**1. NAME**

**HISTORIC** Lilly Biological Laboratories

**AND/OR COMMON** Eli Lilly and Company, Greenfield Laboratories

**2. LOCATION**

**STREET & NUMBER**
U.S. Highway 40 West of Greenfield, Indiana

**CITY, TOWN** Greenfield

**STATE** Indiana

**3. CLASSIFICATION**

**CATEGORY**
- DISTRICT: X
- BUILDING(S): _
- STRUCTURE: ___
- SITE: ___
- OBJECT: ___

**OWNERSHIP**
- PUBLIC: ___
- PRIVATE: X
- BOTH: ___

**STATUS**
- OCCUPIED: X
- UNOCCUPIED: ___
- WORK IN PROGRESS: ___
- ACCESSIBLE IN PROCESS: ___
- BEING CONSIDERED: ___

**PRESENT USE**
- AGRICULTURE: ___
- COMMERCIAL: ___
- PARK: ___
- EDUCATIONAL: ___
- PRIVATE RESIDENCE: ___
- ENTRANCE: ___
- GOVERNMENT: ___
- RELIGIOUS: ___
- SCIENTIFIC: ___
- TRANSPORTATION: ___

**4. OWNER OF PROPERTY**

**NAME** Eli Lilly and Company

**STREET & NUMBER** 307 E. McCarty Street

**CITY, TOWN** Indianapolis

**STATE** Indiana

**5. LOCATION OF LEGAL DESCRIPTION**

**COURTHOUSE** Hancock County Courthouse

**STREET & NUMBER** Public Square

**CITY, TOWN** Greenfield

**STATE** Indiana

**6. REPRESENTATION IN EXISTING SURVEYS**

**TITLE** None

**DATE** None

**DEPOSITORY FOR SURVEY RECORDS**
The Lilly Biological Laboratories, built in 1914, are excellent examples of Spanish Colonial architecture constructed in a midwestern U.S. setting. The laboratories consist of three buildings: a prominent center tower building about 80 feet high and two adjacent buildings, with almost identical external features, located on each side of the tower. Pergolas connect the tower with each building. The pergolas were once covered with fragrant vines in true Spanish tradition. The laboratory buildings are situated on a 2.5 acre tract and contain approximately 54,000 square feet of floor space.

The Tower Building is the prominent feature as one approaches the laboratories which are situated about 1,000 feet south of U.S. Highway 40 on the west boundary of Greenfield, Indiana. The tower consists of five levels. The first three floors were used as administrative offices and a library. The fourth level was a storage area having no windows. The top level is an open vista from which one can view the surrounding countryside. The tower is capped by a pyramidal red-tiled roof. The open vista on the top level of the tower features four wrought iron railings which give the effect of balconies so typical of Spanish Colonial structures.

As one approaches the site, the building to the left of the tower was commonly referred to as the antitoxin building. To the right of the tower was the virus vaccine laboratory. The front facade of each building is almost identical. Each building features two Spanish Colonial gables with gently curved profiles and rounded peaks. The walls are plastered with a slight textured finish. The buildings are generally without sculptural ornamentation which is more characteristic of the Mission Style that preceded the Spanish Colonial revival. The arched windows and doors, also characteristic of the Mission Style, are prominent features throughout the buildings.

The virus and antitoxin buildings are of two-story construction with two parallel wings extending at right angles in back of each building. The roofs are red tile with dormers protruding from the roofs in three directions to provide lighting for the second floors. The prime visible difference in the vaccine and antitoxin buildings is the number of dormers on each; the vaccine building having eleven and the antitoxin (east) building having seventeen.

The second floor window in the center of each gable on the front facade is arched and can be opened for access to a balcony enclosed with
wrought iron railings. A small gently curved diamond-shaped window adds a decorative touch to each side of the balconies and arched windows.

The light fixtures on each side of the front doors are interesting because of their design which blends with and accentuates the overall Spanish motif.

Facilities are available to illuminate the buildings at night. This was discontinued recently as a measure to conserve energy. But the Lilly Biological Laboratories were among the first buildings in the country to have their exterior illuminated at night by floodlighting.

