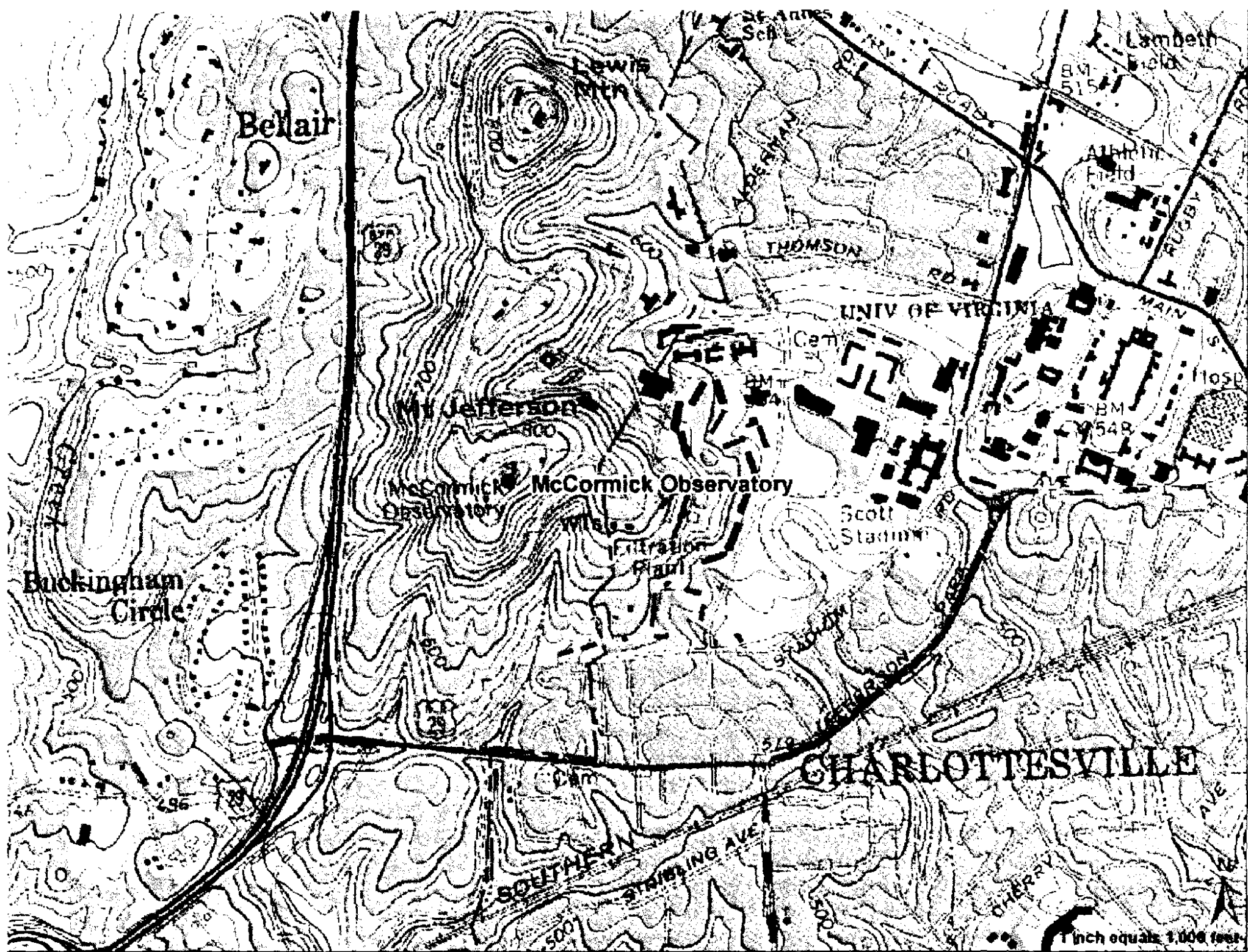
- Primary highway, hard surface
- Secondary highway, hard surface
- Light-duty road, hard or improved surface
- Unimproved road
- Interstate Route
- U. S. Route
- State Route



CHARLOTTESVILLE WEST, VA.
N3800—W7830/7.5

1973
PHOTOREVISED 1978
AMS 5260 II SE—SERIES V834

(SIMEON)
5359 IV NW



Bellair

Lewis

Lambeth Field

Albright Field

THOMSON RD

UNIV OF VIRGINIA

Jefferson

McCormick Observatory

Scott Stadium

Buckingham Circle

CHARLOTTESVILLE

SPARTANBURG AVE

1 inch equals 1,000 feet