

Eastern State Penitentiary
Bounded by Fairmount Avenue, Corinthian Avenue,
Brown Street and Twenty-second Street
Philadelphia
Philadelphia County
Pennsylvania

HABS No. PA-1729

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PHOTOGRAPHS
HISTORICAL AND DESCRIPTIVE DATA

Historic American Buildings Survey
National Park Service
Department of the Interior
Washington, D.C. 20240

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ARCHITECTURAL DATA FORM

STATE PENNSYLVANIA		COUNTY PHILADELPHIA	TOWN OR VICINITY PHILADELPHIA
HISTORIC NAME OF STRUCTURE (INCLUDE SOURCE FOR NAME) EASTERN STATE PENITENTIARY			HABS NO. PA-1729
SECONDARY OR COMMON NAMES OF STRUCTURE			
COMPLETE ADDRESS (DESCRIBE LOCATION FOR RURAL SITES) Bounded by Fairmount Avenue, Corinthian Avenue, Brown Street and Twenty-second Street			
DATE OF CONSTRUCTION (INCLUDE SOURCE) 1823-36		ARCHITECT(S) (INCLUDE SOURCE) John Haviland (1792-1852), architect Jacob Souder, master mason	
SIGNIFICANCE (ARCHITECTURAL AND HISTORICAL, INCLUDE ORIGINAL USE OF STRUCTURE) The prison, one of the oldest in the nation and designed by John Haviland, a noted prison architect, was originally built on the Pennsylvania System, a Quaker penal philosophy stressing solitary confinement and betterment. The prison is also important for its Gothic Revival design and for its impressive radial plan.			
STYLE (IF APPROPRIATE)			
MATERIAL OF CONSTRUCTION (INCLUDE STRUCTURAL SYSTEMS) Coursed granite ashlar			
SHAPE AND DIMENSIONS OF STRUCTURE (SKETCHED FLOOR PLANS ON SEPARATE PAGES ARE ACCEPTABLE)			
EXTERIOR FEATURES OF NOTE Main portion: four- and six-sided battlemented towers with lancet windows.			
INTERIOR FEATURES OF NOTE (DESCRIBE FLOOR PLANS, IF NOT SKETCHED)			
MAJOR ALTERATIONS AND ADDITIONS WITH DATES Three radial wings added 1877, one wing 1894, one wing 1911. Original number of radial buildings was seven.			
PRESENT CONDITION AND USE			
OTHER INFORMATION AS APPROPRIATE Designated National Historic Landmark 1965			
SOURCES OF INFORMATION (INCLUDING LISTING ON NATIONAL REGISTER, STATE REGISTERS, ETC.) Webster, Richard. <u>Philadelphia Preserved</u> . Philadelphia: Temple University Press, 1976.			
COMPILER, AFFILIATION Susan McCown, arch. historian, Historic American Bldgs. Survey			DATE Feb. 21, 1984

ADDENDUM TO
EASTERN STATE PENITENTIARY
2125 Fairmount Avenue
Philadelphia
Philadelphia County
Pennsylvania

HABS No. PA-1729

HABS
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SI-PHILA
354-

WRITTEN HISTORICAL & DESCRIPTIVE DATA

HISTORIC AMERICAN BUILDINGS SURVEY
National Park Service
U.S. Department of Interior
1849 C Street, NW
Washington D.C. 20240

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SI-PHILA,
354-

HISTORIC AMERICAN BUILDINGS SURVEY

ADDENDUM TO:
EASTERN STATE PENITENTIARY

HABS NO. PA-1729

- Location: 2125 Fairmount Avenue, Philadelphia, Philadelphia County, Pennsylvania. Eastern State Penitentiary occupies a 10-acre block bounded by Fairmount Avenue, 22nd Street, Brown Street, and Corinthian Avenue.
- Present Owner & Occupant: The City of Philadelphia owns the site and grants the Pennsylvania Prison Society an annual license to use it.
- Present Use: The corridors and most of the cells in Cellblocks 1, 2, 4, 8, 9, 10, 11 are open for public tours, as is the first floor of the Observatory. The Pennsylvania Prison Society maintains exhibit spaces, a video screening room, a gift shop, an office, and a staff room on the first floor of the east wing of the administration building. The rest of the site is not accessible to the public.
- Significance: Built between 1822 and 1836, Eastern State Penitentiary expressed in physical form the progressive penological philosophy known as the "Pennsylvania System" of solitary confinement. At the center of debates on prison design and governance, it attracted thousands of visitors from all over the world during its early decades. The penitentiary was the product of an early 19th century rational humanitarianism which believed that controlling social institutions could reform deviant members of the population. Its physical structure incorporated advanced building systems technologies (central heating, ventilation, indoor plumbing) and construction methods (cast iron, standardized elements) on a immense scale. The erection of Eastern State also constituted a watershed project in the career of nationally prominent architect John Haviland, who went on to build ten more prisons in six states.
- The ongoing conversion and expansion of the penitentiary through the late 19th and 20th century has demonstrated the evolution of American philosophies of incarceration and rehabilitation. It was elected to the World Monuments List in 1996 as one of the world's 100 most endangered monuments. Eastern State Penitentiary is an internationally significant landmark which has directly influenced the design of 300 prisons on four continents and inspired an ongoing conversation about architecture and social control.
- Historian: Sarah E. Zurier, HABS Historian, summer 1996

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 2)

Chronology:

1787	Philadelphia Society for Alleviating the Miseries of Public Prisons founded (later Pennsylvania Prison Society)
1821	Design competition opens for Eastern State Penitentiary
1822	John Haviland named architect, and construction commences
1829	Pennsylvania legislature orders "separate or solitary confinement at labour" ("Pennsylvania System") implemented at state prisons; penitentiary opens with Observatory, Administration Building, Perimeter walls and corner towers, and Cellblocks 1-3 complete or near complete
1836	Cellblocks 4-7 completed
1869	Cellblocks 1 extended by 20 cells
1872	Pennsylvania system redefined as "Individual treatment system"
1877-79	Cellblocks 8-10 constructed; Cellblock 3 extended by 20 cells
1894	Cellblock 11 constructed
1901-05	Boiler and engine house, emergency hospital, storeroom addition to kitchen constructed
1905-08	Industrial building, shop building, and emergency hospital constructed
1909-11	Cellblock 12 and garage constructed
ca. 1909-1926	Cellblock 13 erected
1913	Pennsylvania system officially abandoned and replaced with semi-congregate
1923	Female prisoners transferred to State Industrial Home for Women at Muncy
1926-27	Cellblock 14 constructed
1927-1933	Graterford Penitentiary constructed
1937-38	Barbican and extramural storage building constructed
1940-41	Bertillon administration building constructed between Cellblocks 8 and 9
1951	Central tower replaced
1954	Redesignated as SCIPHA and ECDCC
1956-59	Cellblock 15 constructed; listed on Philadelphia Historical Commission's Register of Historic Places
1964	Administration building enlarged
1966	Designated National Historic Landmark
1968	SCIPHA/ECDCC designation abandoned and Eastern State reorganized as single correctional treatment center
1970	Closed; placed on the Pennsylvania Register of Historic Places; City of Philadelphia leases property from State of Pennsylvania
1977	City of Philadelphia purchases site from state
1988	Eastern State Penitentiary Task Force formed
1994	Opens for tours on seasonal basis
1996	Placed on World Monuments List; HABS documentation

PART I. HISTORICAL INFORMATION

A. Physical History:

1. Dates of construction: 1822-1836:

Preliminary design process, 1821-1822: On 20 March 1821, the state legislature passed an act stipulating arrangements for the erection of "A state penitentiary, capable of holding two hundred and fifty prisoners, on the principal of solitary confinement of the convicts. . . .at such place within the limits of the City or County of Philadelphia, as the Commissioners hereafter mentioned shall fix and appoint." The twelve-man "Board of Commissioners for the erection of a state penitentiary" was approved, and provided with \$100,000 for the purchase of a site and the arrangement of construction contracts. The act stipulated the plan of the building:

The said Penitentiary shall be constructed on the plan of the Penitentiary of Pittsburg[h], subject to such alterations and improvements as the said Commissioners or a majority of them may from time to time, with the approbation of the Governor, approve and direct: PROVIDED ALWAYS, That the principal of the solitary confinement of the prisoners be preserved and maintained.

This arrangement made clear that William Strickland's octagonal plan for the Western State Penitentiary (constructed in Pittsburgh 1818-26) would at least provide a starting point for the design of Eastern State Penitentiary. The act did, however, allow for the possibility that a new architectural arrangement could spawn from a critical rethinking of the solitary confinement program.¹

On 6 April 1821, the Board convened for their first meeting; by September a six-man Building Committee assumed responsibility for matters pertaining to the construction of the new prison. The choice of a site was one of the first assignments. The legislation stipulated the size (8-12 acres) and general location (no further than 2.5 miles from the state house) of the desired property. By advertising in the local newspapers, the Commission compiled a list of twenty-two possible sites ranging in cost from \$5400 to \$47,500. They settled on a plot owned by brothers Joseph and Benjamin Warner in the Spring Garden District, near the village of Francisville:

Eleven acres--Two dwelling houses in Francis street, first street above Callowhill, running from Ridge Road to Schuylkill--north and south lines 627 feet, east and west lines 750 feet. Two sides bounded by Public Roads. Price \$15,000.

As recorded in two deeds dated 24 November 1821, the Commonwealth of Pennsylvania paid a total of \$11,500 to Joseph Warner and the executors of Benjamin Warner for a "Brick Messuage, and. . .one lot. . .containing ten acres three rods and thirty four perches." Its cherry orchard and elevated position had earned the site the name of "Cherry Hill"; the new prison would also come to be known by this epithet.²

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 4)

In May 1821, the commissioners announced the design competition for Eastern State Penitentiary. They received entries from four architects: New Yorker Charles Loos, Jr. and Philadelphians William Strickland, John Haviland, and Samuel Webb. The commissioners quickly narrowed the field to Haviland and Strickland. The only known details of Strickland's design for Eastern State Penitentiary were its octagonal plan and its 100' long keeper's house incorporated in the octagonal perimeter wall. The internal configuration may have echoed Strickland's Pittsburgh prison with a concentric arrangement of cells.³

John Haviland drafted an explanation of his design in one of his daybooks on 2 July 1821. The prison had a rectangular perimeter wall with the 200' keeper's house (later known as the Administration Building) serving as the formal front of the institution. This building featured a cupola and frontal pediment with "PENITENTIARY" inscribed on the tympanum. It provided accommodations for the various prison officers as well as housing a stable and a cart room. Within the perimeter walls were the cells arranged in a radial plan. From the circular outline of the central hub building (Observatory) radiated seven wings with double-loaded corridors flanked by a total of thirty-two cells and four rooms. Each cell was fitted with a ventilator, skylight, and toilet and had an adjacent individual exercise yard. Inaccessible from the corridors, cells had one doorway to the adjacent walled exercise yard, which contained an exterior doorway.⁴ Guards stationed at the Observatory could watch the cellblock corridors from the first floor room (rotunda) and supervise the exercise yards from an outdoor walkway circumscribing the second floor. Haviland believed that the twenty-six cells in the Observatory, "under the same roof as the wash-house and laundry[,] would be a very appropriate situation for the confinement of the female prisoners." The ambitious plan for this building also accommodated storage cellars and eight dungeon cells in the basement and allowed for the installation of a chapel or a cistern on the second floor.⁵

By 3 July 1821, the Commissioners split into factions supporting Haviland or Strickland. Strickland's champions felt that his plans more closely followed the act's stipulation of an octagonal plan, that his modest keeper's house better conveyed the nature of the institution, and that his compact plan offered a more economical project. On the other hand, Haviland's supporters seem to have preferred the radial plan and felt that his exercise yards and large perimeter wall made for a more secure and better ventilated prison. The debate was significant enough to delay and to confuse the selection. In August, the Commission solicited new designs for the keeper's house from both men, and even considered the juxtaposition of Haviland's front building and perimeter wall with Strickland's cell building. Both architects were evidently anxious to please; one secondary account of the meetings counted at least five different designs submitted by Strickland and at least four by Haviland.⁶ Haviland's design alterations included increasing the thickness of the walls, and covering each story with groined arches. With its improved structure and added tower, the building would cost \$3000 more than originally proposed. Haviland also reconsidered the design of the Observatory and reassigned some of its many functions to the keeper's house and cellblocks.⁷

Construction begins, 1822-1829: The Building Commissioners came to a characteristically ambiguous decision in December 1821, when they passed a resolution which appointed Strickland to supervise construction but rejected his current design. With the building season

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 5)

soon approaching, the Commissioners voted on 12 February 1822 to offer Strickland a yearly salary of \$2000 and to commence excavations and construction of a front facade 650 feet in length. This long dimension signals that the commission had at least adopted Haviland's plan for a rectangular perimeter wall; however, the cell plan and the design for the keeper's house were still under debate.⁸ Perhaps a composite of the two plans was being considered.

By late March, Strickland's supporters hoped to ensure the victory of his design by attempting to pass a resolution limiting the length of the keeper's house to 100 feet. The Haviland faction attempted to install their architect by lobbying for a resolution that the prison plan follow a radial rather than octagonal plan. Both architects submitted new designs for the front building. Estimated at \$28,430, Haviland's 200 foot keeper's house was thought to be "unnecessarily large and will incur an extravagant and useless expenditure of the public money." The Commission decided upon Strickland's less expensive (\$8000) design, whose plain exterior was promoted for its severity and solemnity.⁹

By the meeting of 14 May, however, the majority of the Building Commissioners came to favor Haviland's designs. They reversed their decision to use Strickland's front building and voted to use Haviland's instead. The embattled Strickland contingent deprecated the rival building as "more fitted in its external shew and internal convenience for the dwelling of a nabob than the keeper of a prison." Nonetheless, the majority of the Commission committed themselves to Haviland's plan for the cellblocks as well. Within four months, Governor Joseph Hiester sent the Commission a letter endorsing Haviland's plan. Soon afterwards, the 1818 act was amended such that the plan of the Eastern Penitentiary would be altered to Haviland's "arrangement of the cells upon radiating lines instead of arranging them on the periphery of a circle." At last the matter was settled and Haviland could claim the \$100 award for his design of the Eastern State Penitentiary.¹⁰

Excavation and construction of the perimeter proceeded that spring. When Strickland learned that he had lost the design competition, he agreed to continue to supervise the construction but refused to take responsibility for the work executed. On 12 June, the Commission informed Strickland that he would be dismissed in September, at which time Haviland would commence work as supervisor on a monthly basis. By the end of the year's building season (December 1822), the workers had excavated 26,000 cubic yards of earth for grading and foundations, dug seven wells with walls and pumps, and laid 17,000 perches of masonry. True to the points of the compass, the four walls had risen up to the belting course, except for 50' of the west wall and 75' of the east wall which were 4' below this point. The southeast and southwest towers stood at 25' and 13' feet high respectively. Already \$64,920 had been spent.¹¹

Secure in his position as prison architect and supervisor, Haviland continued to refine his design. In a letter to the Commissioners drafted in a letter book, the architect proposed a number of alterations to the front building "to effect the desired convenience, strength, economy, + beauty of the design to its full intent and meaning." These changes would include siting the infirmary in the east wing, "rough casting" the south facade and coloring it to resemble marble, and finishing many of the [details] in cast iron or stone. By January

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 7)

cellblock. As Haviland prepared several new estimates, the Commissioners debated whether to finish construction of just the first three cellblocks or to erect all seven in a single campaign.¹⁴

The stone masons were particularly busy in 1826, erecting walls of the cells, yards, corridors, Observatory, and courtyards (for the front building). They also completed much of the stonework details (such as jambs, lintels, thresholds, sills, coping, brackets, cornices, and battlements), and a special marble mason had carved blue marble for additional features (sills, stairs, platforms, chimney copings, and sinks). Brick layers worked on culverts, walls, privy linings, vaults and ceilings, chimneys, and arches. Carpenters roofed two cellblocks, the three radiating corridors, the Observatory, and the Administration Building. Many copper, cast iron, and wrought iron elements had arrived on site to be installed the next season, at which time much of the plastering would be completed.¹⁵

While construction was largely completed during the 1827 and 1828 seasons, the \$5000 appropriated over those two years was insufficient to finish and furnish the buildings. On 16 February 1829, the Building Commission reported to the state senate that they lacked the resources to level and finish the surrounding streets, to lay pipes to the Fairmount reservoir, to build the covered passage from the front building to the Observatory (never carried out), to build boilers for washing and cooking, and to purchase furnaces, locks, bedsteads, doors, bells, and clock. A \$5000 award funded the piping to Fairmount and some of the needed furniture and fixtures. Signaling the imminent completion of the first phase of construction, the Board of Commissioners transferred the prison to the Board of Inspectors on 1 July 1829.¹⁶

c. Construction completed, 1829-1836: Eastern State Penitentiary received its first prisoner on 22 October 1829. With the heating system yet to be installed, Warden Samuel Wood purchased six small coal stoves to warm the cells. In his December report, Wood expressed his hope to have "an air heater or furnace....sufficient to warm twenty cells....in operation in 10 days or two weeks." When the Board of Inspectors met for their second annual meeting in 1831, the warden reported that Eastern State Penitentiary was still relying on coal stoves. Nonetheless, the Inspectors were generally pleased with the completed structure and the institutional operations, and they proposed embarking on a second phase of construction.¹⁷

A state act of 28 March 1831 authorized the Inspectors "to construct and erect buildings which shall contain at least 400 cells, suitable for the confinement of convicted criminals, in solitary confinement at labor." The act also stated that the County of Philadelphia would make a \$120,000 loan backed by state stock. In a strange move, the Board of Inspectors reopened the architectural competition for a design for the new cell blocks, and promised another \$100 reward. As expected, weeks later, the Board "Resolved that the added cells required by law to be erected within the outer walls of the Penitentiary be constructed on the plan now submitted by John Haviland on the radial system."¹⁸

Work began in earnest in June, as the ground was levelled, lines staked out, and foundations dug for the new cellblocks. Haviland's proposed new *cell* model, with improved ventilation,

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 8)

met with the Board's approval by the end of the month. The new cells would feature floor ventilators with a double-cone shape, circular wall openings, larger parallelogram-shaped skylights, and access to the cellblock corridor via a pair of iron and wood doors. It should be noted that the early cells lacked doorways into the corridors: instead, the corridor walls were punctuated by peepholes for observation and metal drawers for the delivery of food to the cells.¹⁹

Not approved until August, Haviland's plan for the new two-story *cellblock* buildings demonstrated several other marked improvements over Cellblocks 1-3. In the new cellblocks, the lower range of cells projected 3' beyond the upper level, thus providing additional room for manufacturing activity; the lower cells also had exercise yards. On the upper story, each inmate had access to two cells (paired with communicating doors): one cell as a living space and the other as a work or exercise space. All cells featured skylights installed at a 45 degree angle to prohibit views of anything but sky. By the end of the season, the 100 cells of Cellblock 4 were largely completed, and the walls of Cellblocks 5 and 6 had begun to rise.²⁰

Given the growing convict population, the Inspectors also concerned themselves with issues pertaining to the existing structure. Soon Cellblock 3 would be needed, and it still lacked locks on its cell doors. Two prisoners were assigned to manufacture locks for these cells. As workers began laying iron pipe from the nearby Fairmount Waterworks, it was realized that the low water level would not consistently reach the elevated reservoir and cell plumbing at Eastern State. On-site horse power would be required to draw water from wells to supplement the Waterworks supply.²¹

Records of the following season's (1832) work reveal distress over the city's decision to locate a Poudrette lot (for the deposit of human waste) within 30' of the penitentiary. Also of concern was the Waterworks' announcement that the construction of a new railroad line would interrupt the water supply for two months. To ward off disease, prison officials treated the central reservoir with lime chloride and encouraged the prisoners to treat their own privies with lime chloride and "weak sulphuric acid." During this interval, the penitentiary depended entirely on water supplied by on-site wells. Despite these unfortunate conditions and the difficulties in acquiring iron castings and stone, work did proceed on the new cellblocks. Roofed, plastered, and its yard walls raised--Cellblock 4 would be ready for occupancy once it was dry and its ironwork received and installed. The walls of Cellblocks 5 and 6 had reached the second story and were roofed over in time for the winter. In response to concerns raised by the prison doctor, Haviland improved the ventilation in Cellblocks 1-3 by installing new skylights.²²

An act of 27 February 1833 appropriated another \$130,000 for the completion of the prison. Haviland's model for the Cellblock 7 cells was adopted in May. By the end of the 1833 season, Cellblock 4 was ready for inmates, and Cellblocks 5 and 6 were completed but for some of the yard walls and some plastering work in the cells. About one sixth of Cellblock 7's masonry was in place, and the workers had almost finished laying a culvert around the cells.²³

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 9)

By the end of 1834, Eastern State Penitentiary featured 311 completed cells. With Cellblocks 5 and 6 nearly completed and Cellblock 7 walled and roofed, Haviland cordially resigned his post. Workers had dug, walled, and arched over a new cistern 30' in diameter and 25' in depth. This structure adjoined a new 40' x 34' boiler and furnace building on the plot between Cellblocks 4 and 5. A six-horsepower steam engine could draw water from the well and expel it into a masonry reservoir (40' in diameter, 10' high). The 76,000 gallon reservoir provided water for the lower cells and privy plumbing. Filled with water by the steam engine, nine cedar tanks stationed over the reservoir served the second-story cells and privy plumbing.²⁴

In 1835, Cellblocks 5 and 6 received their first prisoners, and Cellblock 7 was plastered and its yard walls erected. The construction of the original seven cellblocks, Observatory, cistern and engine house, Administration Building, walls and corner towers was complete in 1836 at a price of \$772,600.69.²⁵

2. Original Architect: John Haviland was born on 12 December 1792 at Gudenham Manor, near Taunton in Somerset, England. At the age of nineteen, he was apprenticed to London architect James Elmes (1782-1862), for whom he assisted in the preparation of designs for the St. John the Evangelist Chapel in Chichester, Sussex, England. In his dissertation on Haviland, Matthew Baigell suggests that the apprentice probably learned from the elder architect about issues of professionalism, currents in continental design, solving engineering problems, and "integrating the motifs and details of the period styles with the needs of contemporary society." Elmes had constructed an Egyptian-style courthouse with attached prison block on the Isle of Thanet in Kent, and by so doing probably introduced Haviland to trends in prison design. Elmes later distinguished himself as a critic and scholar with such publications as *Hints for the Improvement of Prisons* (1817).²⁶

