1. NAME OF PROPERTY

Historic Name: **CINCINNATI OBSERVATORY**

Other Name/Site Number:

2. LOCATION

Street & Number: 3489 Observatory Place Not for publication: N/A

City/Town: Cincinnati Vicinity: N/A

State: Ohio County: Hamilton Code: 061 Zip Code: 45208

3. CLASSIFICATION

Ownership of Property		Category of Property	
Private:	__	Building(s):	X
Public-Local:	__	District:	__
Public-State:	X	Site:	__
Public-Federal:	__	Structure:	__
		Object:	__

Number of Resources within Property

Contributing	Noncontributing	
2	__	buildings
__	__	sites
__	1	structures
2	__	objects
4	1	Total

Number of Contributing Resources Previously Listed in the National Register: 2

Name of Related Multiple Property Listing: Buildings and Structures in Hamilton County, Ohio, Designed by Samuel Hannaford/Samuel Hannaford & Sons, 1858-1900 (1979).

4. STATE/FEDERAL AGENCY CERTIFICATION

As the designated authority under the National Historic Preservation Act of 1966, as amended, I hereby certify that this _X_ 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.

Signature of Certifying Official Date

State or Federal Agency and Bureau

In my opinion, the property ____ meets ____ does not meet the National Register criteria.

Signature of Commenting or Other Official Date

State or Federal Agency and Bureau

5. NATIONAL PARK SERVICE CERTIFICATION

I hereby certify that this property is:

___ Entered in the National Register
___ Determined eligible for the National Register
___ Determined not eligible for the National Register
___ Removed from the National Register
___ Other (explain): _____

Signature of Keeper Date of Action

6. FUNCTION OR USE

Historic: Education, Sub: Research

Current: Education Sub: Research

7. DESCRIPTION

ARCHITECTURAL CLASSIFICATION: Classical Revival

MATERIALS:
Foundation: stone
Walls: brick, stone
Roof: metal domed roof
Other: stone columns and trim

Describe Present and Historic Physical Appearance.

The Cincinnati Observatory lies at the end of Observatory Place, a block-long residential drive, which runs northward from Observatory Avenue. The 11-acre site includes two contributing buildings and a radio tower, which is non-contributing. The main building of the observatory is sited on axis at the north end of a circular driveway. Behind this building are two stone geodetic survey markers, which are contributing objects. A second observatory building, known as the O.M. Mitchel Building, sits on the east side of the circle.

Cincinnati Observatory Building

Designed by prominent Cincinnati architect Samuel Hannaford and constructed in 1873, this one-story brick building with limestone trim appears to be a late example of Classical Revival with elongated proportions more typical of Italianate. The facade is dominated by a three-bay prostyle portico, approached by stone steps. The portico features a plain entablature and modified Doric fluted columns, which are engaged with square rusticated stone piers at the ends. The pediment of the portico features a ball finial at the peak and an oculus within the gable. The central doorway, with paneled wood double doors in a simple stone surround, is surmounted by a stone plaque with raised letters reading: "Cincinnati Observatory, 1873."

The exterior brick walls rise from a high basement of coursed ashlar stone broken by small rectangular windows and capped by a raised water table. At the northeast corner, the foundation contains a cornerstone, which reads, "This corner stone/ was laid by/ JOHN QUINCY ADAMS/ Nov. 9, 1843/ Removed and Relaid/ MDCCCLXXIII." On the adjoining side the stone reads, "Cincinnati Astronomical Society/ FOUNDED/ May A. D. 1842."

The end elevations of the main block are each three-bays wide, and the side elevations of the portico wing each have a single window. The rear elevation is five-bays wide. The balustrade is interrupted on the rear by the wall of the base supporting the dome. The elongated windows have 6/6 double-hung sash and simple stone surrounds. In the front and rear of the west wing, the original openings have been partially filled in with brick masonry, creating tall narrow openings with sash consisting only of five vertical panes. The window sills are joined in a continuous string course. The flat roof is highlighted by a cast-iron balustrade at the parapet and pierced by paired interior end chimneys.

The distinguishing feature of the building is the high ribbed metal dome painted silver and resting atop a square base. The metal dome is "open" in the respect that it protects the viewing room from rain but not from the free movement of air. This is necessary to equalize the inside and outside temperatures so as not to create air currents that would obstruct clear astronomical observation. Originally the dome was a "cheese-box" type, being round on the side and flat on the top. This was removed in 1895 and replaced with the existing dome.

The dome is supported by circular brick walls which extend down through the building to the ground. The telescope pier, completely independent from the dome structure, rests on its own foundations extending 8-1/2 feet below ground level. The pier is a tapered brick cylinder, 9-1/2 feet in diameter at the base. At the top it supports the cast-iron base of the

telescope mounting, which is 4-1/2 by 4 feet. At no place does the building touch the central pier, so as not to transmit any vibrations to the telescope; thus the walls are independent of the telescope mounting. At present the building houses a 16-inch refractor telescope built by Alvan Clark & Sons in 1904.

On the interior, a reception room leads from the portico to the central rotunda, which is divided into a library and two small offices by a recent partition. The west wing has a single space known as the "Meridian Circle Room." The east wing, once a single space, has been divided into two rooms for additional library space and a computing room. Numerous pieces of the original furniture remain in the building, including a table, desk and chairs. The building remains in its original condition, except for the 1895-vintage dome, the windows in the west wing and the recent interior partitions.

O.M. Mitchel Building

The O.M. Mitchel Building, located to the southeast of the Cincinnati Observatory, is a smaller 5-bay, brick building. Built into a slope, the building has one-story in front and two stories in the rear. The plan is made irregular by a large domed turret in the center of the rear elevation and a smaller turret with a conical cap at the northeast corner. When a new 16-inch refractor telescope was acquired for the observatory in 1902, it was installed in the 1873 building. In 1904 the Mitchel Building was built to receive the refractor lens that had been installed at Mount Adams in 1845. Originally a 12-inch lens, it was refigured in 1876 by Alvan Clark & Sons into an 11-inch lens after suspected errors in the lens were confirmed. The rear portion of the Mitchel Building, including both turrets, was built first. The front portion, which added a lecture hall and library, was completed in 1908.

Designed by the Cincinnati architectural firm of Samuel Hannaford and Sons, the building is a modest example of the Neo-Classical style. The main feature of the symmetrical facade is the slightly projecting entrance pavilion, which is emphasized with a dentilled entablature supported by smooth stone pilasters and two stone columns of the Doric order. The low pediment above the entrance is capped with anthemia and contains a stone plaque with incised letters reading, "O. M. MITCHEL BVILDING." Stone steps lead to the recessed doorway with double glass doors and elliptical transom within a stone archivolt.

The base is coursed rock-faced ashlar capped with a smooth stone water table. The brick walls, laid in common bond, feature brick quoining at the corners. The windows have mostly one-over-one double-hung sash and flat arches punctuated by keystones. The flat roof is enclosed by a parapet with stone coping and a dentilled cornice. The south elevation consists of a two-bay end wall, and a single-bay setback; all three window openings have been bricked up. The rear elevation consists of roughly four bays with irregularly placed masonry openings with single pane and one-over-one wood window sash. The north elevation consists of four bays, including the corner turret. The building remains in its original condition, except for the three windows that have been closed up.