The Spanish Colonial architecture provides a little of the charm of the old Spanish Missions to the level pasture lands of Central Indiana. Not only are the buildings uniquely beautiful in their suburban setting, but also have provided clean and efficient facilities for the manufacture of biologicals for over 60 years.

The buildings are now surrounded by a complex of laboratories, offices, barns, sheds, and test plots which constitute the Agricultural Research Center for Eli Lilly and Company.
SIGNIFICANCE

PERIOD

PREHISTORIC
1400-1499
1500-1599
1600-1699
1700-1799
1800-1899
1900-1999

AREAS OF SIGNIFICANCE -- CHECK AND JUSTIFY BELOW

ARCHAEOLOGY-PREHISTORIC
ARCHAEOLOGY-HISTORIC
AGRICULTURE
ARCHITECTURE
ART
COMMERCIAL
COMMUNICATIONS
COMMUNITY PLANNING
CONSERVATION
RECREATION
EDUCATION
ENGINEERING
EXPLORATION/SETTLEMENT
INDUSTRY
INVENTION
LANDSCAPE ARCHITECTURE
LAW
LITERATURE
MILITARY
MUSIC
PHILOSOPHY
POLITICS/GOVERNMENT
RELIGION
SCIENCE
SCULPTURE
SOCIAL/HUMANITARIAN
THEATER
TRANSPORTATION

SPECIFIC DATES

Land purchased - 1912
Construction started - 1913
Construction completed - 1914

Builder/Architect:
Robert Frost Daggett
Indianapolis, Indiana

STATEMENT OF SIGNIFICANCE

The Greenfield Biological Laboratories of Eli Lilly and Company are significant for their architectural and historical interests.

1. Architectural Interest

The architecture is Spanish Colonial, closely resembling the old Spanish Missions in Southwestern United States and especially Southern California. This type of architecture is unusual in the American midwest where extreme weather conditions prevail and often work havoc to this type construction. The Greenfield buildings are in good state of preservation considering the adverse weather conditions in Indiana.

The Spanish Colonial architecture was selected in 1912 by Mr. J. K. Lilly, then president of Eli Lilly and Company, following an extended trip through the Southwestern States and Southern California. During this trip, Mr. Lilly became so interested in the old Spanish Missions built by Catholic fathers in the early days of California that he visited every mission along the California coast. It was during some of these visitations when the thought occurred to him that this type of architecture would be ideal for the new biological laboratories which the company planned to build.

The manufacture of biologicals required large quantities of animals, particularly horses, and yet the entire biological process from inoculation of horses to the final purification of biological products required immaculately clean facilities. The Spanish construction proved to be ideal in its adaptability to meet this strict requirement of cleanliness— in the horse stables as well as in the sterile purification laboratories.

The buildings extending to the right and left of the Tower were primarily processing areas including rooms for animal treatment,
laboratories for maintenance of cultures, and equipment for refinement and concentration of various biological products.

The parallel wings built at right angles to the main laboratories were stables in which the horses and other animals under treatment were kept. Each wing had a capacity of 35 to 40 horse stalls. These stables were built after the most improved sanitary construction. They resembled stables where the very finest racing horses were kept. The Lilly antitoxin horses were kept well groomed and cared-for in the most efficient way. Manure and debris were carried from the stables in mechanized litter carriers. All manure was immediately removed from the stables and carried to a fly-proof shed.

The second floors of the stables were used to store hay, grain and supplies for the care and well-being of the animals.

Although certain changes have taken place in some interior portions of the laboratories, many of the features mentioned above are still intact and can be seen today.

2. Historical Interest

These buildings are also of historical interest. First, they are located on a site just west of Greenfield, Indiana, which is the birthplace and early home of the beloved Hoosier poet, James Whitcomb Riley. It was in these surroundings that Riley was inspired to write of plain Hoosier folks and describe such enjoyable scenes as the "Ole Swimmin' Hole."