In 1815, Haviland left England for Russia to visit his aunt and her husband the Count Mordunioff. The young architect hoped his uncle, a minister of the imperial government, could secure him a post in the Corps of Imperial Engineers. Importantly, the Count had befriended eminent prison reformer John Howard during Howard's last visit to Russia in 1790. Albert Van Eyck Gardner suggests that Haviland "doubtless heard from him [the Count] about the famous John Howard whose life had been dedicated to awakening the world to the terrible state of the prisons in Europe." During his visit to Russia, Haviland designed a monument to Howard to be erected in Kherson, the Crimea, where Howard had died while on a tour of area prisons and hospitals. Also in Russia, Haviland met two men who probably convince him to open his practice in Philadelphia: Sir George Von Sontagg and John Quincy Adams (then ambassador to England). Equipped with letters of introduction from both men, Haviland arrived in Philadelphia in September 1816. He established himself as an architect at 26 N. 5th Street and within a year married Mary Von Sontagg Wells, who was Sir George's widowed sister.²⁷

1818 was a busy year for John Haviland. He published the first of three volumes of *The Builder's assistant, containing the five orders of architecture*. . . This work is considered "a landmark event in American neo-classical architecture" as the first American publication to

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 10)

provide a detailed presentation of both Greek and Roman orders. Not only did *The Builder's assistant* help launch the Greek Revival in America, but it provided practical advice on innovative construction methods like the use of cast iron. Also during this year, Haviland further demonstrated his commitment to professionalism by founding an architectural drawing academy at 7th and Chestnut Streets. Finally, 1818 was the year of his first new construction projects in Philadelphia: a residence for in-law Charles Sontag and the Cridland Villa in Roxborough.²⁸

No doubt the strong reception of *The Builder's assistant*, his marriage into the Von Sontag family, and his European training all contributed to Haviland's success. Soon he was competing with architects of national prominence like William Strickland, Robert Mills, and T.U. Walter. In the early 1820's, his designs won a series of significant commissions in Philadelphia: the First Presbyterian Church (1820); Eastern State Penitentiary (1822); St. Andrew's Episcopal Church (1822), now St. George's Greek Orthodox Cathedral); Pennsylvania Institute for the Education of the Deaf and Dumb (1825), now the University of the Arts); and the Franklin Institute (1825), now the Atwater Kent Museum. His designs arranged idealized geometrical forms in symmetrical plans to provide rational answers to contemporary needs. To appeal to American preferences for historic and foreign motifs, the versatile architect often cloaked his designs in the popular styles. His scholarly interpretations of Greek, Roman, Gothic, Egyptian, and Chinese architecture were highly regarded.²⁹

Haviland's career took a turn for the worse when he decided to speculate on a few of his own projects at the same time that he was overseeing the construction of his design for the U.S. Naval Hospital in Norfolk, VA. Of special interest among these projects was the impractical Chinese pagoda and Labyrinthine Garden (1828), an amusement park erected at 24th Street and Fairmount Avenue; just three blocks from Eastern State Penitentiary, Haviland erected another example of the architecture of control--this time as a pleasure garden. In two instances of poor judgment, the financially overextended architect was caught substituting cheaper materials (than specified) for the construction of the Philadelphia Arcade and skimming \$3000 of federal funds from the Naval Hospital contract. Declaring bankruptcy, Haviland was removed from his post in Norfolk and failed to win any additional federal commissions. His Philadelphia reputation suffered, and he was also removed from several projects in the city (such as the Philadelphia County Prison).³⁰

Despite this unfortunate financial episode, Haviland did manage to win several more important commissions in Philadelphia, such as Colonnade Row (1830) and alterations to the Walnut Street Theatre (1827) and State House (1829), now Independence Hall. He was most respected as an architect of prisons. As the battle raged between various penological philosophies in the first half of the 19th century, Haviland's design for Eastern State and the Trenton Penitentiary (1833) gained international attention. His radial plan became synonymous with the "Pennsylvania System" of solitary confinement. Haviland built city, county, and state penitentiaries such as Rhode Island Penitentiary (1834); New York's Halls of Justice and jail, also known as "The Tombs" (1835); and Arkansas Penitentiary (1838). He also entered design competitions for prisons in Canada, Russia, England, and France.³¹

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 11)

John Haviland died on 28 March 1852 and was buried at St. Andrew's in Philadelphia. He was dedicated to the architectural profession; among his many accomplishments, he was a founder of the Institute of American Architects (forerunner of the American Institute of Architects) in 1835. The Royal Institute of British Architects made him an honorary member, and the Philadelphia Society for Alleviating the Miseries of Public Prisons counted him as one of its members as of May 1835. His publications--in addition to the popular *Builder's Assistant*, include an 1833 revised edition of Owen Biddle's *Young Carpenter's Assistant*. In addition to the tremendous publication of his designs and the thousands of international representatives that visited his prisons, Haviland was further immortalized by the construction of prisons on his plan throughout the world.³²

3. Original and subsequent owners and uses: Joseph and Benjamin Warner were the last private individuals to own the eleven acre tract known as "Cherry Hill." In his history of Eastern State Penitentiary, Richard Vaux wrote that before the property was sold, the Warners were permitted to remove the following: "Trees, shrubbery and fences; two small hayhouses or stables and the hay barrack; the mantle and fire places in the mansion house; the copper boiler and stone troughs in the milk house, and the crops in the ground." The Commonwealth of Pennsylvania purchased the property on 24 November 1821 and funded the erection of the Eastern State Penitentiary between 1822 and 1836. The institution served as place of incarceration for those persons convicted of state crimes in the eastern district of Pennsylvania. The first eighty-four years marked the official span of the "Pennsylvania System" of prison operations; from 1913 on, Eastern State Penitentiary implemented a congregate system.³³

On 21 February 1938, The Commonwealth of Pennsylvania (through the Department of Property and Supplies) transferred ownership of the site to the General State Authority. Over Eastern's 161 years as a penal institution, several movements gathered support in an effort to shut the facility down and redevelop the site. For example, when the Governor signed a 1915 bill for a new prison in Centre County (Rockview), a newspaper article hungrily reported that Eastern State occupied "one of the finest blocks of ground in the city" ripe for development as 200-300 units of housing. Other serious calls to close the prison surfaced periodically throughout the 20th century. The prison officially shut down in January 1970, and the last prisoners left in April.³⁴

In 1971, the State of Pennsylvania leased the site to the City of Philadelphia for \$1. Following a riot at Holmesburg County Prison, the city transferred a number of inmates to Eastern as an emergency measure in 1971. The lease agreement was renewed until 1977, when the Commonwealth of Pennsylvania and the General State Authority sold the property to the City of Philadelphia for \$162,526.15. For most of the 1970's and 1980's Eastern State served the City as a adhoc site for the storage of municipal trucks and for the training of police dogs. The Philadelphia Film Commission permitted recording artists Tina Turner and the Dead Milkmen to film music videos on the site.³⁵

In 1988, the newly-created Eastern State Penitentiary Task Force succeeded in convincing the Mayor to discourage the Redevelopment Authority from settling on a private development

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 12)

proposal for the site. Reorganized as a committee of the Philadelphia Preservation Coalition, the Task Force developed an agreement with the Pennsylvania Prison Society (the current incarnation of the Philadelphia Society for Alleviating the Miseries of Public Prisons) to pursue operation of the property as an historic site. The city granted a renewable one-year lease, and by 1994, Eastern State Penitentiary was open for tours on a May to October calendar.³⁶

Since its reopening as a historic site, Eastern has provided a setting for artistic endeavors. Several photographers have made the prison their subject and mounted exhibits within the walls. In 1994, the Iron Age Theater staged an on-site production of "Tunnel," a dramatic interpretation of the 1945 escape attempt from Eastern State Penitentiary. Director Terry Gilliam filmed several scenes of "12 Monkeys" on site in 1995. Eastern also gained critical notice when it hosted the "Prison Sentences: The Prison As Site/The Prison As Subject" art exhibition of "temporary site-specific installations" during the 1995 season. Theatre Company Big House Productions is presently rehearsing Samuel Beckett's "Nothing," which opened in August 1996.³⁷

4. Original builder, contractor, suppliers: As noted, the Building Commissioners appointed William Strickland to supervise construction before they could agree on a design. After Haviland was named architect in 1822, Strickland stayed at his post as construction supervisor but announced he would not take responsibility for the work executed. Haviland took over the position in September 1822 and had a monthly contract until April 1823. Then he worked on a yearly basis until his cordial resignation in December 1834.³⁸

Haviland supervised an extensive crew. A draft of the "Report on the architecture of the Eastern Penitentiary now completing near Philadelphia The Public Works" [ca. 1830-34] copied into one of Haviland's notebooks lists some of the workers employed on the project: architect, superintendent of masonry, masons, stonecutters, brick layers, supervisor of carpenters, carpenters, supervisor of plasterers, plasterers, smith, shingle dresser, and laborers. Throughout the 1820s and 1830s construction campaigns, superintendent of masonry Jacob Souder was a key player on site, and his name was engraved on the metal plate inserted in the cornerstone. Souder received a monthly salary of \$100 and was responsible for disbursing worker salaries. The minutes of the Building Committee record that in 1831, laborers were paid \$1 a day and cartmen with horses \$2 a day. Stone masons' pay ranged from \$1.50 to \$1.75. Although the Committee hoped "to encourage sobriety," the workers were furnished with whiskey as part of their recompense.³⁹

The monthly treasurer's reports in the Inspectors' minutes listed all monies disbursed on the construction of the prison. Some of the skilled laborers are named here, such as plasterer Charles Thompson, plumber C.H. Canby, and smiths John Cameron and Rockwell + Wagner. Thomas B. McElwee's account of the 1834 scandals at Eastern State Penitentiary identifies some of the unskilled workers. Haviland's papers include a draft of "articles of agreement" according to which "William Ingram and Chalkley Jeffers will execute the Masons Work of the Front Building, front wall and Towers," as well as the "stone work of cells" and

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 13)

the brickwork "in the formation of groined, barreled and inverted arches and other brickwork."⁴⁰

Given the magnitude of the project, there were dozens and dozens of suppliers. Letters to Messrs. Buckley + Co. (iron castings and bar iron for the doors) and Messrs. Smith + Sons of New York (paving stones) survive in one of Haviland's notebooks. The treasurer provided a thorough monthly tally of purchases from suppliers of stone, hose, lime, iron, mahogany, bricks, plaster, lead, tin, lumber, stop cocks, plastering hair, shingles, metal castings, glass, pipe, locks, tar and cordage, and door sills. Most of the stone used was Wissahickon schist from East Falls and Media stone from the Leiper quarry on Crum Creek. Several New Jersey firms supplied metalwork, and the Hopewell Furnace (near Birdsboro, Pennsylvania) sold about fifty-seven tons of iron castings for door frames, racks and peepholes.⁴¹

5. Original plans and construction:

Initial plan and construction, 1822-1836: Both John Haviland and Thomas McElwee report that a plan and elevation of Eastern State Penitentiary were deposited in the cornerstone of the Administration Building at a May 1823 ceremony. Although no record was made of the cornerstone's precise location, masonic tradition specifies that the cornerstone be laid in a structure's northeast corner. Preliminary investigation of the Administration Building has discovered a narrow ashlar block in the extreme east of the north wall (now enclosed by the utility closet just north of the gift shop). The larger adjacent ashlar blocks appear to have been shaped specifically to receive this smaller stone. Given its northeast location and its unusual aspect, this stone may be the cornerstone and merits further investigation.⁴²

While the drawings housed in the cornerstone has eluded recovery, a number of other early depictions of Eastern State Penitentiary survive. Of course, with such a diversely-minded team of Building Commissioners, a responsive architect, bothersome construction obstacles, and constantly evolving social theories, it is impossible to hold fast to any one depiction of Eastern. Furthermore, Haviland's concept plan offered such an appealing geometry that subsequent delineators, and even Haviland himself, could not resist depicting an idealized vision of the actual construction. It was the idealized prototype plan that was so widely published, circulated, and copied.

Haviland's "Plan of the Eastern State Penitentiary in Philadelphia" survives in copy form at the Library Company of Philadelphia. A 1936 WPA project prepared this version from an original supposedly held at the "Pennsylvania Historical Society"--probably the Historical Society of Pennsylvania, though this institution has no record of any such holding. This drawing depicts the ground level plan of the entire complex. The Observatory space is connected by narrow corridors to the seven radial wings. Each wing has thirty-six cells with groined arch ceilings and exercise yards. The two cell-size rooms closest to the rotunda on each wing lack yards, because they are intended to house the hot air furnaces that heated the cells.⁴³ Also in this drawing, a forked path leads from the Observatory to the Administration Building. The administration building features the present arrangement of a

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 14)

compartmentalized entry flanked on two sides by a series of three small rooms and corridor leading to a larger room. On the same page appear similarly-arranged plans for upper and lower levels. Immediately behind the building is a pair of courtyards with rounded walls to the west and east.

Another early presentation of the prison design appears in *A Description of Haviland's Design for the New Penitentiary, Now Erecting Near Philadelphia*, produced by the architect in 1824. The publication (at the price of one dollar!) provides an aerial perspective of Eastern State Penitentiary. This view echoes many of the major features presented in the 1821 plan, but the new features demonstrate Haviland's constant refinement of the design program. The courtyard walls behind the administration building appear to extend all the way to the most extreme southwest and southeast exercise yard walls. Also worthy of note is the round shape of the front central tower and the covered walkway between the administration building and the rotunda. Regarding the site, this view designated the wedge-shaped spaces adjacent to the observatory as gravel yards and assigned the rest of the open space within the circular perimeter for vegetable gardens.⁴⁴

In the accompanying essay, Haviland specified cell dimensions (12' long x 8' wide x 10' high), foundation depths, floor materials, circular "dead-eye" skylights, furnishings, ventilators, feeding drawer, and peep hole. He described the two doors--one "wrought iron grated door" and a "strongly framed wooden one"--leading to the exercise yard and the iron door for exiting the exercise yard. Each cellblock corridor was to be lit by two circular windows 4' in diameter and six conical skylights. He intended to provide a barrel-vaulted "solid roof of masonry" for each cell and corridor ceiling as a measure of security, fire-proofing, and insulation. Haviland discussed the plumbing system at length and outlined his thoughts regarding the construction of cell privies "the least liable to emit any unwholesome air from the conveyance, or prove the medium of conversing from one cell to another." His solution was a central reservoir connected to the cell privies via mains and other pipes constantly kept full of water to prohibit any exchange of speech or foul air.⁴⁵

Also in the *Description*, Haviland simplified the functions of the Observatory: a basement reservoir, a ground-story "general watch house," a second-story chamber for underkeepers and guards surrounded by an observation walkway. Meanwhile, the Administration Building would house spaces for cooking and baking in the west basement and spaces for ironing and washing to the east. On the first floor are offices for the Commissioners, keepers, officers, clerks, and turnkeys. On the second floor, the infirmary is in the west, the apothecary in the center, and the warden's apartment in the east. Haviland described the infirmary's "healthy and airy situation" as a "distinct and separate fireproof section, without any door, window, or other aperture connected with the other rooms of the building, provided with a private stone stair-case, and entrance from an external door in the rear." Haviland's versatile architecture of control easily accommodated early 19th century beliefs about the miasmatic spread of disease and upheld the general mission to exclude the prisoners from any informal human interaction.⁴⁶

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 15)

A drawing held by the Academic Research Museum at the Hermitage in St. Petersburg, Russia displays the prison in transverse section, plan and front elevation. Rendered by Haviland, the ca. 1823-1828 image shows squared courtyard walls north of the front building.⁴⁷

The "Plan of the Eastern Penitentiary" engraved by C.G. Childs in 1829 depicts cells with groined ceilings, although by this time at least one finished block had barrel-vaulted ceilings. He portrays the furnace rooms as cells without exercise yards and also shows a covered walkway accessing the observatory from the administration building. Childs's image reveals that the west side of the latter building was to contain the kitchen and offices on the first floor, keepers' and inspectors' rooms on the second, and infirmary on the third with a "Domestics Garden" in the courtyard. The east side housed the warden and provided him with his own private courtyard garden.⁴⁸

A ca. 1833 plan, also by Childs, projects how Eastern State Penitentiary might have expanded: by extending the initial three cell blocks towards the center and at their extremity, Haviland might increase their capacity from 114 to 176 cells. Though not expressed on this plan, the commissioners had already approved the construction of Cellblocks 4-7 with two stories, thus adding 448 more cells for a grand total of 624. Childs again illustrates several features never erected: groined ceilings on the cells and corridors and the covered passageway from the Administration Building to the Observatory.⁴⁹

In 1833-34, British prison society representative William Crawford published a plan misrepresenting the crowded arrangement of Cellblocks 4-7 around the Observatory and the shorter span of Cellblocks 1-3. Crawford also portrayed the first three cellblocks as two stories in height and suggests that each cellblock had four workshops but neglects to locate them on the plan. He does provide some information about the site: pavement walkways outlining the cellblocks, grass plots between them, and a carriage way running inside the perimeter walls. Also, he presents an unusual transverse section of a two-story cellblock that illustrates such details as the privy's location on the exterior wall of the cell, the wood-over-masonry floors, the angled skylights, and the stone (slate) roof.⁵⁰

b. Haviland's final visions, 1836-ca. 1846: Although Haviland prepared an aerial perspective drawing of Eastern State Penitentiary soon after construction was complete, it too provides an idealized image perhaps revealing how the architect had, in hindsight, wished the prison had been built. Haviland historian Matthew Baigell has dated this view, which is held by the Royal Institute of British Architects in London, to ca. 1838-1846. It portrays seven two-story cellblocks arranged symmetrically around the rotunda and the only outbuilding on the lot a small stable addition to the easternmost courtyard wall. Entitled "Pennsylvania State Penitentiary Philadelphia: The First Prison erected on the 'Haviland Plan' of construction" (emphasis original), the drawing was clearly intended as an advertisement of Haviland's architectural program.⁵¹

Fortunately, the text and drawings prepared by Frenchmen Frederic-Auguste Demetz and Guillaume-Abel Blouet provide a detailed document of the penitentiary upon its completion in

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 16)

1836. Published in their 1837 *Rapports sur les Penitenciers des Etats Unis*, their meticulous plan portrays the less-than-regular distribution of the 582 cells and the various support areas near the shoulders of the newer blocks: storerooms in Cellblocks 4-7 and kitchens in Cellblock 7. Demetz and Blouet also reveal the presence of the various outbuildings and additions. Appended to the extremity of each cellblock was at least one structure for the housing of a heating apparatus. The frame laundry and drying rooms were located directly to the north of Cellblock 4. There was a cistern as well as a building housing the reservoir, fulling-mill, and steam engine room between Cellblocks 4 and 5, a frame forge between Cellblocks 5 and 6, and a frame carpentry shop between Cellblocks 6 and 7. By the Administration Building, there was a dye-house appended to the warden's east courtyard wall, a structure for the reception of prisoners inside the northeast corner of the other courtyard, and a stable/coachhouse appended to that courtyard's west wall. Demetz and Blouet also indicated the necessaries: sewage lines for the cellblocks located between Cellblocks 1-2, 2-3, 4, 4-5, and 5-6 and privies in both Administration Building courtyards.⁵²

6. Alterations and Additions: The history of construction on the site continued throughout its years of use as a prison. Like Haviland's work before, the many ensuing buildings, renovations, alterations, and razings reflected the current practices and ideals of their times.