On the interior, one enters through the front porch into a central hall. The hall connects with the lecture room on the south, the observatory on the east, and a library, toilet rooms, on the north, and a study in the turret at the northeast corner.

Recent Alterations

In the early 1980s, the roofs of both observatory buildings were restored. The domes were recaulked and sealed to protect the instruments. The telescopes were also cleaned, polished and restored to their original condition. Most of the large astronomy library was removed to protect the books from the humid environment. About 500 books, dating from the early 1800s to the present, still remain in the observatory library.

The Cincinnati Observatory, as represented in the Observatory Building constructed in 1873 and the O.M. Mitchel Building, retains integrity of design, association, feeling, workmanship, form, material and setting.

A radio tower, located near the northwest corner of the property is counted as a noncontributing structure because it does not share the same historic associations with the other contributing resources.

8. STATEMENT OF SIGNIFICANCE

Certifying official has considered the significance of this property in relation to other properties:
Nationally: X Statewide: _ Locally: _

Applicable National Register Criteria: A X B X C X D _

Criteria Considerations (Exceptions): A _ B _ C _ D _ E _ F _ G X

NHL Criteria: 1, 2

NHL Criteria Considerations: 8

NHL Theme(s): VI. Expanding Science and Technology
1. Experimentation and Innovation
2. Technological Applications
3. Scientific Thought and Theory

Areas of Significance: Education
Science
Architecture

Period(s) of Significance: 1873-1978

Significant Dates: 1873, 1904, 1947

Significant Person(s): Herget, Paul

Cultural Affiliation: N/A

Architect/Builder: Cincinnati Observatory: Hannaford, Samuel
O. M. Mitchel Building: Samuel Hannaford and Sons

Historic Contexts:

XIII. Science
A. Physical Science
1. Astronomy

State Significance of Property, and Justify Criteria, Criteria Considerations, and Areas and Periods of Significance Noted Above.

Statement of Significance

The Cincinnati Observatory is nationally significant for its association with individuals, institutions and events related to the science of Astronomy. It meets NHL Criterion 1 for the role it has played in the field of American astronomy. In the late-nineteenth century, the Cincinnati Observatory was known worldwide for its endeavors in the field of proper motions, gravitational studies and sidereal astronomy, including double stars, nebulae and clusters. It is nationally and internationally significant for the publication of Stellar Proper Motions and its participation in the International Geodetic Association. It is nationally significant for its association with Paul Herget who was director of the Observatory from 1946 to 1978. Under Herget's leadership, the Cincinnati Observatory was the home to the International Minor Plant Center. It meets the test of extraordinary national significance (Criterion Exclusion 8) for its contributions to the U.S. space program and orbit calculations.

Historical Background

The Cincinnati Observatory, founded in 1943, is among the oldest functioning professional observatories in the United States. In that year, Cincinnati's first observatory was constructed on Mount Adams by the Cincinnati Astronomical Society (1843-1870). The original telescope was the largest in the US and the second largest in the world at that time. In 1873 the University of Cincinnati inherited both the physical assets of the original observatory and its astronomical culture and heritage. In order to maintain the prominence of the observatory, the University relocated the institution and equipment to a new building at the present site on Mount Lookout, just off Observatory Avenue. The University built the second observatory building at the present site in 1904.

The original observatory on Mount Adams (demolished) was the first professional observatory in the Midwest and was associated with the productive careers of such famous American astronomers as Ormsby MacKnight Mitchel (1809-1862) who published the *Sidereal Messenger*, the first attempt to bring astronomy to the masses in the United States, and with Cleveland Abbe (1838-1916), a meteorologist who instituted daily weather bulletins in 1869. Abbe's work proved most popular with the American public and led directly to the creation in 1870 of the federal agency that became the National Weather Bureau.

Paul Herget (1908-1981), the world's foremost authority on the computation of planetary orbits, served as director of the Cincinnati Observatory from 1946 to 1978. Under his leadership, the observatory became the original location of the Minor Planet Center, which was officially founded in 1947 by the International Astronomical Union. For the work he initiated and carried out at the Cincinnati Observatory, Herget was elected to the National Academy of Science in 1962, becoming only the sixth Ohioan to receive that honor. Herget

also headed the Vanguard Satellite Computer Center and brought the observatory national and international recognition during the mid-20th century.[1]

Founding and Early Years of the Cincinnati Observatory as an Institution

Early in the nineteenth century there was considerable interest in astronomy throughout Europe. Observatories were being built across the continent. U.S. President John Quincy Adams, who had been exposed to this growing phenomenon in his European travels, attempted to have Congress appropriate funds for an observatory. His attempts were thwarted but did not go unnoticed by Ormsby MacKnight Mitchel, a Cincinnati astronomer, who singlehandedly undertook a three-year effort to raise funds from the residents of Cincinnati. These original donors, many of them prominent citizens, became the Cincinnati Astronomical Society, which exists to the present time with a current membership of approximately 200. On November 9, 1843, at Mitchel's instigation, John Quincy Adams, then over 77 years old, gave the dedication address and laid the cornerstone of the observatory. The hilltop on which the observatory was located was renamed Mount Adams in his honor. By June 1845 the building was complete and its telescope in place.

Ormsby MacKnight Mitchel was appointed as the first director of the observatory. Under his leadership, the observatory was used for astronomical research and for general viewing and educational purposes. From 1845 to the start of the Civil War, the Cincinnati Observatory was reputed to be the best equipped in the United States, and Mr. Mitchel stood among the notable astronomers of the world. When the Civil War broke out, Mitchel went to fight on behalf of the Union. An 1829 graduate of West Point (in the same class as Robert E. Lee), he had kept involved with the army since his graduation. After several successful campaigns, he became a Major General in 1862, but died that year of yellow fever.

After Mitchel, the observatory had several other notable directors. Cleveland Abbe, director from 1868 to 1870, established a system of daily weather reports and storm predictions, having secured the cooperation of observers stationed at various points throughout the country making observations at specific times and telegraphing their information to Cincinnati. Professor Abbe then used this information to issue daily weather bulletins. This service proved so popular with the public that the federal government initiated the United States Signal Service, headed by Professor Abbe, to continue weather observations. This work eventually led to the establishment of the National Weather Bureau (now the National Oceanic and Atmospheric Administration).

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[1] Most of the material in this form was adapted from the following sources: Fred Mitchell, "National Register of Historic Places Inventory-Nomination Form--Observatory Historic District." (Cincinnati, Ohio: Miami Purchase Assn., 1976); David Baab, Mike Habel, and Arch Pelley, "The Cincinnati Observatory--Birthplace of the United States Weather Service." Unpublished student paper, Historic Preservation Lab, University of Cincinnati, 1978; *The Centenary of the Cincinnati Observatory*. Cincinnati: Historical and Philosophical Society of Ohio and the University of Cincinnati, 1944; Donald E. Osterbrock & Kenneth P. Seidelmann, "Paul Herget, Jan. 30, 1908 - Aug. 27, 1981," *Biographical Memoirs of the National Academy of Sciences*, 57 (1987), 59-86.