Second, these buildings marked the beginning of production of immunizing biologicals by Eli Lilly and Company in the year 1914. Here the company produced antitoxins, serums, toxoids, vaccines, etc., to protect against such dreaded illnesses as diphtheria, smallpox, scarlet fever, rabies, tetanus, gas gangrene, typhus, influenza, and others. Upon completion of construction in 1914, these buildings were called a "Model Biological Laboratory."
In addition to producing biologicals of the highest quality to meet the demands of the public for over 60 years, the laboratories also produced critical supplies of immunizing biologicals for our armed forces during two world wars. Of particular interest was the major effort to supply gas gangrene antitoxin to our armed forces during World War II.

Gas gangrene antitoxin was important to the armed forces because it served to protect our soldiers against infection that so often occurred as a result of lacerations, puncture wounds, and injuries which were common to men in combat. It became the responsibility of the Lilly Biological Laboratories to supply the greatest amount of gas gangrene antitoxin ever required from a single manufacturer. Gas gangrene and some other antitoxins are derived from blood serum of horses that have been inoculated with a toxin that causes a buildup of antitoxin in the animal's blood.

To supply the millions of doses of this critical antitoxin required over a thousand horses along with huge supplies of hay, grain, and water to care for them.

Although the spacious facilities of the Spanish buildings were quite adequate for peacetime operation, it soon became obvious that these were not large enough to provide the huge demands of our armed forces. Temporary barns and laboratories were built to house supplies and animals. The number of operating personnel increased more than three times, many of whom were employed to procure horses and supplies as well as to care for such a large number of animals.

The Greenfield personnel did their job; the antitoxin requirements were supplied in adequate quantities and on time.

Following World War II, the temporary facilities were razed and activities gradually reverted to peacetime levels with all operations again being carried out in the Spanish buildings. Eli Lilly and Company continued to supply biologicals of highest quality from these laboratories until 1975. The buildings and equipment remain as a monument to a bit of old Spain transplanted to Indiana and as a reminder of the contribution Eli Lilly and Company has made to the defense of our nation.
### MAJOR BIBLIOGRAPHICAL REFERENCES

Publications from the Archives of Eli Lilly and Company:
- The Lilly Balance, August, 1920
- Lilly Review - April, 1941
  - June, 1941
  - July, 1944
  - November, 1945
- Supervision - November, 1947
- Tile and Till - November, 1916
- " " - August, 1916
- " " - February, 1926
- " " - August, 1928

### GEOGRAPHICAL DATA

ACREAGE OF NOMINATED PROPERTY: 2.5

UTM REFERENCES

<table>
<thead>
<tr>
<th>Zone</th>
<th>Easting</th>
<th>Northing</th>
</tr>
</thead>
<tbody>
<tr>
<td>A(1,6)</td>
<td>6</td>
<td>0,2</td>
</tr>
</tbody>
</table>

VERBAL BOUNDARY DESCRIPTION

---

### LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES

<table>
<thead>
<tr>
<th>State</th>
<th>Code</th>
<th>County</th>
<th>Code</th>
</tr>
</thead>
</table>

### FORM PREPARED BY

**Name / Title:**
Eugene F. Rodman, Industrial Development Projects

**Organization:**
Eli Lilly and Company

**Street & Number:**
307 E. McCarty Street

**City or Town:**
Indianapolis

**Telephone:**
(317) 261-3807

**State:**
Indiana

---

### STATE HISTORIC PRESERVATION OFFICER CERTIFICATION

The evaluated significance of this property within the state is:

- National: ___
- State: ___
- Local: ___

As the designated State Historic Preservation Officer for the National Historic Preservation Act of 1966 (Public Law 89-665), I hereby nominate this property for inclusion in the National Register and certify that it has been evaluated according to the criteria and procedures set forth by the National Park Service.

**State Historic Preservation Officer Signature**

**Title:**

**Date:**

---

**FOR NPS USE ONLY**
I hereby certify that this property is included in the National Register

**Director, Office of Archeology and Historic Preservation**

**Date:**