Interim years, 1837-1866: The decades immediately following the completion of Haviland's plan were marked by renovations to existing structures and systems and the erection of smaller support buildings. The penitentiary's annual reports provide good documentation of the various projects undertaken to improve conditions on the site during its early years. For example, the heating system was constantly evolving. Frenchmen Demetz and Blouet reported in 1837 that there had been a hot air system with brick cockle stoves located below the cells at the ends of each cellblock. The heated air passed through the vaulted underground tunnels into small flues in the cell floors; similar flues in the cell walls released stale air. Corridors and the Observatory were heated via floor grates located above the furnace.⁵³

The ineffective distribution of hot air, the inmates' use of the flue system to communicate with each other, and an accident resulting in the near-asphyxiation of twenty inmates all contributed to the switch to hot water heating beginning in 1838. This system required the use of furnaces or boilers in wood sheds located at the outer end of each cellblock. The cell was heated by twin pipes along the base of its inner wall. By 1850, Eastern State Penitentiary physician Robert A. Given reported that this mode of heating was "exceedingly defective." In 1861, the warden reported on the effective use of steam heat in Cellblock 4, and by mid-decade, Cellblocks 1, 2, 5, and 6 were converted to steam heat with decentralized boilers located in each cellblock.⁵⁴

Ventilation and lighting were also important issues. According to Haviland's original plan, each cell received fresh air via a circular "dead-eye" skylight, a door to the exercise yard, and a slot air vent beneath the sill of that door. Skylights and end windows provided lighting and ventilation for the corridors. The inadequacy of the small "dead-eyes" inspired Haviland to add circular openings above the yard doors in the old cellblocks and to outfit the two-story blocks with narrow rectangular skylights. The ideals of solitary confinement and adequate

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 17)

ventilation were soon compromised: a surge in the inmate population necessitated the conversion of the double-size cells (on the second story of Cellblocks 4-7) into single cells, and the tall exercise yard walls ironically served to prohibit the free entry of air and light into the first-story cells. No later than 1837, daylight was supplemented by the use of iron oil lamps, and gas lighting was in use by 1855.⁵⁵

Toilets and water supply also underwent renovation. Demetz and Blouet described the original sanitary plumbing system with its conical iron water closets on the exterior cell wall and narrow-diameter pipes leading to the yard culvert. This system's problems included its use by prisoners to communicate with one another and the unpleasant odors caused by limiting flushing to two to three times per week. When the Spring Garden District opened its own waterworks on the Schuylkill in 1845, it located its new reservoir behind the penitentiary at Corinthian Avenue and Poplar Street. Buildings system historian David Cornelius notes that the fortuitous location of this new reservoir at a higher elevation than Eastern State "benefitted the Penitentiary greatly by permitting the...daily flushing of the water closets." Nonetheless, Eastern State continued to use its own reservoir as supplement and back-up for the city water supply.⁵⁶ A new sewage culvert was constructed for \$1900 in 1853. Each cell was supplied with a cold water tap and a wash basin (until the 20th century when most of the cellblocks were outfitted with sinks). By 1844, prisoners took their weekly baths in ten bathing compartments erected at the north end of Cellblock 4. The bath water was heated by the "daily escape-steam from the steam engine" in the nearby boiler house.⁵⁷

The structure of the penitentiary underwent some renovations--including a general re-roofing campaign. Partially abandoned in 1850 due to the failure of their slate roofs, Cellblocks 1-3 were re-roofed in a superior slate and their corridors "remodeled" in the mid-1850's. In 1861, the wood shingle roofs of Cellblocks 4-7 were replaced with slate shingles, and the annual report recorded a need for the re-roofing of the reservoir, engine house, "wareroom," stable, and perimeter walls. Renovations to the cells included the replacement of decaying plank floors with linseed oil-soaked wood covered with rough carpet.⁵⁸

Also during this period, a number of timber-framed structures appeared on and disappeared from the site to provide temporary shelter for workshops, baths, boilers, and laundry facilities. Some of these "decaying unsightly frames" were eventually replaced with brick buildings like the fireproof paint shed erected at the end of Cellblock 3. Several more substantial buildings rose on the site, including a laundry to replace facilities destroyed by fire earlier that year and a masonry structure housing the kitchen, bakehouse, and brick-lined reservoir.⁵⁹

New building campaigns, 1866-1913: By 1866, the swelling of the inmate population to 569--twenty-nine more than the single-occupancy cell capacity--caused a reevaluation of the Pennsylvania System. Eastern State Penitentiary responded by pairing prisoners in some cells and considering an expansion of the cellblocks. Overseer Michael Cassidy prepared plans and superintended the construction of a twenty-cell addition to the end of Cellblock 1. In their 1869 *Annual Report*, the Inspectors described the cells as "the most complete and perfect in construction, for the purpose, yet erected in any Penitentiary."⁶⁰

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 18)

With larger dimensions (16' long x 8' wide) providing almost fifty percent additional square footage, more convenient wood sliding doors, large skylights, and better integrated service systems, Cassidy's cells did introduce some marked improvements over the early Haviland cells. From a design perspective, however, the new cells are remarkable for their adherence to Haviland's precedent. They repeat the same construction methods and materials and the same basic form with attached exercise yard.⁶¹ Also, the Administration Building witnessed some repairs and alterations for the first time since 1829. The warden's apartment was renovated and a new "reception room" constructed probably in the west courtyard.⁶²

Pleased with Cassidy's work, the Inspectors engaged him to prepare plans for three new cellblocks and the extension of Cellblock 3, which would be funded by a total of \$87,000 in state appropriations. In the wedge-shaped space south of the Observatory were constructed near-symmetrical Cellblocks 8 (1877) and 9 (1877-78) with fifty cells each, observed from the rotunda by means of an invention of Inspector Richard Vaux: two angled mirrors placed in the axial corridor leading to the new cellblocks. Each of these even larger cells (18' x 8' x 12') was outfitted with two skylights, gas burners, and improved ventilators; however, they lacked exercise yards, and their proximity to Cellblocks 1 and 7 must have limited the intake of fresh air and light.⁶³

1879 witnessed the completion of Cellblock 10 with its thirty-two cells accessed by a secondary corridor running southeast from Cellblock 2's corridor as well as the completion of the twenty-cell "hospital department" extension to Cellblock 3. These still larger cells (20' x 8' x 12') brought the prison total from 580 to 732. Probably during or soon after this building campaign, Cassidy built for himself and a clerk a bullet-shaped brick office building (now the Catholic chapel) in the space between the corridors of Cellblocks 9 and 1. All this new construction demonstrated the prison officials' embattled faith that solitary confinement was the only way to run a prison. For the Inspectors, the cells themselves performed the work of reforming criminals:

They [the new cells] are intended to stimulate his moral character, by cleanliness and order, and to afford a freedom from many annoying and irritating causes which are injurious, when existing as incident to the treatment enforced on convicts....

It has been the purpose of the Inspectors, in the construction of these buildings, to make them as perfect as possible. While it is a prison in which individuals are restrained of their personal liberty as the precedent condition to relieve the punishment for crime, yet the Inspectors have been led to the conclusion that the separate places where each convict is to be confined should be, as far as possible, a separate "reformatory," devoted to the treatment of each individual....

It is, therefore, to be observed, as the Inspectors believe to be true, that the prison structures, and their proper application to the purpose of both incarceration and punishment, are important elements in the methods of reformatory prison discipline. As hospitals for the sick, or any buildings for special uses, should be so constructed, as to apply them to their design and enable the curative treatment, or the application of whatever means are necessary, to be most effectively made, so it is believed a prison is no exception to this rule of common sense, and admitted scientific principles.

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 19)

Although the 1881 report announced that the new structures represented the opening of a new era in prison architecture, they in fact represented a conservative repetition of Haviland's old designs with only minor modifications.⁶⁴

Information about Eastern State's structures and their uses in the 1880s is provided by a large model of the prison made mid-decade and plans in a book published by newly-appointed warden Michael Cassidy. New structures included boiler houses at the ends of Cellblocks 5-7 and near the rotunda entrances to Cellblocks 1-3, a hothouse and a blacksmith shop/stable building between Cellblocks 2 and 3, a carpenter's shop between Cellblocks 3 and 4, a bathhouse at the end of Cellblock 4, the reservoir/grist mill/cistern/bakehouse between Cellblocks 4 and 5, and a washhouse between Cellblocks 5 and 6. Cassidy also noted the location of the resident physician on the ground floor of the west wing of the administration building and identified a gymnasium as well as workshops for coopering, furniture-making and printing in Cellblock 3, a hosiery knitting room in Cellblock 8, shoemaking in Cellblock 9, and chair-caning in Cellblock 1.⁶⁵

A series of repairs and renovations were made by century's close. Perhaps the most innovative of these was the outfitting of the facilities with electric light between 1888 and 1890. The arc lights for exterior spaces and incandescent lights for interiors provided an effective and economical means of lighting the prison. Electric power was generated on site first at the reservoir engine house and later (by 1902) at a new central power plant.⁶⁶ Ongoing concern about the swollen inmate population inspired the 1894 decision to build yet another cellblock. The stable/blacksmith building between Cellblocks 2 and 3 was removed and reconstructed elsewhere to make room for thirty-five-cell Cellblock 11, designed by Cassidy and overseer William Johnston. For \$11,714.84, Cellblock 11 was erected by prison labor within seven months. This one-story cellblock provided a near mirror image to Cellblock 10 and began at the same secondary connecting point as Cellblocks 2 and 10. Almost three quarters of a century after Haviland's original proposals for Eastern, Cassidy and Johnston devised a cellblock that echoed the early architect's plans and construction for a socially-controlling architecture.⁶⁷

With the deaths of Inspector Vaux and Warden Cassidy in 1895 and 1900 respectively, the Eastern State Penitentiary lost two of the most fervent proponents of the Pennsylvania system. The State of Pennsylvania took a more active role in the affairs of the prison at the beginning of the century. Appropriations just for repairs and support systems in 1900-01 totalled over \$35,000. One of the more interesting projects undertaken in 1899 was the enlargement and improved ventilation of cells in Cellblock 3 for the care of tubercular prisoners. In response to the tuberculosis epidemic afflicting Eastern State's inmates at the turn of the century, the new 20' x 17' x 14' high cells had oversized windows and doors and 18' x 18' yards. Other projects underway in the century's first decade included significant renovations of the water, heating, electrical, and drainage systems as well as landscaping and repairs to the cellblocks.⁶⁸

Although convicts continued to be employed as laborers, the state clearly attempted to rationalize construction practice and facility use at Eastern State Penitentiary when it hired

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 20)

architects William S. Vaux (cousin of Richard and brother of current inspector George Vaux) and George S. Morris to survey the site and design several new buildings. The architects erected a series of sturdy masonry buildings that represented the most self-conscious use of applied gothic detail since Haviland's decision to dress the prison's primary facade as a Norman castle. At once, the architects honored Haviland's precedent and as building systems historian David Cornelius put it "deferred to external models. . .[with] allusions both to reformatories such as Huntington and (without apparent irony) to the collegiate Gothic of universities and high schools." All constructed between 1901 and 1909, their buildings included a new boiler and engine house (demolished 1950s) between Cellblocks 3 and 4, a storehouse addition to the kitchen, an industrial building between Cellblocks 5 and 6; a shop building (demolished 1950s), and an emergency hospital (demolished 1937) between Cellblocks 2 and 3. Also, the plumbing system underwent modernization in 1907-12 with new fixtures installed, new pipes laid, and the belt line reconstructed.⁶⁹

The intense construction activity on the site during the early 20th century marks a crucial turning point in the operations and governance of Eastern State. At the same moment when the reformatory movement was growing widespread popularity for its emphasis on vocational instruction, there emerges a striking pattern of creating work spaces and work projects for the prisoners at Cherry Hill. This industrialization movement, with its emphasis on congregate work, is demonstrated in several aspects of the 1900-1913 building campaign.

The erection of structures for industrial purposes signalled the decline of craft-oriented work that could be performed in one's cell or exercise yard. Large-scale spaces were specifically designed to house heavy machinery and/or multiple pieces of smaller equipment so as to create a factory environment. Not only was Eastern State Penitentiary creating industrial spaces where the prisoners would work communally, but it was allowing the prisoners to serve as construction laborers and provide the communal labor to create these spaces. The modern technologies put to use in all of these new buildings educated the inmates in contemporary construction technologies and even gave parts of the penitentiary a new look.

Cornelius notes that the Morris and Vaux kitchen addition provides a good example of "[c]ontemporary industrial architecture." It has "heavy timber mill construction in the ancillary areas and trussed girders (timber, with iron or steel rods) supporting the raised monitor of the main kitchen space." The use of cast iron connectors, he continues, is "characteristic of good contemporary practice." As employed in the stable (built in 1911, now a garage) and Cellblock 12 (1909-11), reinforced concrete made a relatively early appearance here. The cellblock's smooth surfaces and uniform distribution of windows make a telling illustration of prison as factory.⁷⁰

The fact that only one major cellblock rose between 1895 and 1926 demonstrates that prison officials had decided to abandon the ideal of solitary confinement and to attempt to make the prison work. With its 120 cells on three floors, Cellblock 12 represented a small gesture at upping the number of cells on site despite the gap between cells and prisoners (about 760 cells for 1527 prisoners in 1909) that had widened beyond control. Eastern State Penitentiary was rapidly losing its private spaces. The ongoing conversion of exercise yards and even cells to

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 21)

workrooms and schoolrooms became a particular issue in the 1900's. The Board of Public Charities commented that "We regret to notice the increasing tendency to the removing of cells from the use of the prisoners. Within three years at least sixty cells, formerly occupied by prisoners, have been appropriated to other purposes." Nonetheless, the pattern continued as Cellblock 7 got a new tailor shop, Cellblock 2 was fitted with a laundry, and Cellblock 5 sported a new shoe-making shop. As it doubled up inmates in the private cells, converted its exercise yards, and built new work spaces, the penitentiary physically shed the Pennsylvania system.⁷¹

Building the congregate prison, 1913-1970: On 7 July 1913, Governor John K. Tener signed a bill making Eastern State Penitentiary a congregate prison, but this event did not trigger any major building campaigns on site. In fact, the next four decades were marked by a process of consolidation. With few exceptions, the penitentiary continued to explore the evolving needs that a semi-congregate system of prison governance placed on existing physical fabric.⁷²

A less organized process before 1913, the conversion of exercise yards into workshops and classrooms soon became prison policy. The Inspectors' 1919 Annual Report stated that "space afforded the cell yards is being utilized for the construction of rooms to be used in the various services of labor and educational training." The plans drawn up for a 1936 WPA documentation project locate various workshops, classrooms, and offices in exercise yards and cells throughout the complex. Some of the major industries were printing in a new wedge-shaped structure between Cellblocks 1 and 10; weaving in Cellblock 5; dyeing and hosiery manufacture in Cellblock 6; painting and woodworking in Cellblock 7. Also more and more of Cellblock 3 was given over to the infirmary. Cellblock 4's west range and Cellblock 5's northeast range of exercise yards were converted for use as long mess halls in 1924-25.⁷³

The reuse of exercise yards logically coincided with the creation of outdoor exercise spaces for congregate use. Paved portions of the inner perimeter wall provided handball courts. Despite the presence of two buildings, the area between Cellblocks 3 and 4 served as a makeshift athletic field. Other congregate activities necessitated the creative reuse of existing buildings. The storeroom on the second floor of the Industrial Building was fitted up as a chapel and auditorium by 1916. This conversion probably caused the installation of benches as well as the decorative stenciling of the room's beams and ceilings.⁷⁴

The most significant new construction of the period between the wars took place not at Eastern State Penitentiary but at its "farm branch" in Graterford. Designed by a Chicago firm, this new prison was built between 1927 and 1933 to supplement the Philadelphia facility; it was governed by the same administrative structure and warden. Convicts from Eastern were bussed over to the site to provide construction labor. Prison critics and officials soon realized Graterford's potential as the successor of Eastern State, which professional penologists labeled in 1944 "hopelessly antiquated" and "one of the worst prisons in any state."⁷⁵

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 22)

While construction began at the new "farm branch" in Graterford, any new building at the Philadelphia facility was limited to the remaining spaces between, behind, and above the many buildings on the crowded site. A row of ten small punishment cells, each furnished with a radiator, toilet, iron bed, and ventilation hole, was erected adjacent to Cellblock 10. Although its date of erection was not reported, the building was officially known as Cellblock 13 (unofficially called "the hole" or "Klondike"--like the other punishment areas). Its identification as Cellblock 13 suggests that it was constructed after the start of Cellblock 12 (1909) and before the start of Cellblock 14 (1926). Its reinforced concrete walls scored to imitate ashlar are identical to the walls of the solarium constructed atop Cellblock 3 in 1922.⁷⁶

The adoption of the congregate system made the Administration more aware of security issues. A few riots, a series of escape attempts, and the constant threat of large-scale violence inspired a series of security measures in the 1920s and 1930s. The four wood sentry boxes posted in the corners of the yard were reconstructed atop the corner towers. Furnished with high-power searchlights, Krag repeating rifles, and Thompson submachine guns, these new guard stations were intended as serious deterrents to inmate insurrection. Iron gates were installed at the neck of each cellblock corridor so as to prevent prisoners from rushing guards stationed in the Observatory's rotunda room.⁷⁷

At the same time, the Administration Building also underwent a number of security renovations, which all but realized its appearance as a fortified castle. The warden relocated his offices here from the rooms between Cellblocks 1 and 9 where he was under the constant supervision of passing inmates. Similarly equipped as those in the four corner towers, a fifth sentry box was stationed over the main entrance of the Administration Building. A new visiting room was established in the east basement to provide a better environment for the supervision of visitor-inmate interaction. Plans to replace the old wood gates with electric-operated metal gates were realized in 1937-38.⁷⁸

This period witnessed the only two significant alterations to the prison's exterior. In the late 1930s, the architectural firm of Henry D. Dagit & Sons erected a boxy one-story storehouse building (later converted into a police substation) adjacent to the exterior of the north perimeter wall and 22nd and Brown Streets. In 1938, a stone entrance portal was erected in front of the original portcullis. Public opinion was mixed on this project. One newspaper ran a photograph captioned "A New Entrance for an Old Landmark." Director of the Philadelphia Museum of Art Fiske Kimball called for the "removal of the wretched barbican added to the entrance under WPA."⁷⁹

In 1926-27, a number of inmates participated in the construction of Cellblock 14 between Cellblocks 3 and 11. Designed by a Harvard-educated convict, the new reinforced concrete cellblock had 117 cells on three floors and cost \$56,324.11 to construct. Young first offenders were segregated there. Other new projects included the construction of the Bertillon and parole offices between Cellblocks 8 and 9 in 1940-41 and the creation of a shoe shop (later a printing shop) between Cellblocks 10 and 1. Building systems improvements included

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 23)

the conversion to steam heat, the switch to power generated by the Philadelphia Electric Company, and the renovation of the water supply system.⁸⁰

As the labor force for many of the construction and renovation projects, the inmates were important players in the physical transformation of Eastern State Penitentiary into a modern congregate prison. With trades learned "inside" and skills and knowledge brought from their experiences "outside," the prisoners effected some projects of their own. A small-scale example would be the personal decoration of cells with paint, graffiti, and printed matter, which Dickens had remarked on during his visit in 1842. A more elaborate example is the "beautiful little synagogue" built in Cellblock 7 in 1927-28 with funds provided by two Jewish inmates. The least tolerated type of convict construction project, however, was the architecture of escape. A number of prisoners found that the sewage lines made effective means of egress; others dug their own escape tunnels beneath the cellblocks, under the perimeter walls, and up to the street. Evidence of the most famous of the 1945 tunnel break attempt has survived. Filled with ashes immediately after the incident, the tunnel's terminus can be found on the terrace just outside the prison's south wall and immediately east of the southwest corner tower.⁸¹

The 1950s and 1960s were marked by a commitment to reorganize and renovate Eastern State amidst increasing pressure to close the institution down. An administrative rehaul of the state prison system effected the establishment of the State Correction Institution at Philadelphia (SCIPHA) and the Eastern Correctional Diagnostic Classification Center (ECDCC) within the perimeter walls in 1954. The Bureau of Corrections of the state Justice Department issued a publication outlining construction projects on site: playing fields, a new two-story cellblock administrative segregation, a new visiting room, a dental laboratory, a two-story machine and tool shop, an extramural administration building and garage, a 400-seat auditorium, and a 175-seat chapel.⁸²

Only four projects were realized. The construction of the dental lab was already underway in 1954. The powerhouse and the Vaux and Morris shop building between Cellblocks 3 and 4 were demolished to clear the ground for a baseball field. Two-story Cellblock 15 was erected between 1956 and 1959 with thirty-four cells inheriting the notorious role of those cells in the various designated punishment areas (Cellblock 4 gallery, Cellblock 1, Cellblock 13, the cells beneath Cellblock 14). By 1964, construction was finally initiated on the visiting room and office building which had been designed by the architectural firm of Keast and Hemphill two years earlier.⁸³

Several renovation projects were initiated in the early 1950s. Among these were the installation of steel staircases in the four corner towers, renovation of all cellblock shower rooms, a campaign to resurface in cement the tunnels beneath the cellblocks. In 1951, a new steel-framed central tower rose from the top of the Observatory. It featured a "writer's room," record vault, and toilet on its second story and was circumscribed by a metal balcony at its third story. Architectural historian Jeffrey A. Cohen noted that "The image of a new engineered modernity inhabiting the retained old forms, throwing off stolid and aging

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 24)

vestiges, even extended to the clock face, with brightly contrasting arabic numerals in place of the dimmer roman numerals."⁸⁴

The Administration Building underwent another series of alterations. The guards' facilities were expanded by the construction of their own concrete mess hall in the west courtyard (1956) and the renovation of a guards' lounge in the former visiting room. With hardly a place left to build but up, a concrete block structure housing schoolrooms was erected above the southwest wing of Cellblock 1 in the early 1960s.⁸⁵

Ruin and recovery, 1970-1996: After Eastern ceased to be used as a prison, the property received little maintenance. During the 1971-88 period, many of the buildings deteriorated rapidly, and vegetation consumed the site. Photographs from the late 1980s reveal a forest of weeds and trees. Meanwhile, Eastern State became home to urban wildlife such as stray cats, bats, squirrels, pigeons, and hawks.⁸⁶

In 1988, the Eastern State Penitentiary Task Force emerged as an advocate for the sensitive reuse of the property. Members organized a site clean-up during which volunteers could visit Eastern, clear some of the intrusive vegetation, and remove some of the debris that had accumulated there since the early 1970s. Financial commitments from the City and from several granting foundations allowed the Task Force to address some of the site's most immediate physical needs. Much of the early work was done by PHILACOR, a service and manufacturing division of the Philadelphia prison system. Inmates from city prisons cleared vegetation, built wood boxes to protect the cell and corridor skylights, re-roofed part of the Administration Building, and commenced demolition of the concrete block addition atop Cellblock 1. They also made an archaeological reconnaissance of the prison grounds and brought any significant portable artifacts indoors.⁸⁷

In 1994, Eastern State Penitentiary underwent preparations for its first full season of tours. The locksmith recovered a number of the sliding wood doors and metal grates and rehung them in the appropriate cellblocks. The ground floor of the east wing of the Administration Building was readied for use as a visitor's center. Alterations included the reopening of three preexisting doorways: between the corridor and the large tower room, between the corridor and the easternmost small room, and between the two other small rooms. Also, the bathroom fixtures and partition walls in the easternmost small room and the glass partitions in the former visiting room were removed. The three small rooms now serve as an exhibition gallery, the former visiting room as a video screening room, and the large room as a gift shop. In the 1994-95 off-season, grants funded the documentation and conservation treatment of the painted murals in the Catholic chapel between Cellblocks 9 and 1. To protect the murals from future damage, the chapel's roof was replaced and its skylight reglazed.⁸⁸

Other alterations have resulted from alternative uses of the site. In 1995, the production designers for the "12 Monkeys" film rehung the metal doors in the Observatory rotunda, painted the rotunda ceiling white, replaced the skylight above the entrance to Cellblock 2, and installed "antiqued" glazed mirrors over the two empty mirror frames in the corridor between Cellblocks 8 and 9. All other significant evidence of their presence has been removed. To

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 25)

control visitor access to the site during the 1995 "Prison Sentences" exhibit, chain link fences were erected between Cellblock 9 and the Administration Building, Cellblock 3 and the perimeter wall, Cellblock 13 and the greenhouse, and in the corridor between Cellblocks 8 and 9. Also, to discourage vandals' easy access to the site, the Department of Public Property demolished the former storage building outside the north wall (at the corner of Brown and 22nd sts.) in 1994.⁸⁹

B. HISTORICAL CONTEXT

On 22 October 1829, Eastern State Penitentiary received a young man convicted of burglary as its first prisoner. If convict Charles Williams's experience reflected the expressed institutional policy, he would have entered through the metal-studded oak door and proceeded through the entry passage to an intake facility. There he would have been examined by a physician, "stripped of his....clothes, and clothed in the uniform of the prison....being first bathed and cleaned." Williams would have been divested of all his personal belongings and these items put in storage until his release. A clerk methodically logged the following information under the appropriate headings:

<u>Date of sentence</u>	<u>Names</u>	<u>Age</u>	<u>Nativity</u>	<u>Occupation</u>
1829	No. 1			
October 22	Charles Williams	18	Harrisburg, Penna	Farmer

<u>Complexion</u>	<u>Eyes</u>	<u>Hair</u>	<u>Stature</u>	<u>Feet</u>
Light Black	Black	Curly Blk	5 ft 7 1/2 in	11 inches

Williams would have been hooded--if not to prohibit him from seeing other prisoners, at least then to keep him from getting a sense of the prison's layout--and led to an exercise yard on Cellblock 1, 2 or 3.⁹⁰

There, he would have entered a wood door and an iron grate into the yard and then would have passed through another pair of doors to his cell. His hood removed, Williams would have been introduced to the stark interior of his cell: an approximately 12' x 7' space furnished with a bed that could be folded against the wall, clothes rail, seat, shelf, toilet, water tap, and vents for fresh air and heat. A tin cup, wash basin, food plan, mirror, combs, cleaning brushes, towel, razor, and shaving equipment would have been issued for Williams's use. At some point he would learned the rules and customs of the prison. There was to be no communication with other inmates, no personal visitors, no outgoing or incoming mail or news of any sort, no liquor, and no tobacco. "[W]holesome food of a course [sic] quality, sufficient for the healthful support of life" would be delivered through the feeding drawer installed in the cell wall. Williams would be expected to labor in his cell, and prison records note that he learned to make shoes--as many as ten pairs a day by 1831. His fellow prisoners, male and female, might take up shoe-making, woodworking, weaving, spinning, lock-making, blacksmithing, carriage-making, tailoring, or wool-packing. He would also be expected to reflect on his crime and seek forgiveness. Bad behavior would be punished by the denial of time in the exercise yard, the withholding of food, confinement in dark cells, or the implementation of various restraining devices employed by the guards and overseers.⁹¹

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 26)

According to the daily schedule, Williams would rise at daybreak and retire around 9 or 10 p.m. With socks over their shoes, guards pushing food carts with wheels covered with leather (all to muffle sound) would deliver breakfast at 7 a.m., dinner at noon, and supper at 6 p.m. Every day but Sunday, Williams would be allotted one hour to spend in the exercise yard attached to his cell, but prisoners in adjacent cells would not be let out at the same time. Three times a day he would receive a visit from an overseer, once a day from the warden, and twice a week from the resident physician. Prison Inspectors, members of the local Prison Society's Acting Committee, designated state officials, and visiting dignitaries also might pay a call. The occasional religious service was performed by a volunteer member of the clergy who stood at the head of a corridor and spoke loudly.⁹²

Such was the ideal (and idealistic) program of Eastern State Penitentiary upon its opening. Even this capsule view of its operation reveals particular approaches to surveillance, labor, architectural plan, living conditions, and treatment. Early Eastern State was a hybrid of Old World enlightenment philosophy and New World rationality, European precedents in penology and American innovations, the experience of Quakers persecuted in England and their emergence as a [important] voice in Pennsylvania. The institution's history retells the development and decline of the ideals of the Pennsylvania system.