The Middle Years: 1873-1946

By 1870 the City of Cincinnati's growth and development had overtaken the once open location of the observatory and, because of smoke and other visual factors, the Mount Adams location had become unsuitable for serious astronomical research. In 1872 the Observatory became part of the University of Cincinnati. With the urging of Professor Abbe, plans were established to relocate the facility in order to maintain its prominence. Mr. John Kilgour, a successful businessman, donated four acres of land and $10,000 towards the construction of a new observatory and equipment. Additional funds were secured, and the new observatory was erected at Mount Lookout in 1873.

The succeeding directors of the University Observatory, Ormond Stone (1873-1884), Jermain G. Porter (1884-1930), Everett I. Yowell (1930-1940), and Elliott Smith (1940-1943) capably guided the observatory in its principal research activity of stellar proper motion studies and re-established public astronomical programs. The proper motion studies extended the original work that was performed by Mitchel, and they markedly contributed towards our current understanding of the structure of the universe.

Ormond Stone continued the double star study begun by Mitchel and initiated the University's first Summer School Program. He established local standard time for farmers, businesses, railroads etc. with the support of John Kilgour whose company, City and Suburban Telegraph and Telephonic Exchange, donated telephone and telegraph capabilities. During his directorship, with little assistance, he published four volumes of work.

The observatory's principal scientific contribution, until about 1940, consisted of publishing Stellar Proper Motions. These publications recorded the apparent angular rate of motion of a star across the line of sight from earth, as measured on the celestial sphere. The methodical, precise, and laborious process of obtaining and recording relevant data yielded results on only dozens of stars a month. Factors limiting the production rate included: access to only one meridian circle telescope, the limited availability of clear skies, repeated measurements necessary to assure accurate results, and manual calculation of the data.

The astronomical importance of these proper motion studies cannot be overstated. The acquired data provided a base from which the structure and rotation rate of the Milky Way galaxy were determined. Its data also provided the frame of reference for determining modern cosmological theories, such as the "Big Bang," which attempts to describe the universe's origin and structure. Proper motion involves the timing or estimating a star's rate of speed and position relative to earth, comparing it with similar observations made earlier. Stars measured centuries earlier and recorded in catalogues named for their principal observers, were re-measured every fifty or one hundred years with more modern equipment. Director Jermain G. Porter's work was truly monumental; he published data on over 20,174 total stars as well as works on comets, nebulae and latitude variations. In 1894, he won the Comet Medal from the *Astronomical Journal* for a comet discovered with an instrument made in the Cincinnati Observatory building.

A second significant scientific contribution by the observatory was its role in geodetic surveys. By 1881, Porter was participating in the U.S. Coast and Geodetic Survey, which is reflected by a

pair of three-foot-high stone latitude markers standing just north of the Cincinnati Observatory building. With the formation of the International Geodetic Association in 1899, Cincinnati joined four other observatories around the world located along the thirty-ninth parallel in an effort to define more exactly the wandering of the north pole. In 1919, this group was merged to form the International Astronomical Union that took part in scientific programs of the League of Nations. The result of the survey was subsequently incorporated on terrestrial maps.[2]

Porter believed that public astronomical programs were beneficial to moral character, and he conducted free lectures in city libraries to acquaint people with astronomy. He also taught general astronomy courses at the University, and these courses were continued by his successors until World War II. Yowell and Smith extended their lectures to speaking engagements throughout the city and to a newspaper column on astronomy, which continued until 1959. They also founded the Observatory Club in 1930 and attempted to consolidate local amateur astronomical groups in 1942.

The Herget Years: 1946-1978

The Cincinnati Observatory enhanced its national and international prominence through its association with the productive career of astronomer Paul Herget (1908-1981), who served as director from 1946 to his retirement in 1978. His reputation was such that he attracted two prominent Europeans to Cincinnati whose capabilities to continue their scientific work had been largely destroyed during the war. They were Dr. Eugene Rabe of the Rechen Institute in Berlin, and Dr. Peter Munsen from Belgrade. They augmented the development of the Minor Planet Center. Dr. Rabe is noted for his calculation of the Astronomical Unit - the basic unit of measurement within the solar system.

When Herget began his work there as an assistant to the director of the observatory in 1931, the 11-inch and newer 16-inch refractors were no longer significant research instruments, and the main program of the observatory was the accurate meridian-circle measurements of the positions of stars to determine their proper motions. On the recommendation of his mathematics professor Paul Herget was hired to reduce these observations by analyzing data already collected.

Herget's research focused on orbit computations and the use of computer programs which were not readily available for these purposes at the time. He was very resourceful, making use of local industries to provide access to their computers. Herget built his research on the work of Cincinnati mathematician Louis Brand, who emphasized the power of vectors to express complicated mathematical formulae in simple terms. In 1935 Herget completed his thesis on the computation of orbits almost entirely without advice or direction, and earned his Ph.D.

In 1936 Herget undertook the project of determining the orbit of one of the minor planets discovered by James C. Watson. As an American pioneer in the study of asteroids, Watson had left in his will an endowment fund to support research on the asteroids that he had found. Aethra

[2] Charles H. Woodward, "The History of the Cincinnati Observatory Since 1870," A Dissertation submitted to the Graduate School of the University of Cincinnati in Partial Fulfillment of the Requirements for the Degree of Master of Arts, 1966, p. 54.

(132)--the most difficult asteroid to plot because it had the largest eccentricity--was the one Herget tackled first. After he completed the calculation of its orbit he continued to work on one minor planet at a time, in cooperation with the Rechen Institut in Berlin, the world center for minor planets. In his research he first used old hand-operated mechanical desk calculators, but within a few years he began to make his observations on punched cards so that all computations could be carried out on punched-card equipment.

With the arrival of World War II, Herget took a sabbatical from the Cincinnati Observatory to work at the Nautical Almanac Office at the U.S. Naval Observatory, where he prepared parts of the *American Ephemeris* and *Nautical Almanac* by means of the punched-card computer equipment. While working on these projects Herget made a major contribution to the War effort using the experience he gained (calculating the orbits of minor planets/asteroids) at the Cincinnati Observatory; he formulated a method to track down German submarines on patrol in the Atlantic.

By 1943 the Allies reportedly had 108 listening posts around the world to pick up enemy radio signals (which would form triangular patterns with the listening posts). Since German submarines would radio their headquarters when they sighted Allied convoys, Herget tabulated the solutions to a quarter of a million spherical triangles with the help of the new punch-card computer equipment. These solutions were then used to pinpoint the locations of enemy submarines to within five miles. Once this information was known, destroyers could quickly locate and destroy enemy submarines. Herget compiled the technique he had developed into a "submarine book" for the Navy. After this book was printed and distributed to the Navy, losses of Allied convoys declined dramatically. This work by Herget contributed significantly to the Allies gaining control of the Atlantic Theater during World War II.

After the War Herget returned to the Cincinnati Observatory to continue his research on orbital calculations of minor planets/asteroids. Because of his experience at the Naval Observatory with the punch-card equipment, Herget was able to calculate the orbits of many asteroids very accurately in a short amount of time. He was the first to use a computer to calculate these orbits. Based upon his observations, dating back to 1939, Herget was able to compute the orbits of those minor planets as well. By 1947, with the support of the Astronomical Union, Herget established the International Minor Planet Center at the Cincinnati Observatory. From 1947 until he retired in 1978, the Cincinnati Observatory published 4,390 *Minor Planet Circulars* as well as an advanced text book, *The Computation of Orbits*, one of the first astronomy texts using vector notations for orbital calculations.

As President Eisenhower was announcing America's entrance in the space program in 1955, Herget, working with IBM, set up the computer programs for calculating the orbits for Mercury launches. Then, in response to the launching of the satellite Sputnik, the University of Cincinnati established its Institute of Space Sciences, with Herget as Director.
Herget also acted as an advisor to Gerard P. Kuiper, America's foremost solar system astronomer, who organized the survey that provided statistical data on minor planets as faint as sixteenth magnitude. Later he participated in the Palomar-Leiden survey that extended these statistics down to twentieth magnitude.

Over the course of his long professional life, Paul Herget received many honors. In 1962 he became the sixth Ohioan to be elected to the National Academy of Sciences. The University recognized his outstanding research work by appointing him a fellow of the Graduate School. In 1965 he received the title of Distinguished Professor of the University of Cincinnati. Only one other faculty member had a similar appointment--Albert B. Sabin, the developer of the polio vaccine. When he retired, the University awarded Herget an honorary Sc.D. degree.

Over the years, Paul Herget became well known as an outstanding practitioner of a very specialized but highly important branch of astronomy. His orbit calculations were widely known, trusted and used. He was not only an expert at numerical computation, but a skilled theoretician with the insight necessary to cast practical astronomical problems into forms well suited for the newly emerging computer technology of the 1940s and 1950s. During his lifetime, Herget converted the Cincinnati Observatory, at a poor site, without a large telescope or significant funding, into an important research center, known throughout the world for its scientific achievements.

Recent Years

In 1979 the observatory formally became part of the Physics Department of the University of Cincinnati. Under the supervision of the Physics Department, some needed restoration began on the buildings. Since that time, the observatory has remained in operation, mainly as a public facility to promote interest and understanding of astronomy through regularly scheduled public lectures and telescope-viewing sessions. The observatory also offers classes to the public through the university. The 11-inch refractor telescope that Mitchel installed in 1845 and the later 16-inch refractor telescope are both used as educational tools and are enjoyed by thousands of students and visitors every year.

Samuel Hannaford, Architect

Samuel Hannaford (1835-1911) was the best-known and probably most prolific of Cincinnati's 19th-century architects. His firm was surely also the longest-lived--from 1857 to the 1960s--with members of the Hannaford family active until after World War II. Few if any, Cincinnati architects have had a greater impact on the architecture of Cincinnati and surrounding cities. The firm's work was in demand over an area extending from Cleveland on the north to Nashville and Chattanooga on the south and from central West Virginia to Illinois. Although no complete list of their works is available, the total number of the firm's commissions is probably well over 1,000, including residences, clubs, churches, commercial buildings and institutions.

Samuel Hannaford came from England to Cheviot, west of Cincinnati, at the age of 10 with his parents. He was educated at the Farmers' College in College Hill, apprenticed to Englishman John R. Hamilton, and practiced on his own for a year before joining Edwin Anderson as Anderson & Hannaford. This partnership, which lasted from 1858 to 1870, was responsible for well over 100 buildings, including the Cincinnati Work House (one of the most important buildings of its type in America and recently demolished). Hannaford practiced alone from 1871 to 1874, then took on Edwin R. Procter, perhaps for the specific purpose of the ambitious competition-winning design of the Cincinnati Music Hall, in which Ware & Vanbrunt of Boston also competed.

Hannaford then practiced under his own name for a decade, changing the firm name finally to S. Hannaford & Sons in 1887. At this time, his sons Charles E. and Harvey Eldridge became partners. A grandson, H. Eldridge Hannaford, joined the firm in 1912, apparently remaining about 50 years; and another grandson, Samuel Hannaford (II) (ca. 1891-1981) practiced with the firm for much of his long life.

In addition to his architectural practice, Hannaford was a charter member of the Cincinnati Chapter of the American Institute of Architects, founded in 1870. From 1882 to 1903 he was Winton Place's first and only mayor, after which the community was annexed by Cincinnati in 1903. Beginning in 1887, he was associated with the Ohio Mechanics Institute as an officer and teacher. Hannaford also served later in life as the editor of *The Western Architect and Builder*, a periodical dealing with news of architecture in the Midwest.

Samuel Hannaford retired effectively, with a few exceptions such as his final work, the Methodist Home in College Hill, about 1895, although he remained active almost until his death in 1911. Throughout his career, beginning with the Cincinnati Work House commission or even earlier, Hannaford seems to have been adept at political connections and winning competitions. He was extremely skilled as an interpreter of historic architectural styles, particularly the Romanesque Revival and Neo-Classical styles.

The Cincinnati Observatory buildings are representative of the numerous institutional and public commissions undertaken by the firm, including Cincinnati Music Hall (1876-1879), College Hill Town Hall (1886), Cincinnati City Hall (1888-1893, designated as a NHL in 1974), the Hamilton County Memorial Building (1908) and the Ohio Mechanics Institute and Emery Auditorium (1909-1912). The observatory buildings were listed in the National Register in 1979 along with 54 other buildings in a thematic nomination, entitled, "Buildings and Structures in Hamilton County, Ohio, Designed by Samuel Hannaford/Samuel Hannaford & Sons, 1858-1900." The observatory buildings are also included in the Observatory Historic District, which was listed in the National Register in 1976 and a local district designated in 1993.

David Levy, internationally known for his role in the recent discovery of Comet Shoemaker-Levy 9, the comet that crashed into Jupiter, described the Cincinnati Observatory as "One of the most beautiful observatory buildings I have ever seen, the structures and their instruments are historic treasures for the astronomers who run them, as well as for the more than 1.8 million residents of this city."[3]

[3] David H. Levy, "Cincinnati Astronomical History," *Sky and Telescope*, 94, 2 (August 1997), p. 75.

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Previous documentation on file (NPS):

__ Preliminary Determination of Individual Listing (36 CFR 67) has been requested.
X 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
X University
__ Other (Specify Repository):

10. GEOGRAPHICAL DATA

Acreage of Property: 11

UTM References: Zone 16

A: Easting 722620 Northing 4335260 B: Easting 722860 Northing 4335240
C: Easting 722860 Northing 4335120 D: Easting 722620 Northing 4335120

Verbal Boundary Description:

Beginning at the southwest corner of Lot 69 on Avery Lane; thence east 846.95'; thence north for 380'; thence west for 759.15'; thence southwest for 280' along the curve of the west line of lot 69; thence south 120' to the point of beginning.