Penology and prison design in the old world

Perhaps the most fundamental theory that contributed to the creation of Eastern State Penitentiary held that incarceration could serve as a form of punishment. Norman Johnston has argued that monasteries and ecclesiastical prisons had provided the models for the early innovative prisons at Ghent, Amsterdam, and San Michele (see below). Church courts responsible for the population of monks, clerks, and serfs were forbidden to claim lives in retribution for crimes committed. Instead, offenders were subjected to seclusion or solitary confinement "not as punishment alone, but as a way of providing conditions under which penitence would most likely occur." In late medieval and early modern Europe, a number of monasteries were constructed with solitary cells, sometimes with attached gardens or workrooms. Contact with anyone but designated officials and superiors was prohibited.⁹³

In early modern Europe and colonial America, jails served to detain persons accused of crimes while they awaited trial or punishment. The actual punishment of crime was typically corporal in nature. By mutilating, flogging, branding, torturing, confining, banishing, or executing a criminal, civic officials felt they could make an example of bad behavior before a public audience and thus discourage citizens from breaking the law. In his work *On Crimes and Punishments* (1764), philosopher Cesare Beccaria (1738-1794) put it plainly: "What is the political intent of punishments? To instill fear in other men." Crimes against society were punished by the society. Criminals were physically marked or entirely removed from the larger population, and citizens were involved in the project as spectators or even participants, inflicting jeers, garbage, or even blows on the convicts.⁹⁴

Taking a cue from the works of French political philosopher Montesquieu, Beccaria issued a watershed criticism of European penal practices. He eloquently condemned the death penalty and other corporal punishments by suggesting that they were themselves barbarous practices which only encouraged more crime. His other arguments concerned such issues as trial practices, convict labor,

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 27)

and classification of crimes and punishment. Although he did not outline an institutional structure for criminal punishment, Beccaria did make several general suggestions that provide the philosophical background for the creation of Eastern State. For example:

It is not the intensity of punishment that has the greatest effect on the human spirit, but its duration, for our sensibility is more easily and more permanently affected by slight but repeated impressions than by a powerful but momentary action....It is not the terrible yet momentary spectacle of the death of a wretch, but the long and painful example of a man deprived of liberty, who, having become a beast of burden, recompenses with his labors the society he has offended, which is the strongest curb against crimes.

Beccaria's work was published throughout Europe and highly regarded by such prominent Enlightenment thinkers and leaders as Jeremy Bentham, John Adams, Voltaire, and Catherine the Great.⁹⁵

An English contemporary of Beccaria's, John Howard (1726-1790) made a more practical contribution to penal reform by making a survey of European prison conditions. This English reformer compiled the details of diet, architecture, living conditions, personnel, health, labor, and other issues into a series entitled *State of the Prisons* (published in four editions between 1777 and 1792). Howard singled out three continental institutions as the most innovative. The juvenile House of Correction of San Michele in Rome featured three floors of thirty cells, each furnished with a mattress, latrine, window, and door with peephole. In Amsterdam, the Rasp-house (for men) and Spin-house (for women) had opened in 1596 for the enforced employment of beggars and young malefactors. Michel Foucault has pointed out that the Dutch workhouses were especially significant for linking the "the theory, so characteristic of the 16th century, of a pedagogical and spiritual transformation of individuals brought about by continuous exercise and the penitentiary techniques conceived in the second half of the 18th century."⁹⁶

In Belgium, the House of Corrections at Ghent was remarkable for its octagonal design and its combined practices of isolating prisoners at night, separating the prisoners by sex, age, crimes committed, and sentence. Like Eastern State Penitentiary, the cells at Ghent were arranged in cellblocks radiating from a central location. Prison historian Norman Johnston suggested that "Architecturally Ghent can be regarded as the first large-scale penal institutions in which a conscious attempt was made to bring architecture to the aid of the treatment philosophy." Considering the successes of these model institutions and the problems of a great number of inadequate prisons he witnessed, Howard concluded that "the first thing to be taken into consideration is the *prison itself*" (his emphasis). Proper institutional design and regulations could make an inmate's stay in prison more effective and more humane.⁹⁷

By the 1780's, British architects were learning from continental examples and developing their own innovative designs for prisons and workhouses. In some cases, this extended to paired sleeping and working cells (Gloucester) or paired cells and exercise yards (Reading). Alternatively, English reformers and architects considered the larger plan as a vehicle for experimentation with issues of containment, punishment, labor, and surveillance. Following his 1787 visit to the construction site of a circular textile mill in Russia, social philosopher Jeremy Bentham (1748-1832) devised his Panopticon prison: a glazed, cylindrical, multi-story building lined with barred cells facing a central

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 28)

guard tower. Thus, a single guard stationed at the center could observe and control a large number of inmates. As Bentham himself declared, a well-designed building could serve as a machine whose work was to better the human condition: "Morals reformed--health preserved--industry invigorated--instruction diffused--public burdens lightened--Economy seated, as it were, upon a rock....all by a simple idea in architecture!" While Bentham never saw one of his own designs realized, other European architects drew from his work to construct their own circular, semi-circular, and octagonal panoptical prisons.⁹⁸

The radial plan developed as an alternative to Bentham's Panopticon. Cross-shaped plans had long been in use for churches, schools, hospitals, asylums, and other institutions which relied on the ability of architecture to create an ordered or hierarchical set of spaces. An ally of Howard's, architect of William Blackburn (d. 1790) designed eighteen British jails and prisons. These included his cruciform County Jail at Ipswich, the Suffolk House of Corrections with its central tower largely detached from radial wings, and the jail and penitentiary Kent with its four clusters of cellblocks radiating from central hubs. Perhaps Blackburn's work and the more innovative prisons on the European continent served as examples to John Haviland when he set out to design Eastern State.⁹⁹

Pennsylvania penology, Philadelphia prisons, and reform

While experimentation with prison design began to emerge in the mother country, the importation of the severe British criminal code discouraged the British colonies from innovation in their penal matters. Known as the Duke of York's Laws, the British code of 1676 outlined twelve crimes subject to the death penalty and another list of crimes whose penalty was corporal punishment. When Quaker William Penn incorporated Pennsylvania as a province in 1681, this code was already in place; however, within a year, the province's own "Great Law" superseded the older code. These sweeping laws formalized such Quaker values as human perfectibility, tolerance, and liberality in government. Most significant here were the limitation of capital punishment to those convicted of murder and the corresponding increase in sentences to hard labor in a "house of correction." Penologist Harry Barnes claims that apart from a contemporary measure in West Jersey, this "unquestionably marks the first instance in the history of criminal jurisprudence in which imprisonment at hard labor was prescribed for a majority of the acts which were branded as crimes by the community."¹⁰⁰

Traditionally, workhouses were intended for the employment of vagrants and the poor, and jails served as holding facilities for accused persons awaiting trial or convicts awaiting the performance of their sentences. On the other hand, the "Great Laws" specifically decreed that "All prisons shall be workhouses for felons, thief, vagrants....county." A March 1683 supplement further provided that each county erect "a sufficient house, at least twenty feet square, for restraint, correction, labour and punishment of all such persons as shall be thereunto committed by law." Thus the Pennsylvania laws called for the creation of a new penal institution--or at least a fusion of the distinct functions of the jail and the workhouse. By combining workhouse and jail in one institution, the colonists effectively made prison sentences serve as punishments but also made poverty and vagrancy a crime.¹⁰¹

The "Great Laws" were in turn superseded by an act of 31 May 1718 which reinstated the British criminal code in an even more drastic form than that outlined by the Duke of York's Laws. The new code required the death penalty for thirteen different crimes, and subsequent colonial laws increased

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 29)

that figure to fourteen with the punishment of counterfeiting by death. With the emphasis on corporal and capital punishment, the drive to erect workhouses abated, and Pennsylvania's penal institutions came to resemble the holding jails of the Old World. Barnes suggests that only in the Quaker strongholds of Philadelphia and Chester County did the fused workhouse/jail survive well into the 18th century. In Philadelphia, the High Street jail was constructed soon after the passage of the 1718 law. It featured on the same lot a building for criminals and a building for debtors, vagrants, and the poor. When this facility became outmoded, a 1773 law provided for a "new gaol, workhouse, and house of corrections in the city of Philadelphia."¹⁰²

Contemporary with the construction of the new jail was the Society of Friends' organization of the world's first prisoners' aid society on 7 February 1776. The Philadelphia Society for Assisting Distressed Prisoners focused their efforts on calling attention to the conditions in the High Street jail and aiding prisoners there. Although this organization disbanded when the British seized Philadelphia in 1777, the reform movement reemerged after the war. A group of Philadelphian political players gathered to reform the English criminal code still in place in 1786. They turned to the ideas of Bentham and Beccaria, Montesquieu and Blackstone, as well as to Quaker thinkers. Led by Benjamin Franklin, Caleb Lownes, William Bradford, and Benjamin Rush, this group succeeded in getting a 1786 law passed which substituted hard labor for the death penalty in three of the lesser felonies. Historian Finn Hornum suggests that these Pennsylvanians once again attempted to reorient punishment away from the colonial idea of retribution and towards an enlightened theory of reformation and rehabilitation.¹⁰³

On 8 May 1787, a group of citizens convened for the first meeting of the Philadelphia Society for Alleviating the Miseries of Public Prisons. Their act of incorporation and constitution stated that "the objectives of the Society shall be confined to the alleviation of the miseries of public prisons, the improvement of prison discipline, and the relief of discharged prisoners." While many of their early efforts echoed those of the previous Society, the new organization immediately gained a high public profile. Their recognition was owed in part to the distinguished and nonsectarian composition of its membership (such as Lownes, Rush, Thomas Wistar, and Bishop William White) and to the particular moment into which it was born. These were the formative years of the young republic and the pinnacle of Philadelphia's prominence as America's financial, cultural, and philanthropic center.¹⁰⁴

By publishing a series of public "Memorials"--or missives to the state government--the Prison Society established an authoritative voice of support for prisoners' rights. The first Memorials called attention to existing problems, their main target being the Walnut Street Jail located opposite the State House yard. Despite its trim Georgian appearance designed by prominent architect Robert Smith, the jail embodied many of the problems of Old World jails. During the early years, male and female, young and old, debtor and convict prisoners alike were thrown together in large rooms. Guards extracted service and supply fees from the inmates and operated taverns within the prison walls, literally charging prisoners their shirts--and their pants--for a drink. Diets were poor, heating and ventilation inadequate, and punishments cruel. Moreover, the labor program was all but nonexistent making the institution no more than a free-for-all detention space. The Prison Society's third Memorial entreated the State Assembly to "adopt such measures, as justice, humanity, and sound policy dictate, and....rescue the prisons of Pennsylvania from the just reproach that they tend to confirm depravity, instead of promoting the interests of honesty and virtue."¹⁰⁵

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 30)

The Prison Society launched a critical dialogue with the state government. First of all, the Prison Society helped to establish prison reform as an important *state* issue. A 1789 law announced that Walnut Street Jail would receive the more serious offenders convicted anywhere in Pennsylvania. Support for the jail would be provided in part by the counties whose prisoners had been transferred to Philadelphia. Secondly, the Prison Society emerged as an influential author of state policy regarding prisons. The Society's efforts were rewarded on 5 April 1790 with the passage of a law calling for imprisonment at hard labor to punish crime, separating witness and debtors from convicts, and segregating offenders by sex.¹⁰⁶

Clearly, the Prison Society was reading its John Howard. In his history of the Prison Society, Negley K. Teeters, writes that the society had purchased a copy of Howard's *State of the Prisons*. Like Howard, the Prison Society was concerned with issues of design, health, living conditions, security, and deterrence of crime; however, they placed particular emphasis on the Quaker ideal of individual reform through solitary confinement, hard labor, religious instruction, and visits with officials and clergy. The Prison Society also promoted the informed administration of prisons. At their behest, the 1790 law also called for the appointment of two aldermen and twelve citizens as Inspectors of the Walnut Street Jail. That year, the Mayor approved a slate of twelve prominent Philadelphians--the majority of them members of the Society--as Inspectors.¹⁰⁷

The most ground-breaking portion of the law arranged for the construction of a small cellblock at Walnut Street for the solitary confinement of the "more hardened and atrocious offenders....who have been sentenced to hard labour for a term of years in the hope that the addition of unremitted solitude to laborious employment, as far as it can be effected, will contribute as much to reform as to deter." Norman Johnston comments that this new brick "penitentiary house" neatly demonstrated John Howard's influence on the Prison Society. Cells appeared on either side of a two-story cellblock with a central corridor bisected laterally by a partition wall. This latter device, prevalent in many contemporary British jails, served to deter communication between prisoners on opposite sides of the corridor. The 6' x 8' cells had vaulted brick ceilings 9' high, a pair of doors (one iron, one wood), and a barred and louvered window opening. They were furnished with water taps and privy pipes, and stoves in the corridors provided heat. Constantly confined in the cell without any opportunity for labor, the prisoner had no human contact but with the guard or turnkey who visited once a day.¹⁰⁸

Reports on the Walnut Street Jail during the 1790's were generally favorable. For example, the Duc de la Rouchefoucauld-Liancourt endorsed the "highminded" inspectors, the "varied and profitable" labor system, the "good" discipline, and the sound elementary and religious education provided. The number of convictions in Philadelphia did drop from 131 in 1789 to forty-five in 1793, and there were no escapes from Walnut Street during those four years. In the meantime, the Prison Society effected additional reforms such as abolishing the death penalty for all crimes but first degree murder and awarding the keeper a (state) salary in order to prohibit him from levying fees on inmates. A debtors' wing was established on Prune (now Locust) Street in 1785, and the Arch Street Prison, a workhouse for vagrants, was erected in 1817.¹⁰⁹

By the 1800's, the optimism characteristic of the Inspectors' previous accounts had begun to wane. Overcrowding became an issue as the inmate population swelled from 106 in 1800 to 206 in 1809 to 304 in 1811 to a high of 473 in 1820. In a report of 8 January 1821, the Visiting Committee

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 31)

(Inspectors) suggested that immigration from Europe, migration of African-Americans from neighboring slave states, and the difficult financial climate of the early 1800's had contributed to the overcrowded conditions, which had in turn overwhelmed any efforts to classify and segregate prisoners:

The Visiting Committee will Sum up this report by saying that the great Penitentiary System of Pennsylvania is not in operation. That instead of employment, most are Idle. Instead of Classification, those for all kinds of offenses associate together, and instead of Solitary Confinement, from 20 to 35, and sometimes as many as 40, are lodged in rooms of 18 feet square. And the Com. can see little but ruin to the morals of the inmates of the prison and danger to the Safety of the community. They would therefore recommend that prompt and efficient measures be immediately taken to prevail in the Legislature to erect a new Prison where the Penitentiary System may be carried into effect, for we are of the opinion that there is as great cause for the Society to endeavor to reform the present System as there was 30 years ago.

A commitment to the penitentiary program was maintained, but it would require the creation of a new institutional structure and a new physical structure.¹¹⁰

Persistent lobbying by the Prison Society and the administration of the Walnut Street Jail culminated in state legislation providing for the construction of a state penitentiary to serve the western half of Pennsylvania. The law of 3 March 1818 appropriated \$60,000 to erect a prison organized according to the principle of solitary confinement. Within the year, Pittsburgh's Western State Penitentiary began construction according to an octagonal, panopticon plan by William Strickland. The 1818 law also authorized Inspectors of the Walnut Street Jail to transfer inmates to the Arch Street Prison and then, with the consent of the proper authorities, to purchase land for the construction of a penitentiary for the eastern half of the state. On 20 March 1821, the state provided funds for the new Eastern State Penitentiary and appointed twelve men (mostly members of the Prison Society) to a Building Commission charged with organizing the erection of the new institution.¹¹¹

Ideals at Eastern State Penitentiary: The solitary system and the separate system (1821-1866)

With \$100,000 to spend and their choice of four competition entries and twenty-three different construction sites, the Building Commissioners of the new prison had the opportunity to carry out a large-scale penal experiment. They considered how "Good design" itself could foster "a disposition to virtuous conduct" or alternatively "impress so great a dread and terror" as to discourage would-be offenders. Their debates concerned cost, ventilation, inmate health, containment, surveillance, seclusion, deterrence, labor, and security--issues which came to be expressed in Commission decisions on location, plan, arrangement of buildings, architectural style, and building materials. Despite the belabored approval of the plans of Englishman John Haviland and the attending conflicts on hiring a supervising architect, the first phase of construction at Eastern State got underway in 1822.¹¹²

Perhaps the Building Commissioners had agreed on Haviland's design because they perceived its flexibility in accommodating any of the various penological systems being considered. As Building Commissioner Roberts Vaux suggested, "at the penitentiary in progress near Philadelphia....each cell is to have a yard, where, or in the cell itself, which is also sufficiently commodious, labour may be performed, if it shall be so ordered." Even as the walls of Eastern State Penitentiary rose on Cherry

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 32)

Hill, state legislators, Prison Society members, and Building Commissioners continued to study prison systems currently in operation. Supporters of *solitary confinement without labor* argued that this system provided the most severe punishment and thus produced the most effective and most rapid criminal reform; yet, Pennsylvanians soon learned of the problems developing at the newly-opened Western Penitentiary where this system was employed. The 9' long x 7' wide cells afforded too little space for inmate labor, and the building's lack of sound-proofing allowed prisoners to communicate with each other through metal grates. Within a year of Western State Penitentiary's 1827 opening, its board of managers acknowledged that the system was endangering inmates' physical and mental health.¹¹³

New York's Auburn State Prison provided an intriguing alternative. Built in 1817, Auburn had in fact imitated the Walnut Street Jail's penitentiary house and briefly experimented with solitary confinement. The New York prison abandoned the program in 1822 due to the marked increase in disease, suicide, and mental illness among inmates. Auburn soon developed its own penological system known as the *silent system* or *Auburn system* defined by *solitary confinement and hard labor*. Inmates were secluded in individual cells at night, but allowed to work together during the day. The imposition of complete silence and the threat of violent punishment ensured inmate discipline and resulted in high levels of production in the prison workshops.¹¹⁴

By April 1829, the state legislature had rejected Western State's laborless system and rejected the popular Auburn system, which had been adopted by many other states. A state act ordered the implementation of *separate or solitary confinement at labour* at both state penitentiaries. This program, which came to be known as the *Pennsylvania system*, promised to maintain constant isolation, provide the opportunity for a prisoner to reflect and repent, generate money from the prisoners' work, and produce skilled laborers prepared to reenter society and earn an honest living. The silent system, however, persisted as the chief rival of the separate system.¹¹⁵

On 1 July 1829, Eastern State Penitentiary's Building Inspectors officially "delivered up" the buildings to the Board of Inspectors to prepare for incoming prisoners. Prison Society member, former Inspector of the Walnut Street Jail, and devout Quaker Samuel R. Wood had been appointed warden in June. He set about hiring his staff of "under keepers, who shall be called overseer, and all necessary servants." By 1834, the staff would include a warden, underkeeper, watchman, laborer, principal overseer and five overseers, butcher, blacksmiths, dyer, bricklayer, carriage maker, two drivers, and a gatekeeper. When Eastern received first prisoner Charles Williams three months later, the great experiment commenced. During the first seven years of operation, Eastern's infrastructure was not yet in place. Four of the seven cellblocks (for a total of 354 habitable cells) were constructed during this period, and numerous improvements were made to Cellblocks 1-3.¹¹⁶

Eastern State Penitentiary was one of the many social institutions erected in and around Philadelphia during the 1820s and 1830s. Kenneth Finkel has argued that rapidly expanding Philadelphia was inventing itself as the country's largest, most economically secure, most socially responsible, and most culturally exciting city. A flurry of philanthropic building activity produced the Orphan Asylum, the Pennsylvania Institution for the Deaf and Dumb, the House of Refuge, the Pennsylvania Hospital for the Insane, the Alms House, the U.S. Naval Asylum, and Moyamensing (City) Prison. Not too far from but not too near to the city's core, the Spring Garden District witnessed the

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 33)

construction of the Small Pox Hospital (1818), House of Refuge (1826), Girard College for Orphans (1832-48), and Eastern State Penitentiary. While each of these various institutions was intended to serve a very distinct group, their architecture performed the very public function of reminding citizens of their preferred situation outside the walls. So John Haviland could write of Eastern State: "The plan and facade is perfectly original, its expression and material impart a grave, severe, and awful character--and the impression it produces on the imagination of the spectator is peculiarly impressive, solemn, and instructive."¹¹⁷

The institution's immense construction costs--at \$772,600.69 the most expensive building yet constructed in the U.S.--its ground-breaking design, its peculiar penological program, and the idealistic expectations of its proponents created much public interest. Various portrayals of Eastern's inner workings--as seen through plans and drawings, statistical tables, and essays--express two important themes. A recurrent theme in several contemporary histories of Eastern State (and in histories of American prisons in general) holds that the good intentions of the administration met with bad results. Closely linked to this theme is the idea that visitors confronted with Eastern failed to be indifferent about what they saw--an sentiment that restates itself today among tourists who venture inside the walls.¹¹⁸

Arguably the best publicity for Eastern derived from the widespread publication of its principal elevation and of its plan. In the 1820s, the relatively remote Spring Garden District did not have a substantial population to impress with the imposing walls of the state prison. A popular monthly magazine, *Atkinson's Casket*, printed a view of Eastern State yet under construction in 1827. Published works intended to promote Philadelphia sometimes presented information on Eastern and even presented bird's eye views of the site in their galleries of other local landmarks like Christ Church, Laurel Hill Cemetery, and the State House.¹¹⁹

Notable in the Philadelphia tourist guides that mention the penitentiary are references to the public distribution of visiting tickets. Among Eastern's early visitors were family groups like "the six Brodheads" of Pike County, Native American delegates like "Chief Bl. Hawk and his company," married couples like the Nelsons of Booneville (Missouri), and "76 members of the United Fire Co. of Baltimore." It is not clear to which locations visitors had access. Given the rule forbidding inmates to receive personal visitors, it is curious that the site would have attracted as many as the 10,000 visitors reported in 1858.¹²⁰

Most of the published accounts record the impressions of the visiting experts, international officials, and notable authors who no doubt had freer access to the site. Charged with documenting the details of the Pennsylvania system for the interest of their home countries, foreign visitors typically considered Eastern State in comparison with other American prisons like Auburn and Sing Sing in New York. In their 1833 report to the French government, Gustave de Beaumont and Alexis de Tocqueville concluded that the expensive but noteworthy Pennsylvania system was too impractical for adoption in France. A few years later, the French sent judge Frederic-Auguste Demetz and architect Guillaume-Abel Blouet to prepare meticulous architectural drawings and statistical tables (see figure), which endorsed Eastern's program.¹²¹

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 34)

The Secretary of a London prison society, William Crawford made a thorough presentation of Eastern State's operations and published an idealized first floor plan (see figure) in 1833-34; his research resulted in the construction of England's radial Pentonville Prison and the implementation of the solitary system there. In addition to those from Britain and France, dignitaries from Sweden, Belgium, Prussia, Brazil, Peru, Antigua, Puerto Rico, Jamaica, and Canada visited Eastern State. Their accounts put Haviland's radial plan (real or ideal) and the Pennsylvania system at the center of international debates about prisons. Prominent American visitors included Reverend Louis Dwight of the Boston Prison Discipline Society, architect and agent Gershom Powers of Auburn Prison, educator Horace Mann, several state governors, architect Thomas U. Walter, financier Nicholas Biddle, Presidents John Quincy Adams and Andrew Jackson, and repeatedly, John Haviland himself.¹²²

Perhaps Eastern's most famous critic was English author Charles Dickens, who was reputed to say, "The Falls of Niagara and your Penitentiary are two objects I might almost say I most wish to see in America." Dickens supposedly spent only two hours at Eastern State in March 1842, but his stay made enough of an impression that he penned almost an entire chapter of his *American Notes* (1845) on the subject. The author praised the humanitarian intentions of the system but feared that its creators and administrators "do not know what it is they are doing." His melodramatic portrayals of specific inmates aside, Dickens thoughtfully captured some of the details of prison life, in particular its sounds (or lack thereof):

Standing at the central point, and looking down these dreary passages, the dull repose and quiet that prevails is awful. Occasionally there is a drowsy sound from some lone weaver's shuttle, or shoemaker's last, but it is stifled by the thick walls and heavy dungeon door, and only serves to make the general stillness more profound....

There is no sound, but other prisoners may be near for all that. He [a typical inmate] remembers to have heard once, when he little thought of coming here himself, that the cells were so constructed that the prisoners could not hear each other, though the officers could hear them. Where is the nearest man--upon the right, or on the left? or is there one in both directions? Where is he sitting now--with his face to the light? or is he walking to and fro? How is he dressed? Has he been here long? Is he much worn away? Is he very white and spectre-like? Does *he* think of his neighbour too?

The popular author's harsh depiction of Eastern State stunned the proponents of the Pennsylvania System who had been pleased with the English author's apparently cordial visit. German-born political economist Francis Lieber wrote a rebuttal for the local newspapers, and American reformer Dorothea Dix published a glowing report on Eastern State in her *Remarks on Prisons and Prison Discipline* (1845). Condemnations of Dickens' critique occasionally resurfaced in *The Journal of Prison Discipline and Philanthropy* over the next fifty years.¹²³

Eastern State Penitentiary did indeed develop operational problems almost immediately after its opening. In 1834, an enormous scandal erupted that called into question Eastern's mission to produce through solitary confinement a moral and benevolent environment in which individual prisoners could rehabilitate themselves. That year, a state legislative committee organized hearings regarding accusations of "[p]ractice and manners among the officers, agents and females, licentious and immoral"; the embezzlement of prison funds and misappropriation of public property, "cruel and unusual punishment" of prisoners; "subversive" activities such as parties, intoxication, "carousing and dancing," and "habitual intercourse with lewd and depraved persons"; and "illegal practice in the

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 35)

treatment of convicts" such as using them as house servants. The testimony provided largely confirmed these accusations, thus implicating much of the prison administrative structure from Warden Wood and the Board of Inspectors down to a clerk, overseer, and his wife. Nonetheless, the majority of the committee dismissed the case by issuing a few minor recommendations.¹²⁴

With the scandal of 1834, the incarceration of the few female prisoners (always less than 3% of the total inmate population) at Cherry Hill became a serious issue. At first they were housed in a room in one of the Administration Building's towers; then they were moved to the gallery of Cellblock 7 and in 1852 to one of the one-story cellblocks. In 1836, Warden Wood hired Mrs. Harriet B. Hall as a matron to supervise the women convicts. Also of concern were the flaws in the architectural program regarding heating, ventilation, plumbing, and communication between inmates. To this end, the resident physician emerged as a key player in the making of institutional decisions. His monthly reports to the Board on the inmates' mental and physical health provided the impetus behind critical improvements to buildings systems and behind larger questions of the efficacy of solitary confinement.¹²⁵

Labor issues presented few problems. Eastern State had adopted a combination of the "public account" plan and the "piece-price" system in which prison authorities purchased materials from and sold finished products back to contractors. In the developing industrial climate, there was still a market for handicraft manufactures that could be produced in the cells. Shoe-making and weaving were the most popular industries at the penitentiary through the 1860s.¹²⁶

As administrators attempted to reckon with operational issues, the rivalry between Auburn's silent system and Pennsylvania's solitary system intensified. The Auburn System emerged during this period as the favored model for new prisons and renovated penitentiaries throughout the country. All four of the other state prisons (RI, MD, NJ, VA) which had adopted the Pennsylvania system abandoned it by 1858. Even the administration of Eastern State cast off the term "solitary" and adopted the "*separate method of confinement with labor and moral instruction*" as the formal definition of the Pennsylvania system. As Negley Teeters and John Shearer have pointed out, this new terminology attempted to cast off the former term's negative connotations with silence and solitude, and it instead emphasized that inmates were encouraged to converse with and seek guidance from prison officials and approved visitors.¹²⁷

Keeping up appearances: the individual treatment system (1866-1913)

In the aftermath of the Civil War, freed slaves began to migrate north, many Americans from rural areas headed for the cities, and the nation struggled to rebuild its war-torn economy. The influx of unemployed (and often unskilled) individuals resulted in a sharp jump in the inmate population at Eastern State. With 569 inmates and only 540 cells, the Inspectors approved the doubling-up of prisoners in a single cell. In the *38th Annual Report* (discussing the year 1866), the Inspectors suggested that as a temporary necessity, "pairs of convicts of such a low grade of mental capacity as to render them unfit for any punishment but restraint were to be housed commonly." Teeters and Shearer suggest that 1866 marks "the beginning of the end of the Pennsylvania System in the prison of its birth." Not until 1964 did the number of available cells at the penitentiary overtake the number of prisoners. Again, the Inspectors coined a new term to describe the program in place. By 1872,

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 36)

they settled upon the "*individual treatment system*" according to which inmates at Eastern were to be treated separately though sometimes housed communally.¹²⁸

Eastern embarked on an extended building campaign in the late 19th century. Filling out the original Haviland plan, overseer Michael J. Cassidy supervised the construction of plans for the extension of Cellblocks 1 and 3 by twenty cells each and the construction of Cellblocks 8-11. The motives of the Inspectors and Cassidy, who was appointed warden in 1881, are unclear. On the one hand, the construction of additional cellblocks represents a direct attempt to solve the linked problems of overcrowding and the pairing of inmates in a single cell. In his reports to the Inspectors and in his public addresses at national prison organization meetings, warden Cassidy maintained that he would "object to more than one in a cell under most every condition." On the other hand, the cells he constructed offered almost 50% more square footage than the Haviland cells--as if in direct anticipation of pairing and even tripling inmates in a single cell. Indeed by 1884, Cassidy confessed that "We have sometimes three prisoners in a cell."¹²⁹

Although inmate privacy declined during this period, some inmate services and living conditions did improve. The standard daily diet instituted in 1829 was made more varied and nutritious. Particularly industrious inmates could supplement their meals by tending vegetable gardens and even fruit trees in their exercise yards. Prisoners were permitted to engage in hobbies and even adopt pets, such as butterflies, cats, birds, or rabbits. They also could personalize their cells with painted murals and decorations. Policies regarding visitors and mail were relaxed such that the warden could report on the occurrence of 1,000 visits by inmates' relatives and friends as well as the approved (censored) exchange of 6,700 incoming and 5,000 outgoing letters in 1872.¹³⁰

The position of teacher was created in 1854, and his duties included maintaining the prison library and offering instruction in bookkeeping, phonography and mathematics as well as German and Spanish. Substantial contributions from several publishing companies greatly expanded the holdings of the prison library. By the 1860s, a printed catalogue of library holdings offered prisoners their pick of magazines, religious works, inspirational fiction, and other literature. The library was housed on the second floor of the Observatory. While the prison chaplain provided the hundreds of prisoners with individual "moral instruction" at best once a month, there were services and hymn-singing every Sunday. In his summary of operations at Eastern State, Amos Mylin reported that "Eight services are conducted in the blocks at the same time, and the prisoners have hymn books, many of them join in the singing and all apparently enjoy the exercises."¹³¹

Prison physicians lobbied for a more healthy prison environment and for better health facilities. In the mid-1880's, a gymnasium was created in Cellblock 3. In 1886, physician William Robinson explained that "The convicts are masked and taken to the room in classes of six each, and given a course of exercise lasting thirty minutes." Various other improvements were made to the infirmary facilities as well. Still, the poor mental and physical health of many inmates represented an immense liability to the prison's reputation. The persistence of the ironically-named "solitary vice" since the prison's opening was a particular embarrassment to its administrators: masturbation was thought to be the chief cause of mental and physical disease among inmates. The administration also struggled to defend itself against reports that the punitive confinement in the "dark cells" (or "Klondike" areas) led to tuberculosis and that mortality rates at Eastern were higher than those at congregate prisons.

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 37)

Reviewing Eastern's late-19th century position on health matters, Norman Johnston concluded that "In short, infirmities of all kinds among prisoners were ascribed to their having entered the prison in poor health or bearing inherited tendencies toward specific diseases."¹³²

Additional scandals hastened the decline of the Pennsylvania System. In 1897, another state legislative committee investigated charges implicating much of the administrative structure. Specific charges included the filthy condition of the cells, the low quality of inmate diet, the brutal and indifferent treatment of convicts (particularly the mentally ill) the misrepresentation of prison affairs in the *Annual Reports*, and the intimidation of convicts testifying before the committee. Despite the scathing testimony of a prominent judge and a series of abused prisoners, the legislative committee dismissed the case with an endorsement of Eastern State's management. The Board of Public Charities' 1903 investigation uncovered such problems as misuses of prison funds and materials, distribution of special food and privileges to favored inmates, and the use of inmates as personal servants for the warden and chief overseer.¹³³

Meanwhile, the old penitentiary was no longer the tourist mecca it had once been. The Fairmount and Francisville neighborhoods had grown up outside the prison walls, and Eastern State Penitentiary became one of the many established institutions--philanthropic foundations, schools, churches, stores--for local residents. Nonetheless, the legend of Eastern State did persist in the American literary imagination. While preparing his novel about Philadelphia tycoon Charles T. Yerkes, author Theodore Dreiser probably visited Eastern State to research prison operations. *The Financier* (1912) thoughtfully captured the mundane details of prison procedures, politics of favoritism, and the feeling of solitary confinement.¹³⁴

Henry James described his visit to the "ancient grimness" of Eastern State in his travelogue of impressions upon returning to his native country after decades of living in Europe. Published in 1907, *The American Scene* expressed the prison's peculiar relationship with the Philadelphia elite:

Of such substance was the story of these battlements; yet it was unmistakable that when one had crossed the drawbridge and passed under the portcullis the air seemed thick enough with the breath of the generations. A prison has, at the worst, the massive majesty, the sinister peace of a prison; but this huge house of sorrow affected me as, uncannily, of the City itself, the City of all the cynicisms and impunities against which my friends had, from far back, kept plating, as with the old silver of their sideboards, the armour of their social consciousnesses. It made the whole place, with some of its oddly antique aspects and its oddly modern freedoms, look doubly cut off from the world of light and ease....Parts of the place suggested a sunny Club at a languid hour, with members vaguely lounging and chatting, with open doors and comparatively cheerful vistas, and plenty of rocking-chairs and magazine. The only thing was that, under this analogy, one found one's self speculating much on the implied requisites for membership....One would have taken them to consist, without exception, of full-blown basenesses; one couldn't, from member to member, from type to type, from one pair of eyes to another, take them for anything else.

After reflecting on his experience at Eastern State, James sided with Dickens's "passionate protest" of sixty years past.¹³⁵

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 38)

The administration's most critical problems derived from its stubborn devotion to the Pennsylvania system at the expense of other developments in penology. The State of Pennsylvania had made a modest attempt to centralize the administration of its reformatory and penal institutions in 1869, when it passed an act establishing the Board of Public Charities. This entity paid annual visits to the various institutions, had general overview of their budgets, issued annual reports to the state legislature, and suggested policy changes; however, notes Finn Hornum, "the Board had no real control over the daily administration of the institution"--even in 1874 when the Governor was invested with the power to appoint its members. For the last two decades of the century, the strong personalities of Warden Cassidy (appointed warden 1881) and President of the Board of Inspectors Richard Vaux (a former city mayor and the son of Building Commissioner Roberts Vaux) helped to sustain the Pennsylvania system.¹³⁶

In other prisons across the country, new theories and techniques began to gain acceptance. In 1853, Irish prison reformer Walter Crofton developed the "*Irish system*," which combined the concepts of graded classification, commutation, indeterminate sentencing, and parole. Each prisoner was classified in a graded group; good behavior allowed him or her to progress through the series of grades, reduce his or her sentence, and leave prison on parole. Closely linked to the Irish System was the development of the American reformatory. In 1877, superintendent Zebulon Brockway introduced the Irish system at New York state's newly-opened Elmira Reformatory for young offenders. This experiment was widely hailed at various American prison conferences, and some of the more progressive institutions began to adopt similar programs--including Pennsylvania's own Huntingdon Reformatory (opened 1889). Despite the similar rehabilitative ideals shared by the penitentiary and reformatory systems, Eastern State Penitentiary's maverick Warden Cassidy stridently denounced the "prevailing epidemic of indeterminate sentence and parole" at the 1887 meeting of the National Prison Association.¹³⁷

More than any other issue, with the possible exception of overcrowding, labor caused a reluctant Eastern State to relinquish the Pennsylvania system. By the last quarter of the 19th century, a number of factors were threatening Eastern's handicraft contract labor system. First of all, rapid industrial expansion in Philadelphia and Pennsylvania had decreased the demand for hand manufactures. In attempting to safeguard their jobs in the wake of machine industry, free laborers perceived cheap prison labor as a threat to their livelihoods. On 13 June 1883, Pennsylvania prohibited private contract labor at all state and county penal institutions and introduced a state-use system which made the state the sole contractor. A week later, the state passed an act requiring all goods produced in penal institutions to bear the words "convict made," the year of manufacture, and the name of the institution. In 1891, the state implemented the eight-hour day for its convicts.¹³⁸

The most devastating state legislation regarding convict labor was the Muehlbronner Act of 1897. While its decree against the use of power machinery in prisons did not affect Eastern, this act seriously restricted the number of prisoners employed in handicraft manufactures. Only 20% (raised to 35% in 1899) of the convict population could be employed at any time. Skilled trades like shoe-making, which had to compete with factory-made products, were replaced with tasks like mat-weaving and brush-making. Eastern State administrators managed to keep other inmates busy with on-site construction and maintenance projects as well as in repair and hobby shops.¹³⁹

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 39)

Also faced with restrictive legislation regarding prison industry in New York state, Zebulon Brockway devised a new system of "*vocational training*" for his inmates at Elmira. He argued that inmates taught industrial skills in prison would become better-adjusted and valued contributors to free society. As expected, Cassidy and Vaux's opinions on the subject of free labor and vocational industrial training were entirely negative. He supported only the "honest industry" of hand labor and complained of the "labor unions....transplanted from the old country to this [which] have well-nigh ruined the industries of America." Richard Vaux condemned reformatories as only a slight improvement on the congregate system--"itself a crime against common sense and public safety."¹⁴⁰

Almost immediately after the deaths of Vaux in 1895 and Cassidy in 1900, many of the reforms and new ideas developed over the past half-century began to be implemented at Eastern. In regard to governance and administration issues, Pennsylvania passed a commutation law in 1901. In regard to labor and site use issues, Eastern embarked on a massive campaign of construction and building systems to update the infrastructure. In 1904, warden Joseph Byers sternly stated:

The administration of the Eastern Penitentiary on lines as originally laid down in the Laws of 1829, most of which are still in force, is out of the question. Taking no account of the marked advance in Penal Legislation in the past thirty years, and of changes in industrial and social conditions, and looking only at the physical side of the question, the enforcement of the "separate and solitary system" demanded by existing Laws is an absolute impossibility. Either the Laws should be changed to meet present conditions and to conform to the general accepted principles of prison reform, or the State should relieve its officials of the impossible situation of enforcing Laws that cannot be enforced.

Administratively, programmatically, philosophically, and physically, Eastern began to reinvent itself as a congregate prison.¹⁴¹

Accommodation at last: the congregate system (1913-1970)

On 7 July 1913, Governor John K. Tener signed a bill establishing Eastern State Penitentiary as a congregate prison. The law actually authorized "the proper authorities of the Eastern State Penitentiary....at their discretion, to have any or all of the persons confined in the said penitentiary congregated" for the purposes of "worship, labor, learning, and recreation." Jeffrey Cohen suggests that in fact, "The new law mandated less than it allowed and may simply have ratified some measures already in operation at Cherry Hill, but it soon translated into a wider range of congregate activities." Although it is not clear how many aspects of life at Eastern State Penitentiary were specifically transformed by the 1913 law, the dynamics of sanctioned congregate activity deserve consideration.¹⁴²

To start with the four activities specified by Governor Tener, communal religious activity was facilitated by renovation projects that created a general chapel above the laundry, a synagogue in Cellblock 7, and a Catholic Chapel in the former warden's office off Cellblock 1. The Morris and Vaux construction campaign had resulted in plenty of infrastructure for congregate labor. In 1927, criminologist Harry Elmer Barnes claimed that "In spite of....verbal recognition of the reformative value of vocational education little or nothing was ever achieved in this direction in the Eastern Penitentiary until recently, when Warden McKenty made provision for correspondence courses in technical and vocational subjects." Given the average inmate population of 1,447 men during the

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 40)

1920s and 1930s, facilities like the print shop, shoe shop, garage, and industrial buildings facilitated only limited vocational education. McKenty had more success in expanding general education offerings at the prison. By the end of 1917, 613 inmates were enrolled in prison school "from the beginning class for illiterates through the grammar school grades." By 1933, this figure had dropped to 108.¹⁴³

Lacking any formal diversionary facilities besides the library, Eastern developed new recreational programs. The 10,000 volume library moved to a covered exercise yard off Cellblock 2, and its former home on the second floor of the Observatory was converted into musical practice rooms. Several inmate musical groups—including a twenty-five-man string band, a forty-five-man brass band, and an 18-man orchestra—performed at Eastern, and their concerts were sometimes broadcast over the radio. Internationally renowned conductors John Philip Sousa and Leopold Stokowski each visited the penitentiary to conduct an inmate band. Also, it is told that during his time at Eastern State in 1929-30 mobster Al Capone purchased uniforms for the band. Movies were screened in the chapel above the laundry.¹⁴⁴

Sports were a favorite pastime at Eastern, and inmates had two hours of "yard-out" each day. Despite the presence of the power plant and the shop building, the yard between Cellblocks 3 and 4 served as a makeshift baseball and football field. The 1992 Eastern State Penitentiary oral history project features several former neighborhood residents who remember kids stationing themselves on Brown Street to catch the home run baseballs that flew over the prison walls. It took a strong arm to toss the ball back over the approximately 30' high wall. The heavy exchange of baseballs back and forth over the wall (4300 baseballs hit "out of the park" in 1933-34) either represented the popularity of the sport in Philadelphia and/or, as the administration suspected, a handy method of smuggling drugs into the prison. Other popular sports included quoits, handball, basketball, boxing, volleyball, and weight-lifting.¹⁴⁵

Of course, prisoners were already sharing living spaces well before 1913, and it seems that they continued to be fed in their cells until 1924 when the mess halls were constructed. Throughout Eastern's history, as at most prisons, diet was a key issue for the prisoners. The three meals served every day helped to structure a daily schedule, and the distribution of food provided the administration with a mechanism for punishment and reward. Since its early days, severe disciplinary action typically entailed the withholding or curtailing of meals coupled with staff brutality and solitary confinement in one of the various "Klondike" punishment areas. In the 20th century, movie and television-watching privileges were similarly meted out.¹⁴⁶