Boundary Justification:

The boundaries are those of two large parcels owned by the University of Cincinnati including the two buildings of the Cincinnati Observatory and adjacent open space.

11. FORM PREPARED BY

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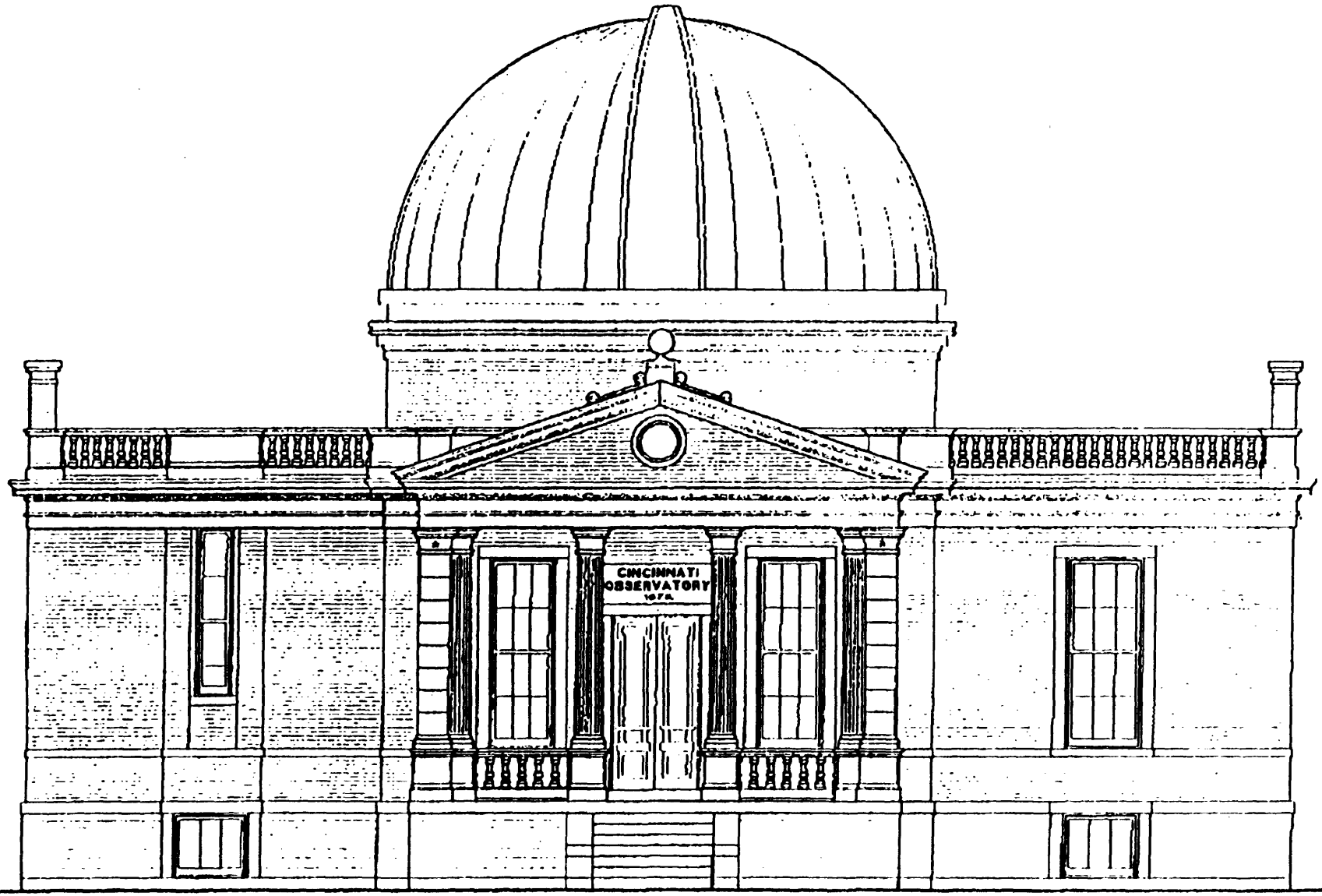
Cincinnati Preservation Association
342 West Fourth Street, Cincinnati, OH 45202

*with assistance from John Bevan, Patricia Bevan, Ann Flanagan, Robert A. Flischel, Gregory T. Huber, Paul Nohr, Walter E. Langsam, Michael L. Sitko and John E. Ventre.

Telephone: (513) 721-4506

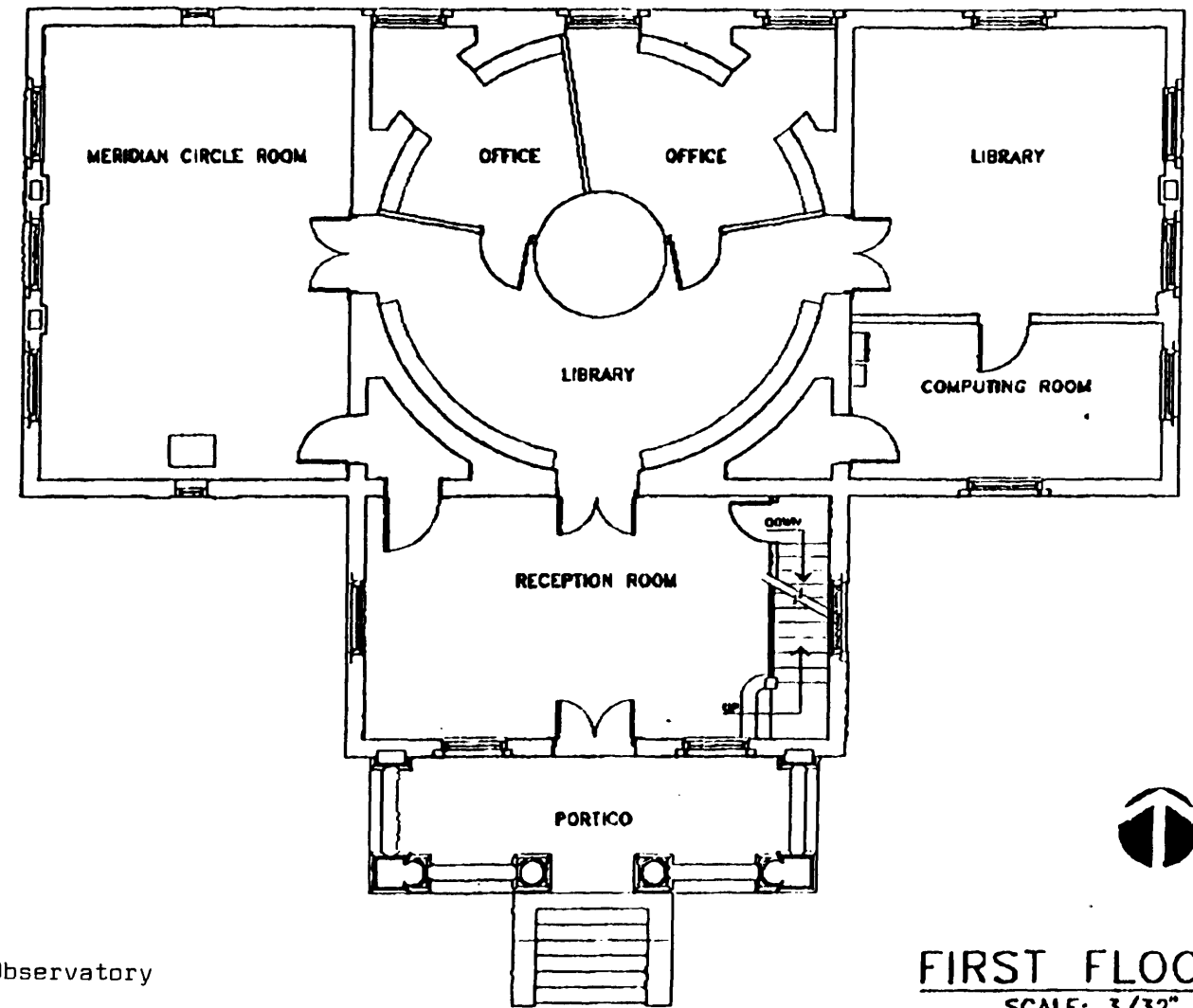
Date: July 30, 1997



Cincinnati Observatory

SOUTH ELEVATION

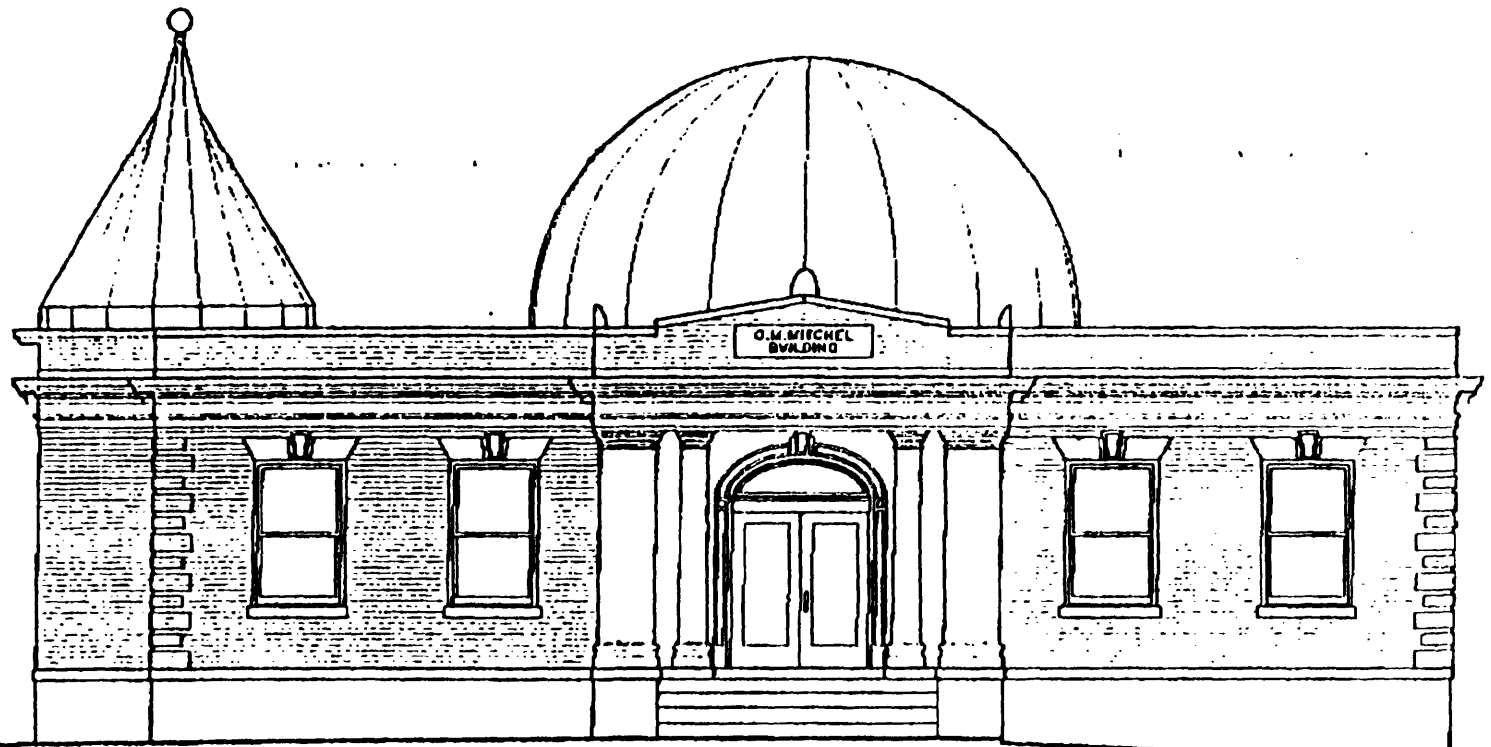
SCALE: 1/8" = 1'-0"