The adoption of the congregate system also created security issues at Eastern. Perhaps the greatest success of both the Pennsylvania system and Haviland's plan was the near impossibility of inmate insurrection on a large scale. No doubt, the administration's fears of such activity formed a major obstacle to congregating the prison. Sweeping security measures taken in the 1920s and 1930s during the heyday of the "big house" era focused on fortifying administration areas and guard stations—nearly realizing the prison's external appearance as a fortress. The administration's fears were sometimes confirmed by various escape attempts, murders, and riots.¹⁴⁷

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 41)

While dramatic riots did occur during the 1920s, 1930s, and 1960s, it is the escape attempts that continue to incite intrigue. Escapes included an assortment of schemes, such as constructing a collapsible ladder, strolling out the main entrance, hiding in an outgoing supply truck, disguising oneself as a guard, or exiting via the sewer system. Eastern's most notorious outbreak occurred as a result of the eighteen-month long effort of inmate Clarence Klinedinst. From his cell at the end of Cellblock 7, he dug a tunnel that resurfaced outside the prison walls on Fairmount Avenue. On a Sunday in April 1945, he and twenty-one other men (including fabled bank robber Willie "That's where the money is" Sutton) broke out. All of the prisoners were caught within two months.¹⁴⁸

As suggested previously, the 20th century witnessed increased involvement in the affairs of Eastern State on the part of the state government. In 1921, an act was passed to create a Department of Public Welfare with supervisory responsibility for all state institutions that provided human services. Its Bureau of Restoration (later renamed Bureau of Correction) had direct administration of the penal and correctional institutions. Finn Hornum points out that while the warden and Board of Inspectors (later renamed Board of Trustees) continued to make decisions pertaining to the daily management of the prison, "much of their autonomy was now subject to the approval of the central office bureaucracy in Harrisburg." In 1923, female prisoners were transferred to the new State Industrial Home for Women in Muncy. In the late 1920s, Eastern State was designated the receiving facility for the eastern part of the state and became a maximum-security facility for repeat offenders and those less likely to reform. By the early 1930s prisoners could be transferred from Eastern to its new "farm branch" at Graterford (administered by the same warden and Board).¹⁴⁹

Contemporary with the events listed above were important changes concerning prison labor practices. The recommendations of a state-appointed penal labor commission resulted in a 1915 law that implemented the state-use system at Eastern State, set new wage standards (from ten to fifty cents a day), and overrode the earlier limitations on inmate labor in various industries. A new Prison Labor Commission managed production and oversaw distribution of the manufactured materials to all state institutions. Intense production was hindered by the complexities of state administration, by state agencies' reluctance to purchase prison manufactures, and by New Deal legislation prohibiting interstate commerce of such goods. In 1943, the midpoint of American involvement in the second World War, only about 200 inmates were idle. The other 1,100 were employed in state-use industries (printing, binding, weaving, tailoring, shoe-making); federal War Production work (such as the manufacture of tent pins, surgical splints, and gas raid sirens); maintenance work; and "made" work (such as woodworking and handicrafts in the prison hobby shops).¹⁵⁰

In the 1940s, state governments nationwide initiated the centralization of state administration of penal institutions. At the same time, rehabilitation and treatment programs emerged as a new approach to the handling of criminals. Pennsylvania lagged behind other states in implementing these new ideas until the creation of the Bureau of Correction in 1953, when Bureau Commissioner Arthur T. Prasse began to effect a general reorganization of the state's correctional institutions. In Philadelphia, this called for the Eastern Correctional Diagnostic and Classification Center (ECDCC) to operate Cellblock 14 as a new prisoner intake and designation agency, and the State Correctional Institution at Philadelphia (SCIPHA) to occupy the rest of the site as a maximum-security prison for 500 men.¹⁵¹

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 42)

In 1968, ECDCC and SCIPHA were reintegrated as one correctional treatment center--the Eastern State Correctional Institution. Administrators planned to emphasize therapy, casework, counseling, education, training in establishing a "new" facility on the grounds of the old penitentiary. In September 1969, however, Pennsylvania announced that it would close Eastern State Penitentiary and transfer all inmates to Graterford and other appropriate institutions. The 235 staff members were also given the opportunity to transfer to other state facilities. When the prison officially shut down in January 1970, forty-three prisoners remained on site to do maintenance work. The last members of this "skeleton staff" left in April.¹⁵²

Preservation on a large scale (1970-1996):

In 1970, the State of Pennsylvania leased the site to the City of Philadelphia. According to the agreement, the city was responsible for renovating the facility and paying off the state bonds for recent improvements. Serious rioting at Philadelphia's Holmesburg City Prison resulted in the transfer of inmates to Eastern State that July. Convicts and defendants awaiting trial were housed on site at the newly designated Center City Detention Center as a temporary measure. Significant physical evidence of their occupation within Cellblocks 6, 7, 8 and 9 has recently begun to be documented. The city continued to use the site for various purposes until and after its 1977 purchase from the state.¹⁵³

This sale captured the imagination of numerous interest groups. For some, Eastern State Penitentiary was an empty eleven-acre lot occupying valuable land in the thick of the crowded Fairmount and Francisville neighborhoods and just over a mile northwest of City Hall. For others, it was a little understood monument of potential world historic and architectural significance, and deserved further attention. For both interests, Eastern State was an extremely valuable site.¹⁵⁴

In 1974, Mayor Frank Rizzo prepared a plan to level the site and "to consolidate all of the City's Criminal Court facilities together with a holding complex for defendants into a major Justice Center on the site of Eastern State Penitentiary." That same year, the Philadelphia Planning Commission considered other hypothetical redevelopment schemes that would use the site for a penal museum, a youth hostel during the Bicentennial celebrations, a shopping complex, an industrial park, and a residential complex. In 1983, the Philadelphia Redevelopment Authority invited developers to submit proposals for the residential development of the site. Given the restrictive terms of the sale and the tremendous financial commitment necessary for a redevelopment project at Eastern, only one proposal was received--and summarily rejected. Three years later, the Redevelopment Authority reduced the preservation and use restrictions and reopened the invitation to interested developers. Following a review by the Philadelphia Historical Commission, the Redevelopment Authority rejected all four of the plans received. The three firms who resubmitted plans intended to develop the site as a shopping center and office park; their efforts to preserve any of the prison's structures or ambience were minimal.¹⁵⁵

Meanwhile, a group of Philadelphia citizens gathered to share their thoughts about the proposed development plans. They expressed their concerns about the impact of the development schemes on the neighborhood and their sense of the architectural and historical significance of the penitentiary. Composed of neighbors, architects, preservationists, academics, and cultural players, the Eastern State

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 43)

Penitentiary Task Force launched a grass roots letter-writing and media campaign to call for the rejection of the various development plans. In a letter to Fairmount area Councilman John Street, Task Force Chairman Kenneth Finkel stated: "We urge the Redevelopment Authority to support a proactive, future-minded broad-based study that would include an Historic Structures Report and address all of the concerns and interests of the citizens of the neighborhood, the city and the nation for this little-understood landmark."¹⁵⁶

As a result of the Task Force's efforts, Mayor Wilson Goode officially discouraged the Redevelopment Authority from proceeding with any of the three proposals. A new chapter began in the life of the old prison, the Task Force began to see to Eastern's immediate needs. They organized volunteers to help remove the thick vegetative growth that had engulfed the site since 1971. They considered various reuses of the 170 year old prison: antique mall, document storage, art storage, garden center, night club, gallery of inmate art, rehearsal space, neighborhood center, bakery, ceramic studio, and museum. They also applied for grants for historical research, conditions assessment, reuse planning, a museum exhibit, groundskeeping, and minor stabilization efforts.¹⁵⁷

Since the late 1980s, the Task Force has received both private grants and city support to fund an impressive array of projects at or about Eastern State. These include a historic structures report, conditions survey, reuse model and trial reuse study, protection and stabilization plan, site operation and marketing study, tour route feasibility study, detailed cell study, and Administration Building study; a series of four workshops exploring issues of criminology, historic preservation, prison architecture, and community planning; a Philadelphia Museum of Art exhibition and catalog concerning the history of Eastern; an oral history project and video, a video documentary concerning the prison's history, and the transfer to video of a 1929 documentary set at the prison; the stabilization of the murals in the chapel and the repair of the chapel roof and skylight; and general maintenance and groundskeeping projects. And importantly, they also initiated free public tours of the site which continued on a limited basis through 1993.¹⁵⁸

In 1992, the Task Force reorganized as a committee of the Preservation Coalition of Philadelphia. A few years later, the Task Force developed an agreement with the Pennsylvania Prison Society (the current incarnation of the Philadelphia Society for Alleviating the Miseries of Public Prisons) to pursue operation of the property as an historic site. By 1994, Eastern State Penitentiary was open for tours on a May to October calendar, attracting 31,000 visitors in 1994-95.¹⁵⁹

Several local institutions have established partnerships with Eastern State Penitentiary. Bryn Mawr College conducts an ongoing archaeological dig; Chestnut Hill College has established an internship program, and PHILACOR (a manufacturing and services agency of the Philadelphia prison system) perform maintenance work. Eastern has provided the setting for artistic projects in film, dance, theatre, and visual and conceptual art. The Eastern State Penitentiary Committee considers its mission as a historic site to consist of the following:

To preserve the architecture of Eastern State Penitentiary; to make the building accessible to the public; to explain and interpret the century-and-a-half long debate that took place on the site regarding the rehabilitation of inmates; and to provide a forum where issues of criminal justice can continue to be discussed.¹⁶⁰

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 44)

167 years after its opening, Eastern State Penitentiary endures as perhaps the most internationally significant landmark in the city of Philadelphia.

PART II. ARCHITECTURAL INFORMATION

A. General Statement:

1. Architectural character: Designed by national prominent architect John Haviland and erected between 1822 and 1836, Eastern State Penitentiary represented the first thoughtful, large-scale application of the radial plan to prison design. As completed Eastern State expressed in physical form the progressive penological philosophy known as the "Pennsylvania System" of solitary confinement. This system was the product of early 19th century rational humanitarianism which believed that controlling social institutions could reform deviant members of the population. The penitentiary attracted thousands of visitors from all over the world during the early decades of its operation, placing the penitentiary at the center of debates on prison design and governance. Notwithstanding the deficiencies and/or merits inherent within the system, Eastern State Penitentiary has directly influenced the design of approximately 300 prisons on four continents and inspired an ongoing conversation about architecture and social control. The erection of Eastern State also marked a turning point in the career of John Haviland, who among other things, went on to build ten more prisons in six states.

Architecturally, Eastern State Penitentiary is a striking example of Medieval Gothic Revival architecture. Characterized by its massive, stone construction; crenelated battlements; projecting towers and buttresses; and (blind) pointed-arched windows, it is one of the earliest examples of a castellated structure in America. A revival of the Gothic design that dominated English architecture from the late-12th through the mid-16th centuries began in England during the mid-18th century; a few examples appear in American by the early 19th century. While later interpretations emphasize the picturesque qualities of the style--as proclaimed by well-known, mid-19th century practitioners such as Alexander Jackson Davis--the Gothic style prior to its revival possessed an aura of mystery and gloom associated with the Middle Ages. This early interpretation of Gothic architecture is particularly well suited to prison design. At Eastern State, its monumental construction and windowless, fortress-like facade evokes impressions of confinement, isolation and gloom. Reflective of the obscurity into which its inmates passed, its message was clear: live within the laws of the State lest you become one of its inhabitants. As the popularity of Gothic Revival architecture waned by the 1870s, the style was applied primarily to the design of ecclesiastic and institutional architecture.

The penitentiary occupies a ten-acre block defined by a squared masonry wall with castellated, three-and-a-half story towers, one at each of its four corners. Integral with the front wall is the "Anglo-Norman"-style, two-story Administration Building with its central two-story tower. Behind it appear various one-story additions. At the exact center of the property appears the octagonal, two-story Observatory crowned with a two-story sentry tower. Around the Observatory are arranged fifteen one-, two-, and three-story cellblocks (with additions). As the institution expanded within its walls, almost all subsequent cellblock construction

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 45)

echoed the archetypal plan established by John Haviland: individual cells on either side of a skylit, double-loaded corridor that extended from the Observatory toward the perimeter wall. A garage, a laundry/chapel, a kitchen, and a greenhouse are also present within the walls. Its physical structure incorporated innovative construction techniques (cast-iron, standardized elements), and advanced systems for heating, ventilation and indoor plumbing. Developing construction technologies and its idiosyncratic architectural expression all contribute to the distinctive character of Eastern State Penitentiary. Despite the innovative design and penial philosophy expressed by its original form, during the Penitentiary's 158 years of operation the construction and alteration of architectural fabric was undertaken to suit the evolving needs of the institution.

2. Condition of fabric: The present condition of Eastern State Penitentiary ranges from good to critical. Current opinion holds that the oldest structures on site are often in the best repair, while the newer structures and additions are in the worst condition. Once the penitentiary closed its doors, the site was not maintained. Unchecked vegetation covered the grounds and even some of the buildings for more than a decade, and vandals caused significant damage to the site. Much of the prison's furniture and many of its fixtures were removed for reinstallation at Holmesburg City Prison, and other materials were lost to scavengers.

Soon after they became involved, the Eastern State Penitentiary Task Force contracted a local architectural firm to prepare a sweeping conditions survey and a protection and stabilization plan. In 1990, the latter report identified twelve priorities for its stabilization (in descending order): Site Access & Growth in Buildings, Overhanging Tree Limbs, Roofing Failures, Flat Roof Drainage, Skylight Closure, Debris Removal, Site Drainage, Windows and Doors, Building Drainage, Clear Open Terrain, Structural Repairs, and Miscellaneous. As the budget has permitted, several of the recommendations have been acted on, such as vegetation removal, re-roofing, skylight protection, and debris removal. The most pro-active effort made thus far targeted the Catholic chapel between Cellblocks 1 and 9: it has been re-roofed, its skylights reglazed, and its painted murals treated by an architectural conservationist.¹⁶¹

B. Building Descriptions:

1. WALLS AND CORNER TOWERS:¹⁶²

a. Dates of construction and location: Serving along with the Administration Building as the public face of Eastern State Penitentiary, the walls and corner towers (1822-29) define a square ten-acre plot approximately 670' to a side. They are aligned with the points of the compass, slightly off the Philadelphia grid. The south wall is interrupted by the Administration Building, whose barbican contains the only entrance to the site. Towers emerge from the four corners of the perimeter wall. A low retaining wall of fieldstone appears outside the main walls along the south and east sides.

b. Description of exterior: The walls reach a height of 30' above grade and extend another 10' below grade; they measure 12' thick at the base and 2' thick at the top. The site slopes downhill from Brown Street to Fairmount Avenue, and the ground within the walls was made

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 46)

level during initial construction efforts. A clear depiction of the grade change appears outside the west wall (on 22nd Street), as the wall decreases in size as it approaches Brown Street.

The south wall is finished with square-cut ashlar laid in regular courses. Fourteen blind lancet windows punctuate the south wall and give it the appearance of providing the primary facade of an enormous building. Filled with concrete, these openings have stone lintels and cast stone sills. The east, north, and west walls are finished with a rougher and less regularly coursed ashlar stone. As the east and west walls approach the south, however, the ashlar grows more regular as if in anticipation of the highly finished south wall. Ten battered buttresses of the same highly-finished ashlar as the south wall appear on each the east, north, and west walls at approximately 50' intervals.

The original slate coping of all walls has been replaced with cast stone. A short span of chain link fence appears on top of the north wall; it served to block the flight of baseballs hit by inmates from the baseball field between Cellblocks 3 and 4. The inner surface of all interior walls is a semi-coursed rubble fieldstone. In some areas, large patches of concrete cover portions of wall, created in the 1920s to provide inmates with handball courts.

The four towers are finished with the same masonry as the south wall and buttresses and have battlements that extend above the perimeter wall. Each tower is topped with a concrete and brick guard house with metal windows and doors. The profile of the south towers project beyond the walls in a partial octagon. They have three lancet windows, two rectangular slit openings, and two filled rectangular windows each. The concave inner walls of these towers are finished with more regularly-cut fieldstone, and they are entered through steel doors at grade, and the guard stations have a single exterior door. The two squared north corner towers project very slightly from the perimeter walls, and they have no windows. These towers are entered by a steel door placed at the top of a concrete flight of steps with a metal handrail. The inner walls are faceted. The guard stations have two exterior doorways as well as short walkways atop the neighboring walls.

c. Plan and uses (towers): Norman Johnston reports that in the early years of the prison, some guards lived with their families in the towers. The interior walls of the southwest tower display evidence of three flights of stairs. Three floor levels, and two openings for stovepipes. The southeast tower served as a morgue for a period after WWII, and it is likely that one or more of the towers was used for storage.

In 1906, all of the towers received concrete roofs, and the door to the northeast tower was sealed off. Before 1924, wood sentry boxes were located on the ground at the four corners of the yard. By May of that year, these sentry boxes were installed atop the corner towers: they were fitted with searchlights, Krag repeating rifles, and Thompson machine guns. The wood structures were replaced with brick and concrete sentry boxes by 1945. The installation of new metal stairways and ladders took place in the early 1950s.

At present, the south towers house switch-back metal open-riser stairs ascending to landings from which metal ladders lead to hatches in the floor of the guard stations. The north towers

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 47)

have a similar configuration of steel open-riser spiral stairs ascending to metal ladders. The guard stations contain one room with a door providing access to the tower roof.

d. Interior features: In addition to the equipment mounted outside, the northwest, southwest, and southeast guard stations are each fitted with a telephone, radiator, cabinet, wall-mounted sink, and toilet/seat.

2. ADMINISTRATION BUILDING:¹⁶³

a. Location and dates of construction: Centered on the south perimeter wall, the Administration Building is located in front and center of the property. The main block (1822-29) consists of three tower structures linked by the three-story east and west wings. Within what remains of the former courtyards north of the Administration Building appear several additions: a rectangular, one-story structure (after 1962) and a L-shaped, one-story structure in the west yard (1952-56) in addition to an L-shaped, one-story structure in the east yard (1962-64). Also within the west courtyard is a one-story emergency generator station (after 1962). A one-story squared barbican is centered on the south facade of the building (1937-38) and a small one-story sentry box appears just east of the north gate (1937-38).

b. Description of exterior: The towers and the south, east, and west walls are composed of massive smooth coursed ashlar; the west and east end walls and the north wall feature a combination of coursed ashlar and large polygonal stones. The exterior surfaces are backed by rubble fieldstone, with some visible instances of inverted brick arches in the rubble foundations for additional support. All the following detail work is executed in stone masonry, unless specified otherwise. A beveled water table appears at the same height as that of the perimeter wall. The battlements of the main block guard a shed roof covered with flat seam metal roofing and asphalt shingles. This roof had four brick chimneys.

The squared east and west towers feature pointed arch machicolations beneath crenellated parapets. Some of the merlons serve as chimneys. These towers have shed roofs covered with flat seam metal over the original copper roofing.¹⁶⁴ The octagonal central tower also has a crenellated parapet. Its pyramidal roof is covered with flat seam metal and repaired with pitch.

The original entrance had a pointed arch opening filled with a massive metal studded oak door beneath a partial, fixed, portcullis of wrought iron. Topped by a label molding and flanked by two gabled buttress towers, this entrance was largely covered by a new stone portal in 1937-38. This barbican is finished with semi-coursed stone with ashlar jambs, lintels, and quoins. In addition to the barbican's large opening for vehicular access and its pedestrian doorway, the Administration Building has six other exterior doorways: the large through-way to its north, the north entrance to the west wing, the west entrance to the west wing, and the three roof hatches in the towers.

The Administration Building features a variety of window types. On the south facade, the flanking towers each have a bank of three pointed arch windows with individual metal grates

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 48)

beneath three narrow rectangular windows; on the north facade, the towers have three tiers of three rectangular windows with metal grates and continuous sills. On the south facade of the main block appear three single pointed arch windows with individual metal grates. Some of the windows on the north facade--typically rectangular openings with metal grates--have been blocked by subsequent construction. The central tower features one door, one roof hatch, four pointed arch openings filled with louvers, twelve narrow slit openings, and three rectangular windows covered with metal grates.

Originally, two rectangular courtyards were present directly behind the east and west wings. Much of the remaining semi-coursed stone yard walls now provide exterior walls for the additions constructed behind the Administration Building. In the west yard, the small concrete block emergency generator station to the southeast has a coursed fieldstone veneer and a timber roof covered with asphalt. The mess hall to the west has walls of random range ashlar, a steel structural system, and a built-up shed roof. The electrical substation to the north is made of concrete with a stone and brick veneer and has a timber roof covered with asphalt. In the east yard, the long visitors' room and office addition have walls of random range fieldstone, steel framing, and a built-up roof. The small sentry box just east of the north gates is constructed in the same manner as the barbican.

c. Plan and uses: The Administration Building's complex original plan has been further complicated by many alterations and additions. A brief discussion of the building's historic configurations should shed some light on its present arrangement.

Haviland planned a symmetrical structure with a central entry passage flanked by stairways and by two wings with end towers. Three gates--at north, center, and south--divided the entry passage into two distinct bays. While the south bay of the entry passage was open to the sky, the north bay was crowned with an enclosed room and above it the central tower with an internal spiral stair. Each floor of the wings had identical corridors which were joined on the north by three small rooms and which terminated at the larger tower room. An exterior balcony connected the east and west corridors at the third floor level, and a series of stairways provided passage to the various spaces inside the building.

The west wing housed cooking and baking facilities on the ground floor, staff rooms on the second floor, and the infirmary on the third floor and fourth floor (tower). The east wing housed washing and ironing rooms on the ground floor, rooms for staff and warden on the second, and the warden's apartment on the third. The center tower room (third floor) served as the apothecary and the upper portion of the tower contained an alarm bell and clock. The two courtyards also provided specific functions. The west yard had privies in the northwest corner and a prisoners' receiving room in the northeast corner; the east yard had privies for the warden's family. Notable about the early configuration was the ease in which those spaces used by prisoners (infirmary, apothecary, entry passage) could be isolated and secured.

19th century construction included the addition of a stable on the west exterior wall of the west courtyard, a new receiving building on the site of the old one, and the beveling of the west courtyard wall's northwest corner and east courtyard wall's northeast corner to make

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 49)

room for new Cellblocks 8 and 9. At the conclusion of the 1872 renovations to the Administration Building, the Inspectors' room was relocated to the east wing, and a resident physician and clerk were allotted rooms in the west wing.