Cincinnati Observatory

FIRST FLOOR PLAN

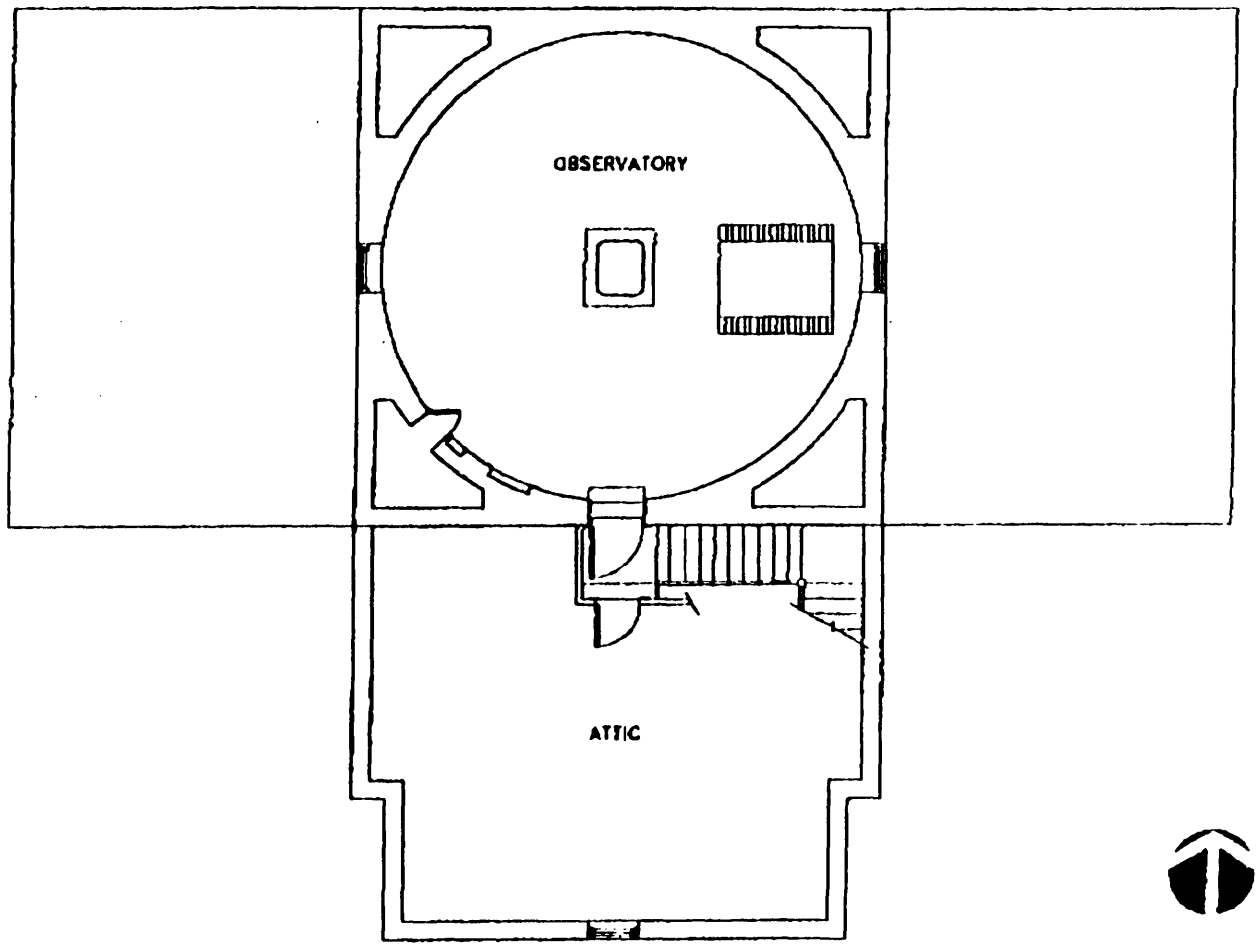
SCALE: 3/32" = 1'-0"



Cincinnati Observatory
O.M. Mitchel Building

WEST ELEVATION

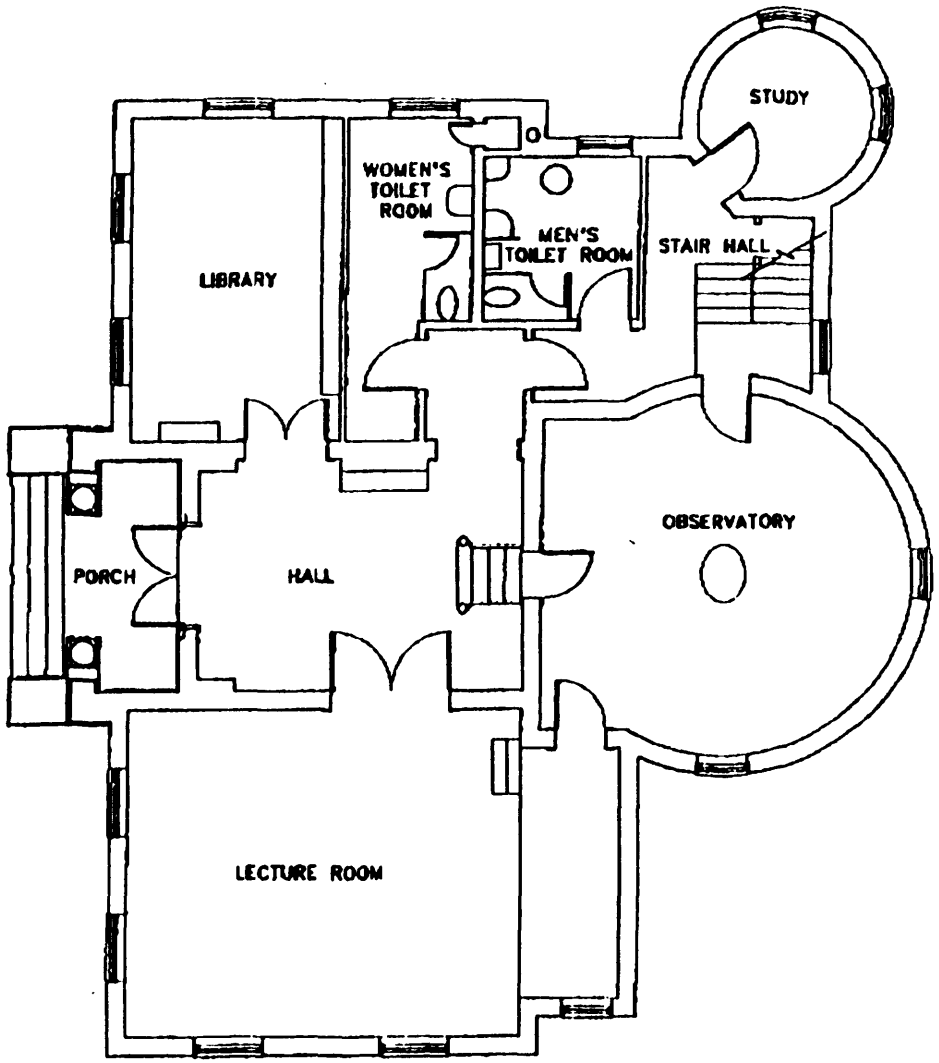
SCALE: 1/8" = 1'-0"