Morris and Vaux's 1900 plans of Eastern State Penitentiary depict a similar arrangement of spaces in the Administration Building. The west wing contains the offices for the physician (ground floor), principal overseer (second floor), and principal overseer and matrons (third). The warden uses the entire east wing but the second floor tower room which continued to serve as the Inspectors' room. These plans also provide the location of additional stairs and doorways. In 1904, a new structure was erected next to the receiving room to house offices for the Bertillon classification system.

The various security measures adopted in the 1920s-30s focused on the Administration Building. In the mid-1920's, the upper floors of the east wing was converted into offices for prison officials and staff, and the ground floor of the east tower was renovated as a visiting room. Evidence of the latter persists on the concrete floor marked with the locations of stools and the partition wall. Alterations of the 1930's included the construction of the barbican and sentry box from stone salvaged from the newly-demolished emergency hospital and the enclosure of the third floor balcony. The many non-original partition walls in the second and third floor rooms may have been added during this period.

The 1950s and 1960s witnessed a construction boom in the courtyards: the erection of the officers' mess, electrical substation, visiting room and attached offices, and emergency generator room. All but the latter were accessible directly or indirectly from the Administration Building itself. The 1962 plans for the visiting room and offices reveal that the east wing's ground floor contained an arsenal, two waiting rooms, and a guards' day room. At the time of its closing, the west wing housed locker rooms, a kitchen, and offices; the east wing contained the arsenal, waiting rooms, offices, and communications rooms.

With the decision to open Eastern as a tourist site, the ground floor of the Administration Building's east wing underwent a number of alterations. Pre-existing doorways were opened to create a passage between the corridor and tower room (now the giftshop), between the corridor and easternmost room, and between the other two rooms. The bathroom fixtures and partitions were also removed from the easternmost room. These three rooms now serve as an exhibition gallery, and the former long visiting room to the north now acts as a video screening room. Staff use the rooms to the northwest for an office and a lounge.

d. Interior features: Notable on the interior of the main block is the brick vaulting system which Haviland designed to provide structural security and fireproofing. Almost all of the rooms and corridors feature brick groin or barrel vaults. The north entrance bay and the former apothecary have brick groin-vaulted ceilings, plastered and scored to imitate ashlar masonry. Most masonry interior walls are surfaced with plaster, and a number of partition walls redistribute the interior spaces.

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 50)

Despite all the alterations, the main block does retain a number of its original fixtures, including iron gates, weather doors, blue marble steps and balcony. While all of the original chimney mantles have been removed, there are a number of extant neo-Grec style radiators from the 19th century.

3. OBSERVATORY:¹⁶⁵

a. Dates of construction and location: Located by Haviland at the exact center of the enclosed site, the Observatory is the central hub from which radiate (directly or indirectly) fourteen of the fifteen cellblocks. It is an octagonal, two-story building crowned by a central tower with surrounding walkway (1822-1829, altered c. 1856-1872 and reconstructed 1950-51).

b. Description of exterior: Many of the "exterior" walls of the Observatory are shared with adjacent buildings and rooms. The Observatory's first two stories are constructed of rough-faced ashlar fieldstone capped with concrete. Above appears an extension wall of tan and red bricks arranged in a decorative pattern (similar to the cornices on the third-story rooms of Cellblocks 4-7) and capped with concrete. The structure is roofed with corrugated steel covered in asphalt.

The first floor has eight doorways. Missing plaster (which was applied directly to the masonry) reveals brick arches above these round-arched openings--designating earlier doorways. Sets of glazed, paneled, hollow metal, double doors appear in the doorways to Cellblocks 1, 2, 5, and 8/9. The doorways to Cellblocks 4, 6, and 7 lack one door leaf, and the doorway to Cellblock 3 is empty. The doorway to Cellblocks 8 and 9 has a paneled metal surround. Further blurring the boundary between "exterior" and "interior" space, there are cast stone baseboards applied to the Observatory's masonry on either side of these doorways to most Cellblocks. The first floor also had eight windows, which survive in varying condition. The original window had a two-light wood sash with a beveled stone lintel and a cast stone sill.

On the second story, windows appear to the southeast, east, and northeast. The original window to the south has been replaced with a door which opens onto concrete walkway accessing the roofs of Cellblocks 1, 2, 8, 10, and 11. Of the four doorways to the second story cellblocks, three have been blocked. Only the doorway to Cellblock 7 (southwest) remains.

The present tower retains the general arrangement of its predecessor (see below) as expressed in 1950s materials. It is made of steel with a corrugated sheet metal exterior finish. two circular openings for clocks and two square, louvered openings appear beneath the exterior walkway of steel grating which circumscribes the tower. The tent roof is covered with sheet metal.

c. Plan and uses: The Observatory has a basement, first floor, second floor, and attic but no surviving internal stairs. Accessed by a bulkhead contained in a shed outside Cellblock 7.

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 51)

This basement room is the hub from which the cellblock tunnels radiate. The basement originally contained an octagonal cistern 40' in diameter. Intended to supply water to the cellblocks, this reservoir was abandoned when the new reservoir and elevated tanks were erected between Cellblocks 4 and 5 in 1833.

The first floor (rotunda) is one large room whose original function of surveillance was retained throughout the penitentiary's long history. As the institution gradually adopted the congregate system, the Observatory became a nexus for the inmates as well. The daughter of a former warden remembers the inmates marching through this room en route to the mess halls in Cellblocks 4 and 5. A 1925 photograph printed in the Philadelphia Inquirer depicts a all-convict musical group performing here.

The second story had been intended for use by the turnkeys and for storage. There was an exterior wood balcony that provided a lookout over the one-story cellblocks. The two-story blocks each had direct access to the Observatory's second story, but only Cellblock 7's doorway survives unfilled. The prison library took over the Observatory's second story by 1861, and the apothecary shop was sharing the space with the library by 1893. According to the WPA plans made in 1936, the library remained here at least through that time; it later moved to a set of converted cells in Cellblock 2. After the space ceased to be used as a library, multiple partitions were erected to create six separate musical practice rooms in this space.

The attic level is accessed through a door in brick addition atop Cellblock 6. A metal grate walkway leads to a spiral stair that twists up to a landing (with the clocks and louvered openings). From there, a flight of steel stairs ascends to a hatch through the floor of the tower room. A ladder on the exterior metal balcony ascends to the tower roof.

The original, small, octagonal tower had eight louvered openings crowned with a lookout lantern. By 1872, the tower was outfitted with round clock faces, and its second story was expanded into a room with seven round-arched windows and a door onto a balcony enclosed protected by waist-high chain link fencing. The structure had a tent roof with a spherical finial. By 1950, the windows had been squared, and the finial had been replaced with a searchlight. The tower was entirely dismantled and a new steel tower erected in 1950-51. Despite changes in look and technologies, the central tower was consistently used for surveillance.

d. Interior features: The wood floor on the first story was replaced in 1904. The terrazzo floor in place now was probably installed in the 1950s. The rubble fieldstone walls of the first and second floors are finished with plaster applied directly to the masonry. The refinishing of the second floor room probably coincided with the removal of the library. The shelves lining the walls were removed, and the wood floor was replaced with linoleum tiles. A dropped acoustical tile ceiling was installed, and the "pyro-bar" block partition walls erected.

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 52)

The interior of the attic has two steel trusses riveted to the wood structure. The tower room has painted steel walls and a linoleum tile floor.

4. CELLBLOCK 1:¹⁶⁶

a. Dates of construction and location: One of the original Haviland radial wings, Cellblock 1 extends southeast from the Observatory. It is an irregularly-shaped, one-story block (1823-29) continued by a twenty-cell addition to its southeast (1868-70), flanked by a one-story wing (1823-29) with addition to its northeast (early 1930s), and flanked by a one-story addition (c. 1879-1894) and one-story wing (1823-1829) with second story addition to its southwest (c. 1960-65).

b. Description of exterior: The exterior walls of the main block and the first story of the adjacent wings are faced with rough-cut granite gneiss arranged in irregular courses with a back-up of rubble fieldstone and brick. Massive ashlar quoins appear on the southeastern end wall, which was erected at the end of the twenty-cell extension in 1869-70 according to a plan drawn up by overseer Michael J. Cassidy. The location of the original end wall can be detected by the presence of a masonry seam in the corridor interior. Also, inside the northwesternmost Cassidy cells, the missing plaster on the northwest walls reveals the massive ashlar surface and quoins of Cellblock 1's original end wall.

The gable roof of the main block is formed of wooden timbers supporting planked sub-roofing and is covered by standing seam metal on the northeast side of the gable and asphalt shingles on the southwest side of the gable. There is a plain cornice composed of square-cut slabs of stone. Originally, the exercise yard wings were open to the sky; they now have flat roofs of timber or concrete covered with asphalt. The timber roof of the neck of the corridor is covered with flat seam metal.

The main block originally had three major exterior doorways: two round-top doors in the neck of the corridor (now filled) and one at the southeast end of the corridor (now eliminated by the 1869-70 addition). There are now two exterior doors: one accessing an outdoor corridor between the chapel and the southwest wing and another at the southeast end. The latter door has rough-cut jambs and a monolithic lintel; above it appears a round-top window with a lintel of voussoirs in the form of a round arch. This configuration of end door and window imitates Haviland's surviving cellblock ends (Cellblocks 2, 4-7) and would be used again by Cassidy on the ends of Cellblocks 3 and 8-11.

Two of the four original, deeply-set, rectangular windows survive in the neck of the corridor. twelve metal skylights on wood bases daylight the corridor. The Haviland cells (and his cells in Cellblocks 2 and 3) originally featured fixed, round "dead-eye" skylights, a few of which survive in the older cellblocks. Many of the older cells were retrofitted with pairs of operable, narrow, rectangular skylights prior to 1869.

The exercise yards originally featured 5'8" high' x 2'2-1/2" wide openings arranged beneath lintels (in the Haviland cells, the lintels are monolithic) that bowed out over the paired metal

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 53)

and wood doors to shed rain. Evidence of these hatches, now filled or removed, remains. Meanwhile, the converted exercise yards have been fitted with skylights, windows, and standard-sized doors.

The concrete block second-story addition to the southeast wing has a built-up roof and is accessed by two exterior metal stairways. This space is daylit by windows and a large hole in its southeast wall. The red brick exterior walls of the one-story addition to the southwest are laid in Flemish bond and have a decorative brick cornice. The roof of the chapel/office is covered with composition shingles and asphalt, and has a chimney with a concrete cap. The one-story addition to the northeast wing was created by roofing over the yard space between Cellblocks 1 and 10. Its exposed exterior wall surfaces are made of concrete block, and the structure's flat roof is surfaced with asphalt.

c. Plan and uses: The original plan of Cellblock 1 has been impacted by many the additions and alterations made through the 1960s. Inside the main block, the cells appear on either side of the corridor which originates from the Observatory. When first constructed, Cellblock 1 housed a total of thirty-eight cells (nineteen to a side) and a few extra rooms for heating equipment near the northwest end of the corridor. Most of the original cells measured 11'9" long x 7'4" wide with a barrel vaulted ceiling sloping from 16'3" to 10'9" above the cell floor; their exercise yards measured 14'3" long x 8' wide with 11'6" high walls. The extension of Cellblock 1 in 1869-70 introduced twenty larger cells measuring 16'3" x 7'11" x 11'5 to 8'7" with exercise smaller yards.

A handful of the cells have been converted into workshops, offices, and storerooms, and the cell at the northeast end became a shower room. Originally, each cell was accessed only via the exterior door of its exercise yard and then through the paired doors between exercise yard and cell; food was transmitted to each inmate through a feeding hatch in the cell wall closest to the corridor (see figure). Penitentiary officials realized the inefficiencies of this plan by the early 1830s: new doors between cells and corridor were installed between the 1850s and 1872, and the feeding drawers were blocked. The new doorways featured a hinged wood door and a hinged metal lattice door. The Cassidy cells were constructed with a sliding wood door and a hinged metal lattice door. All doorways are raised 6" above the corridor and cell floors.

Once accessed by pairs of communicating doors from the cells, the exercise yards have been sealed off, roofed, and converted into workshops and support spaces. The northeast range of workshops provides access to the wedge-shaped addition which housed a shoe-making shop (later a print shop). Only accessible from outdoors, the southwest range of workshops (which includes a barbershop) is crowned by the second-story addition which once housed classrooms. The interrupted demolition of this cinder block structure in the 1990s caused the removal of its partitions designating offices and bathrooms. The brick addition was constructed as administrative offices ca. 1879-1894 and was later adopted for use as a chapel. It can be accessed from the main corridor, from an exterior passageway, and from the exterior space between Cellblock 1 and Cellblock 9.

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 54)

d. Interior features: Massive squared flagstones alternate in twos and threes across the corridor covering the original brick flooring; the original wood floors of the cells are covered with poured concrete. For the most part, plaster is applied directly on the masonry walls of the corridor and cells. The masonry partition walls are 18" thick. Missing plaster reveals that the earlier part of the corridor has a brick barrel vault, and the extended corridor has a false timber-framed vault lined with wood lath and plaster. The cells feature plastered brick barrel vaults supported by the masonry partition walls between cells. As a security measure for the newly-congregated prison, metal gates were installed at the head of all cellblock corridors in 1923-24.

The workshops feature a variety of finishes, including concrete ceilings and tiled walls. The chapel and offices feature some beaded board partition walls and ceilings. In the 1950s, an inmate employing the pseudonym Paul Martin (two of his favorite saints) painted murals depicting religious scenes on the walls of the chapel.

An underground service tunnel stretches beneath the length of Cellblock 1's corridor. It has a brick vaulted ceiling, walls of stone, a poured concrete floor, and continuous brick ledges on either side. It housed various heating and plumbing connections to the cells.

5. CELLBLOCK 2:¹⁶⁷

a. Dates of construction and location: One of the original Haviland radial wings, Cellblock 2 originally ran east directly from the Observatory, but its corridor has been interrupted by a secondary artery to Cellblocks 10 and 11. It is an irregularly-shaped, one-story block (1823-29) flanked by one-story wings to its north and south (1823-29) and extended by two rooms on each side of the west end of the range of cells.

b. Description of exterior: Cellblock 2 retains its original end wall with its coursed rough-cut ashlar and massive ashlar quoins. Its timber roof is covered with a combination of flat and standing seam metal. The main block features four exterior doorways, including its original access at the east end of the corridor.

The corridor features eleven skylights, and the cells display either "dead-eye" or narrow rectangular skylights. With the conversion of the exercise yards to workshops and classrooms, the door openings have been filled, several windows cut into the walls, and skylights inserted into the ceilings.

c. Plan and uses: Largely due to its alignment in one of the cardinal directions--and the lack of room for new construction between it and the perimeter wall--the original arrangement of Cellblock 2 remains largely intact. Its plan resembles that of Cellblock 1 with wedge-shaped rooms arranged at the neck of the corridor, cells positioned on either side of the corridor, and a few cells and all exercise yards converted into workshops and support spaces. The wedge-shaped spaces contain offices to the north and a tobacco shop to the south. Other cells were used for storage, offices, a curio store (which extends into the yards), an ironing room, a barber shop, and a shower room.

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 55)

Cellblock 2 originally had thirty-six cells and two rooms for heating equipment; corridor/cell doors were not introduced until 1875. The cells are typically 1'7" longer than those in Cellblock 1. Because Cellblock 2 was in such poor repair in the 1850s-1870s, prison officials used it for the incarceration of mentally ill inmates and as a punishment area. This cellblock housed female prisoners at least as of 1892 and probably for decades before that.

Interrupted to its east by the intrusion of Cellblock 15, the northern range of workshops includes a long tailor shop accessed from the exterior or from passageways made from defunct cells. The southern range includes workshops (once classrooms, now accessed from outside), the curio store (which extends into the cells), and a laundry room (both accessed from the corridor).

6. CELLBLOCK 3:¹⁶⁸

a. Dates of construction and location: One of the original Haviland radial wings, Cellblock 3 extends northeast from the Observatory. It is an irregularly-shaped, one-story block (1823-29) flanked by one-story wings to its northwest and southeast (1823-29) with additions and continued by a 20-cell extension (1878-79) with second-story addition (1922) to its northeast.

b. Description of exterior: The timber roof of Cellblock 3 is covered with flat seam metal over the corridor and asphalt shingles over the main gable. The second story addition is made of reinforced concrete scored to imitate ashlar, and it has a built-up roof. Some exercise yard walls have been extended in height with reinforced concrete, and they have timber roofs covered with asphalt. Attached to the northwest wall is a brick incinerator with an oven at its base connected to a tall chimney stack with corbelled cap.

The main block features several types of exterior doorways. The twelve large arched openings were cut into the exterior cell walls on the southeast side to provide light and air to the patients in the tubercular ward there. Nine of these openings survive as doorways and feature fanlights and wood doors covered with metal grates and metal doors. Three others have been filled with glass block. The early exterior doorways include the end door and the two original doorways with ashlar quoins and lintels in the neck of the corridor. Also of note are several open (not filled, without doors) exercise yard doorways on the northwest wall. In the alley between Cellblocks 3 and 14, a metal exterior stair ascends to a door in the second story addition.

The corridor features 15 skylights (another two were removed for the 2nd story addition). The surviving Haviland cells each have one narrow rectangular skylight, while the tubercular cells have two. Three of the four original four-light windows survive in the neck of the corridor. The converted exercise yards feature one skylight and an array of windows.

c. Plan and uses: The plan of Cellblock 3 originally resembled that of Cellblock 1 with cells and exercise yards positioned on either side of a corridor extending to the rotunda. Fortunately, seven of the original feeding hatches between cell and corridor survive with their

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 56)

metal doors set in beveled metal openings. By 1872, most of the original cells had been doubled for use as workshops, and the 1878-79 addition was almost immediately put to use as a "hospital department." In the mid-1880s, several cells in the eastern end of the northern range were adapted for use as a gymnasium. In 1899, a tubercular ward was created on the south side of the building, and it featured nine 20' x 17' cells with large arched openings facing a yard.

Reconfiguration of the cells and exercise yards for infirmary and work spaces continued well into the 20th century. 1922 witnessed the erection of the second-story, eleven-room "solarium" reached by a staircase directly outside the Tuberculous ward. Also significant was the conversion of several cells and exercise yards into hospital wards, x-ray room, and kitchen on the northwest as well as the creation of a doctor's office, operating/autopsy room, and utility room on the southwest. Most of the exercise yards on the southeastern side were demolished to make room for Cellblock 14 (1926-27).

d. Interior features: Cellblock 3's use for workshops and as an infirmary introduced a variety of finishes and partition walls. Some other notable features in Cellblock 3's corridor include the presence of terrazzo flooring, the use of metal lath to hold plaster, and the wood framing and wood lath construction of the barrel-vaulted ceiling above the last twenty cells.

7. CELLBLOCK 4:¹⁶⁹

a. Dates of construction and location: The first of Haviland's two-story radial wings to be constructed, Cellblock 4 extends north from the Observatory. It is a symmetrical, bottle-shaped, two-story block (1831-33) flanked by one-story wings (1831-33) to its east and west, and crowned on its southern end by a third-story addition (c. 1885-1900s).

b. Description of exterior: With its narrower second story resting on the standard width first story, the profile of Cellblock 4 reflects the decision made in the midst of construction to add a second story (or gallery) of cells. Haviland made the second story cells smaller so as to accommodate skylights in the first story cells below. To redress the lack of exercise yards on the second story, he paired adjacent cells with connecting doors, thus providing each second story inmate with one space for living and one for exercise.

Cellblock 4's timber roof is covered with asphalt shingles. The walls of the third-story addition are tan brick laid in common bond. This structure has a decorative cornice of red and tan brick which echoes the Observatory's brick extension wall. Its roof of wood planks is covered with flat seam metal and asphalt.

The building has fourteen exterior doorways. Its three original doorways survive: 2 rectangular doorways with monolithic stone lintels in the neck of the corridor and one doorway at the north end of the corridor. The corridor features two skylights, and the former exercise yards are daylit by a combination of skylights and windows. The typical cell has a pair of operable, narrow, rectangular skylights.

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 57)

Cellblock 4 features several ventilation systems. Cast-iron ventilator boxes positioned on the northern end wall of the building and distributed along the second story of the east and west walls originally served to ventilate the upper cells. In 1836, Haviland explained the problem with this system: "[T]hat design afforded the means of communication. Two prisoners applying their mouths to the same ventilator could converse either to the yard or to the adjacent cells." All but two boxes were promptly sealed shut: the boxes on the north end wall were retained, because there were no exercise yards below. Haviland copied this feature--only on the end wall--in Cellblocks 5-7.

c. Plan and uses: Cellblock 4 was constructed with 100 cells total. The first story plan resembles that of the original three cellblocks with twenty-five cells with exercise yards on either side of the central corridor. Constructed with doors on to the corridor, these first story cells were 3' longer but had significantly shorter ceilings than those in Cellblock 1. The wood winder stairway enclosed in a room on the west side is original: the metal stairways in the corridor were added in 1904. There are two short flights of steps which formerly accessed a door (now sealed) to the second floor of the observatory. The west set of steps has been interrupted by a metal stair to the third floor addition. The latter contains one room used for the surveillance of the second floor balconies through an interior [lunette] window.

The second floor features 3' wide cantilevered balconies that with their various bridges define a series of open light wells. The second story has another fifty cells (10'3" x 7'6" with vaults 15' to 9'6") positioned over the cells on the first story. All evidence of connecting doors between pairs of second story cells has been concealed by subsequent changes and finishes, but some of these passages do survive in Cellblocks 5 and 7. There is an office in the southernmost room of the east range of cells.

Almost all the exercise yards have been sealed off and converted into workrooms and support spaces. The west range of yards includes kitchen support areas, a mess hall seating 350-400 (dating from 1924), and storage spaces. The east range includes a series of workrooms as well as three nearly intact exercise yards. Two at the south extreme are roofed and have a communicating door. The yard at the north extreme is the best survivor on site: it lacks a roof, still features its original low monolithic stone lintel, and its walls have not been altered.

In the 1920s until at least 1940, there were "Klondike" punishment cells located on the second floor of Cellblock 4. In the 1940s and 1950s, the cellblock housed exclusively African-American inmates, some of whom worked in the nearby kitchen, serving areas, and mess halls.

d. Interior features: Cellblock 4's corridor and all subsequent cellblock corridors have barrel-vaulted ceilings made of timber framing and wood lath. Each doorway between cellblock and corridor had a hinged wood door and a lattice metal door. The balconies (now surfaced in cement) are made of tongue and groove wood boards supported by cast iron brackets fastened into the hall walls. Wood handrails resting on cast iron balusters in the form of Aeolic columns complete the balconies. The wood stairways feature decorative wood

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 58)

balusters. Plaster was applied directly to the brick walls of the third story room, and applied to metal lath on the ceiling. Its floor is made of tongue and groove wood planks.