Cincinnati Observatory

SECOND FLOOR PLAN

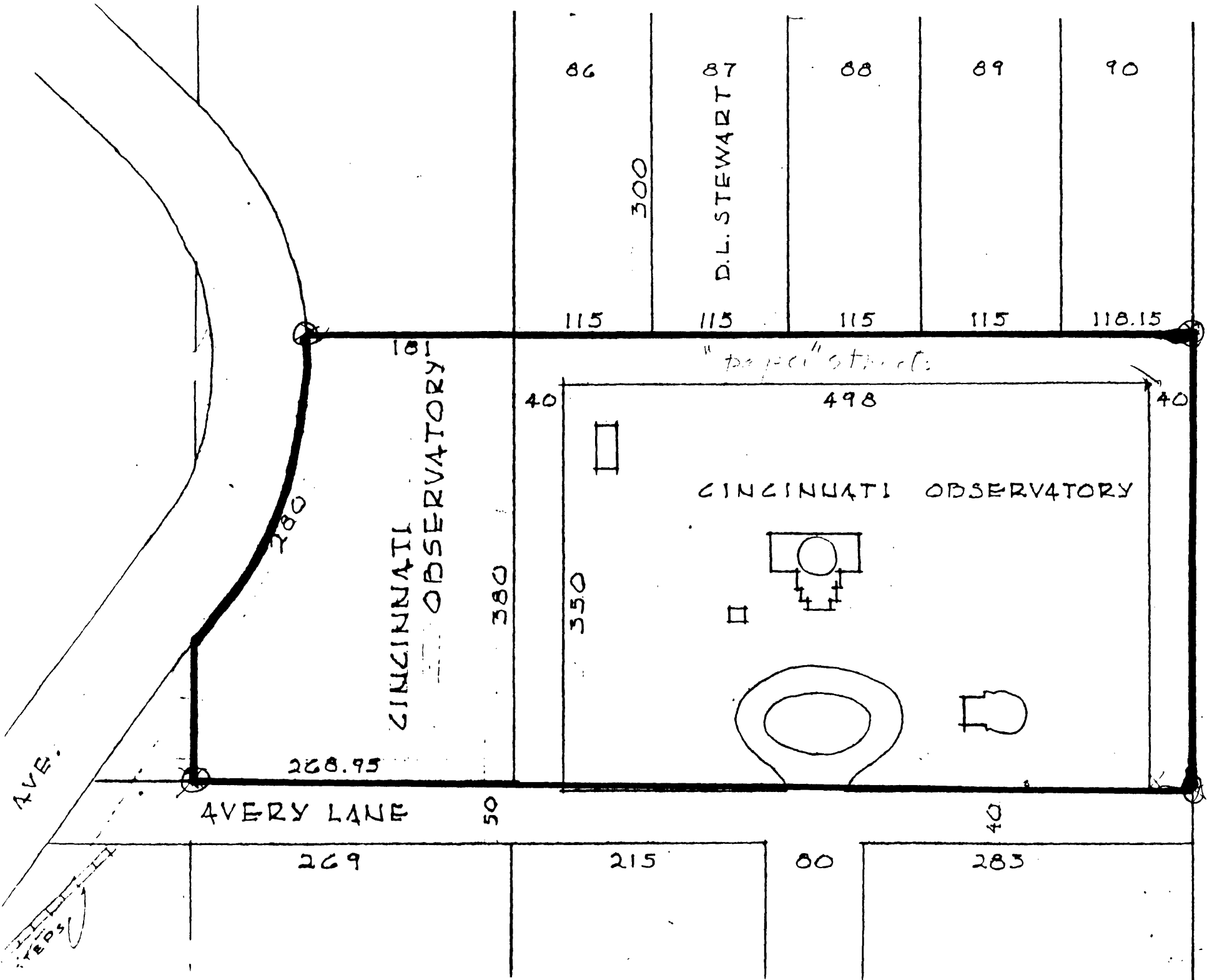
SCALE: 3/32" = 1'-0"



FIRST FLOOR PLAN

SCALE: 3/32" = 1'-0"

Cincinnati Observatory
O.M. Mitchel Building


86
87
88
89
90
300
D.L. STEWART
115
115
115
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118.15
181
"to-be-cl" st
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498
40
CINCINNATI OBSERVATORY
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CINCINNATI OBSERVATORY
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AVE.
AVERY LANE
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40
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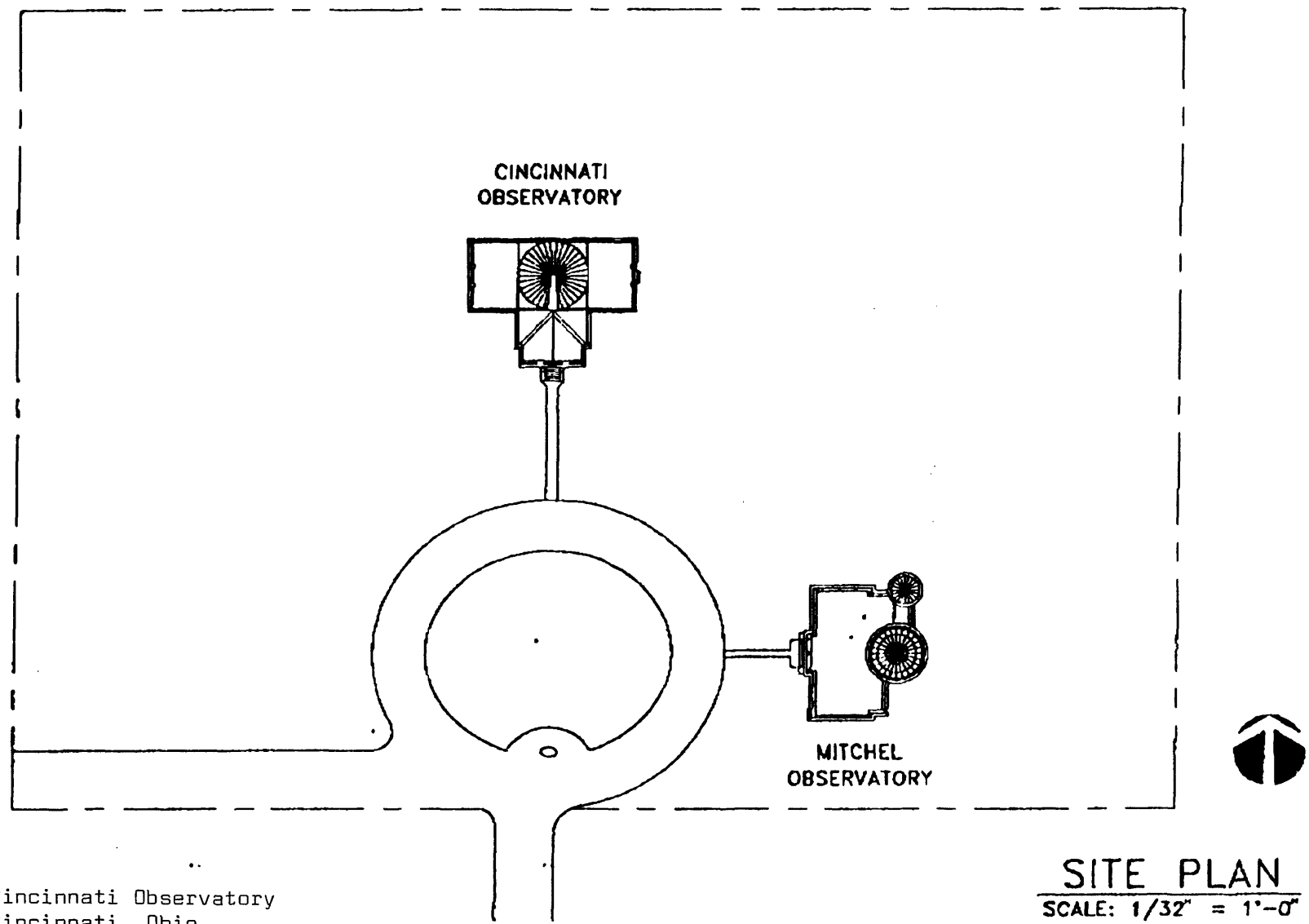
283



Cincinnati Observatory
Cincinnati, Ohio

SITE PLAN
SCALE: 1/32" = 1'-0"