Notable in Cellblock 4 is the survival of a utility cart used for the delivery of food, library books, and supplies to the inmates in the second story cells. Its large flat wood bed is covered with sheet metal and mounted on a metal armature and with four-spoked, metal wheels. Also stationed on the first floor of the corridor is another wheelbarrow-type cart with a bed of wood planks mounted on a metal armature with two large, spoked, metal wheels and two smaller rubber wheels.

Cellblock 4's underground tunnel provides an excellent example of how Haviland's tunnels beneath two-story cellblocks differed from previous models. Here, a central brick partition wall (interrupted by several passages through) runs almost the length of the tunnel. It divides the brick tunnel ceiling into two half-segmental vaults.

8. CELLBLOCK 5:¹⁷⁰

a. Dates of construction and location: One of Haviland's two-story radial wings, Cellblock 5 extends northwest from the Observatory. It is a symmetrical bottle-shaped, two-story block (1831-35) flanked by one-story wings (1831-35) to its northeast and southwest, and crowned on its southeastern end by a third-story addition (c. 1885-1900s).

b. Description of exterior: Cellblock 5's timber roof is covered with asphalt shingles; the brick third floor addition has a flat roof covered with flat seam metal. There is a series of concrete trash can shelters attached to the exterior wall of the northeast range of cells. The building's three original doorways survive. The corridor features three large skylights, and the former exercise yards are daylit by a combination of skylights and windows. The typical cell has a single operable, narrow, rectangular skylight.

Haviland did incorporate some changes into the design of Cellblock 5. For example, he curved the exterior walls of the two rooms closest to the observatory, perhaps in part to prohibit inmates from hiding behind sharp corners.

c. Plan and uses: The plan of Cellblock 5 resembles that of Cellblock 4 but with a total of 136 cells. It has a similar configuration of cells, balconies, corridors, light wells, and stairways. Most first and second story cells have dimensions equal to those corresponding cells in Cellblock 4. In 1936, there was a tailor shop, a shower room, a barbershop, and a storage room on this cellblock.

The exercise yards have been sealed off and converted into workrooms and support spaces. The northwest range of yards includes kitchen support areas and two mess halls (dating from 1924), as well as a single roofed exercise yard. The southwest range includes workshops (used for shoe-making and weaving) and rooms for the storage of water softening equipment and electrical equipment.

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 59)

Like Cellblock 4, Cellblock 5 housed some of Eastern State's African-American inmates during the 1940s and 1950s--on its first floor. The gallery had punishment cells for convicts of all races and served as an area where homosexual inmates were housed.

9. CELLBLOCK 6:¹⁷¹

a. Dates of construction and location: One of Haviland's two-story radial wings, Cellblock 6 extends west from the Observatory. It is a symmetrical bottle-shaped, two-story block (1831-35) flanked by one-story wings (1831-35) to its north and south, and crowned on its eastern end by a third-story addition (c. 1885-1900s).

b. Description of exterior: Cellblock 6's timber roof is covered with asphalt shingles, and the third story addition has a roof of flat seam metal mopped with asphalt. The building's original end door and one of its corridor neck doors are intact. The corridor features two large skylights, and the former exercise yards are daylit by a combination of skylights and windows. The typical cell has a single operable, narrow, rectangular skylight.

c. Plan and uses: The plan of Cellblock 6 resembles that of Cellblock 4 but with a total of 100 cells. It has a similar configuration of cells, balconies, corridors, light wells, and stairways. Cell dimensions resemble those in Cellblocks 4 and 5. Located in the cellblock were a barbershop, a tailor shop, a shower room, and a cell office. Cellblock 6's third-story room accesses the Observatory attic.

The exercise yards have been sealed off and converted into workrooms and support spaces. The north range of yards contained hosiery and knitting shops, an electrical shop, and other work spaces. The twelve exercise yards at the eastern end of the south range were demolished probably to make room for Cellblock 12 (1909-1911). The remaining range of yards contains two workshops (used for dyeing and printing) and a chaplain's office, which connects to a cell whose access to the corridor has been sealed off.

10. CELLBLOCK 7:¹⁷²

a. Dates of construction and location: The last of Haviland's radial wings to be constructed, Cellblock 7 extends southwest from the Observatory. It is an symmetrical bottle-shaped, two-story block (1833-36) flanked by one-story wings (1833-36) to its northwest and southeast, and crowned on its northeastern end by a third-story addition (ca. 1885-1900s).

b. Description of exterior: With the exterior wall of the first-story cells protruding just slightly beyond the exterior wall of the second story, the profile of Cellblock 7 varies from the other two-story cellblocks. By arranging the skylights horizontally in the first story cellblocks, Haviland was able to align the exterior walls on both stories. Each second story cells has one vertically-aligned, narrow, rectangular skylight.

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 60)

The main gable of Cellblock 7 has a timber roof covered with asphalt shingles, and the third story addition has a timber roof covered with flat seam metal and asphalt. The building has two exterior doorways, one just outside the Observatory and one at the corridor's far end. The corridor features three large skylights, and the former exercise yards are daylit by a combination of skylights and windows. Cellblock 7's only surviving original window appears at the corridor's southwest end; the openings at the neck of the corridor have been filled.

Just southeast of Cellblock 7 appears a corrugated metal shed with a wood roof topped with sheet metal. It provides access to Cellblock 7's service tunnel, which connects to the Observatory basement and the maze of underground tunnels.

c. Plan and uses: With its 136 cells, the plan of Cellblock 7 demonstrates Haviland's latest refinements of the two-story model he had first used in Cellblock 4. Rather than cantilevering the balconies over the first story corridor, he set back shortened second story cells. This allowed him to locate the balconies directly above the corridor-end walls of the first story cells. Cell dimensions resemble those in Cellblocks 4-6. Haviland also curved the interior wall at the southwestern extremity creating a sort of apse to disguise a chimney stack.

In Cellblock 7, Haviland erected a pair of metal stairways to the second floor, and these elegant stairways survive to this day. They feature decorative stringers, balusters with their Aeolic capitals tilted to accommodate the slope of the stair, and wood handrails. Another metal stair extends up to the third story addition. Unlike Cellblocks 4-6, there is no wood winder stair.

On the second story, the two rooms by the stairs contain offices. The rooms directly beneath were used for offices (northwest) and as a dentist's office (southeast) attached to a waiting room made of three converted cells. Other cells housed the barbershop, paint shop, and shower room. The exercise yards have been sealed off and converted into workshops and support spaces. Cellblock 7 was known for its "alley shops": the woodworking and craft shops in which prisoners created model boats, cradles, children's toys, and other handicrafts for sale to the public. The thirteen exercise yards at the northeastern end of the northwest range were probably demolished to make room for Cellblock 12 (1909-11). The remaining range of yards contains six workshops. The southeast range includes five workshops and a space that was fitted up as a synagogue in 1927-28.

d. Description of interior: Of special interest is the synagogue, which is finished with a decorative plaster ceiling, wood paneling and built-in seats along its side walls. At the front (northeast) of the room is the ark with built-in closets, a chamber for the Torah, and ionic columns.

11. CELLBLOCKS 8 and 9 (and BERTILLON OFFICE):¹⁷³

a. Dates of construction and location: Overseer Michael J. Cassidy's first new cellblock buildings, Cellblocks 8 and 9 (1877-79) are located south of the Observatory. Together they form a nearly-symmetrical, V-shaped, one-story building bisected by an axial corridor that

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 61)

leads to the Observatory to the north and bisects the triangular addition (the Bertillon Office) wedged between the two cellblocks to the south (1940-41). There is also a triangular room added to the west extreme of the northwest range of cells in Cellblock 8 (probably ca. 1897).

b. Description of exterior: The masonry walls of Cellblock 8 and 9 are made of polygonal fieldstones backed by rubble stone. Their roofs are finished with standing-seam metal mopped with tar, and the radial corridor is covered with flat seam metal. There are no exercise yards. The addition at the non-corridor end of Cellblock 8 has walls of rubble fieldstone and a concrete roof; it has one door.

Cellblocks 8 and 9 were constructed with truncated end walls. The end doors appear beneath monolithic stone lintels, above which appear arched-top windows. There are another five rectangular windows along the north end of the central corridor. Twelve skylights appear on Cellblock 8's corridor and twelve on Cellblock 9's. The axial corridor has four skylights and a round-top thirty-three-light metal clerestory. Most cells contain two narrow rectangular skylights, and the barbershop formed from two converted cells near the northwest end of Cellblock 9 has its own large skylight, made of wood.

The Bertillon Office is made of concrete faced with square-cut, random range fieldstone. The concrete roof is coated with tar. At the front center of the building, the pair of metal doors beneath the sixty-light transom window provide primary access to the Observatory and thus to the entire cellblock complex. The building also features forty-eight-light metal windows with masonry jack arch lintels and concrete sills, as well as two skylights.

c. Plan and uses: To construct Cellblocks 8 and 9 in the space south of the Observatory, Cassidy constructed an axial corridor that branched into thirds. Two diverging branches provide corridors for two cellblocks similar in layout to Haviland's one-story cellblocks. Both cellblocks were constructed with fifty cells each. Cellblock 8 has 52 cells (not all of them rectangular), a shower room, rooms with built-in cabinets, and the triangular addition (probably a hosiery knitting room) only accessible from the exterior. Cellblock 9 has 48 cells, a shower room, a barbershop, and one room with built-in closets.

The typical cell measures 17'9-1/2" x 7'11" with a barrel vaulted ceiling sloping from 12'10" to 9'4-1/2". Given the 140 square feet in each cell--almost 50% larger than the 86 square feet in Cellblock 1's cells--one has to wonder if Cassidy's new cells represented an acknowledgment of the crowded conditions at the prison and if they anticipated the abandonment of the Pennsylvania System. The generous dimensions would more comfortably accommodate the two and sometimes three inmates housed in a single cell.

The central branch of the corridor previously ended just past the V of Cellblocks 8 and 9 with an arched opening housing a set of glazed, double doors with sidelights and fanlight. To construct the wedge-shaped Bertillon Office in 1940-41, these door was removed, the corridor extended, and a new exterior door arranged in front. To the west appear a series of seven rooms accessed by two doorways from the corridor; to the east are another seven rooms--including a shower room--accessed by four doorways from the corridor. The

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 62)

Bertillon Office--named for the Bertillon System of prisoner classification--succeeded the various receiving rooms stationed in the Administration Building's west courtyard.

d. Interior features: The construction of Cassidy's cellblocks largely imitates Haviland's later blocks with their loadbearing masonry walls between corridors and cells, cell demising walls of stone and brick, cell vaults of brick, and corridor vaults of wood lath and timber framing. Plaster is applied directly to all masonry surfaces. The cells have concrete floors, and the corridor floors are paved with flagstones. The corridor which bisects the Bertillon Offices is made of concrete and terrazzo.

The photographs and plans published in Cassidy's own book, *Warden Cassidy on Prisons and Convicts* (1897), provide some key details regarding the cellblocks' original fixtures and finishes. The corridors were lit with multi-branch gas fixtures. Interior masonry walls were 20" thick, and exterior walls were 24" thick. Floored with wood planks, each cell was fitted with a toilet, water tap, steam heating pipes, and gas lighting. Plumbing lines ran under the cells to an underground service tunnel beneath its central corridor. Constructed without exercise yards, the cells were largely ventilated by the two operable skylights and the pair of doors at the corridor end of each cell: an iron grate and a sliding wood door of Cassidy's invention.

Also of note are the two angled mirrors installed near the intersection of the axial corridor and the cellblock corridors. These black walnut mirrors were to compensate for the lack of a direct line of sight to the cellblocks from the Observatory by providing views down the cellblock corridors. Their original glass is missing, but new antiqued, glazed frames were applied to the surface of the old frames for the filming of "12 Monkeys" in 1995.

12. CELLBLOCKS 10 and 13:¹⁷⁴

a. Dates of construction and location: The third cellblock designed by overseer Cassidy, Cellblock 10 extends southeast (ESE) from the secondary artery shared with Cellblocks 2 and 11 just east of the Observatory. It is a bottle-shaped, one-story block (1878-79) with a wing to its north (ca. 1910-1929), and it borders on Cellblock 1's shoe shop/print shop to its southeast. Cellblock 13 must have been erected during the period after Cellblock 12 and before Cellblock 14 began construction (1909-1926). It is a one-story, nearly-rectangular block abutting the northeast of Cellblock 10.

b. Description of exterior: Again, Cellblock 10 largely follows precedents. Here, however, the masonry walls are random ashlar blocks backed by rubble stone, and there is a partial concrete parapet on its northwest span where it borders the courtyard behind Cellblock 15. Cellblock 10 has five exterior doors. Three doors, six windows and three large metal skylights appear along the neck of the central corridor, and eight smaller metal skylights daylight the rest of the corridor. Most cells have two operable, rectangular metal skylights glazed with wire glass; a barbershop near the neck of the corridor features one of these skylights and a large wood-frame skylight. The wing addition has stone and brick walls faced with stucco and a timber roof covered with flat seam metal and asphalt.

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 63)

Cellblock 13 has walls of reinforced concrete scored to imitate ashlar and a concrete roof covered with asphalt. It has a single door to its northwest, three skylights and a grilled opening over its corridor, and eleven skylights and eleven conical ventilating holes (all now blocked with concrete) over its former eleven cells.

c. Plan and uses: To provide physical access and a line of vision from the Observatory to the new cellblock, Cassidy had the corridor to Cellblock 2 widened. The corridor for Cellblock 10 originates from this nexus and continues southeast between the cells. Wedged in the limited space available between Cellblocks 1 and 2, Cellblock 10 was constructed with thirty-one or thirty-two cells--many of which were irregular in shape. The typical cell has dimensions similar to those cells in Cellblocks 8 and 9. One of the cells is fitted up as a barbershop, another as an office, and a third as a shower room. Not accessible from inside Cellblock 10, the northeastern addition served as a rag shop.

Cellblock 13 is entered by a door on its northwest. Inside, a single-loaded corridor accesses the eleven cells whose concrete partition walls are almost entirely demolished. A single cell survives near the entrance. It measures 3'11-1/2" wide by 8'11-1/2" long. Called "The hole" or "Klondike," this cellblock was to provide a most severe punishment for transgressive inmates. Those sent here spent up to a month in solitary confinement. These cells were used until 1959, when Cellblock 15 opened as the new maximum security block.

d. Interior features: Cellblock 10's cells feature semicircular, not barrel, brick vaults. Cellblock 13's reinforced concrete walls are painted, but its concrete ceiling and floor are not. In the series of video interview conducted for Eastern State's 1992-93 oral history project, a number of the former inmates remembered this punishment block as being "underground." Eastern State Penitentiary historian Paul Eisenhauer has suggested that this perception may have been encouraged by the grated opening in the ceiling of Cellblock 13 as well as by the profound disorientation an inmate was likely to experience while being escorted to these cells: guards were encouraged to beat inmates all the way to the "Klondike."

13. CELLBLOCK 11:¹⁷⁵

a. Dates of construction and location: Co-designed by warden Cassidy and overseer William H. Johnston, Cellblock 11 extends northeast (ENE) from the secondary [artery] shared with Cellblocks 2 and 10 just east of the Observatory. It is a bottle-shaped, one-story block (1894) that nearly mirrors Cellblock 10.

b. Description of exterior: Cellblock 11 shares portions of its northwestern walls with Cellblocks 3 and 14. It also had a stone masonry parapet along a portion of the southeastern wall in order to seclude Cellblock 15's exercise courtyard. Most of the parapet has collapsed into the courtyard, pulling down part of the roof and wall beneath it. This situation provides a sectional view of the cellblock's structure, which largely copies Cellblock 10. Cellblock 11's main roof is covered with standing seam metal, and the corridor roof is covered with flat seam metal. Cellblock 11 has four exterior doors with the voussoirs over the end window featuring a keystone bearing the date 1894. Also notable about the end wall is the presence of

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 64)

two metal tie rods secured with straps forming an X. One exterior window and four large metal skylights appear along the neck of the central corridor, and eight smaller metal skylights daylight the rest of the corridor. Most cells have two operable, rectangular metal skylights.

c. Plan and uses: With its corridor branching from the nexus with Cellblocks 2 and 10, the layout of Cellblock 11 imitates that of Cellblock 10. Cellblock 11 was constructed with thirty-five cells--several of which were irregular in shape. The typical cell has dimensions typical of Cassidy cells. The cellblock had three barbershops, a storage room, and a tailor shop. In the late 1950s, the ECDCC used Cellblock eleven to house some of its inmates.

d. Interior features: The collapse of Cellblock 11's parapet reveals that the cells have semi-circular vaults and brick (not stone or stone and brick) demising walls thinner than those in the older cellblocks. Missing plaster on the corridor walls reveals that they were constructed of stone and brick.

14. CELLBLOCK 12:¹⁷⁶

a. Dates of construction and location: Constructed by prison labor according to the plan of an unknown designer, Cellblock 12 extends southwest (WSW) of a space between Cellblocks 6-7 and the Observatory. It is a bottle-shaped, three-story block (1909-11), with a mostly one-story bottleneck.

b. Description of exterior: Cellblock 12 is constructed of reinforced concrete. Deterioration has revealed that the beveled water table was formed by applying hollow clay tiles to the concrete surface and stuccoing over the tiles with a cement plaster. With its uniform light color, its trapezoidal end profile, its nearly flat roof, its windows (not skylights) and its prominent frontispiece, the building distinguished itself among the previous gable-roofed, stone cellblocks. It has a concrete cornice and what may be a concrete slab or timber roof covered with built-up roofing. A small and inaccessible addition made of concrete appears on the roof.

In addition to the doorways to Cellblocks 6 and 7, there are four exterior doorways: two in the corridor's neck and one more at the far end of the corridor. Outlined with shouldered trim in concrete, this opening has a set of paneled, wood, double doors and a metal door grate. Also framed within the trapezoidal frontispiece are two triple windows and two louvered vents. Each side wall is punctuated with three rows of twenty-one narrow, rectangular casement windows with sloping slate sills. Other windows appear on the neck of the corridor and on each of the upper levels near the stairs. Given the original presence of electrical lighting, this cellblock has only four metal-framed skylights on the corridor.

c. Plan and uses: The general plan of Cellblock 14 borrows heavily from that of Haviland's first three two-story blocks. The first story corridor stretches to the southwest between two ranges of twenty-one cells. Two stairways in the corridor's neck ascend to the second floor and then to the third. An identical configuration of cells is present on each of these floors, with cantilevered concrete balconies and bridges defining two-thirds open light wells. The

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 65)

most NNE third story cell has a ceiling hatch which leads to a small concrete structure on the roof. The cellblock now has a total of 120 rooms.

The two cells closest to the stairs on each story serve as storage rooms, and there is a shower room at the opposite end of the first story corridor. Cells on this block also housed a tailor shop and barbershops. Raised 4" off the ground, each doorway had been fitted with a steel grate door and rolling wood door. Most cells measure 15' x 7'6" with flat ceilings 9' above the cell floor.

d. Interior features: All concrete cell and corridor walls are painted but for the shower rooms with their ceramic tile finishes. The concrete balconies have metal guard rails topped with wood handrails. Steel rails ("body bars") stretch across the light wells, and there are rolling utility carts in place on both the second and third floors. All interior surface finishes are concrete, as are the treads of the stairways. Each cell has a masonry sink, a toilet, radiator, ceiling light fixture, and a four-channel radio console.

15. CELLBLOCK 14:¹⁷⁷

a. Dates of construction and location: Constructed by prison labor according to plans drawn up by inmate John Gillespie, Cellblock 14 is wedged between Cellblocks 3 and 11 northeast (ENE) of the Observatory. It is an irregularly-shaped, three-story block (1926-27), which roughly replicates Cellblock 12.

b. Description of exterior: Cellblock 14 is constructed of reinforced concrete with steel and wood fittings, and it shares portions of its exterior walls with neighboring Cellblocks 3 and 11. Unlike those of Cellblock 12, Cellblock 14's walls are deteriorating rapidly with metal reinforcing rods springing out of the structure and prying loose the concrete. Now inaccessible, the flat roof may be made of timber or concrete; it is topped with built-up roofing.

Its east end wall displays a boxy profile with a projecting concrete frontispiece containing two triple windows over the primary door. There is another doorway between a converted cell on the second floor and a concrete bridge to Cellblock 3; it may have been created in 1954 when Cellblock 3's former solarium came to serve as offices for the Eastern Correctional Diagnostic and Classification Center (located in Cellblock 14). Outside the east end of Cellblock 14 appears an opening in the ground covered with a metal grate: it accesses the tunnels and punishment cells beneath the cellblock.

The side walls are punctuated with deeply set cell windows. Additional windows appear near the stairs and at the extreme ends of the cellblock. With windows present in the cells and the block wired for electricity from the start, there are only three metal-framed skylights on the corridor.

c. Plan and uses: Bent into the narrow space between Cellblocks 3 and 11, Cellblock 14 lacks direct access to and from the Observatory. The head of Cellblock 14's corridor begins

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 66)

at a doorway on the northwest corridor of Cellblock 11. Cellblock 14's corridor stretches northeast with a slight bend near the middle of the block. Twenty-eight cells appear on the northwestern flank and eleven cells on the southeast. A single stairway near the bend in the corridor ascends to the second floor and then to the third. An identical configuration of cells is present on each floor with cantilevered concrete balconies on the second and third floors. The roof is accessed through a ceiling hatch in the third story cell directly opposite the stairs. Given the cramped space occupied by Cellblock 14, it contains at least thirty irregularly-shaped cells. The showers are located in a trapezoidal room on each floor. Most cells have as much square footage as Haviland's early cells and 8'5-1/2" walls and flat ceilings.

Cellblock 14 was constructed for younger inmates, mostly first offenders. In 1954, the ECDCC used the cellblock for the intake and classification of new prisoners.

d. Interior features: All concrete cell and corridor walls are painted but for the shower rooms with their ceramic tile finishes. The concrete balconies have metal guard rails with wood handrails. Steel rails ("body bars") stretch across the light wells. Each cell has a porcelain sink and toilet fixed in a masonry cabinet, a radiator, a ceiling light fixture and a four-channel radio console. Cell doorways were originally fitted with a steel grate door and a rolling wood door.

Notable in the tunnel beneath Cellblock 14 are four punishment cells. Entirely surfaced in concrete, each cell is 6' high, 6' wide, and 9' deep, with a sink/toilet and a light fixture.

16. CELLBLOCK 15:¹⁷⁸

a. Dates of construction and location: Constructed according to the plans of three men from the Engineering Department of the Pennsylvania Industrial School, Cellblock 15 extends northward from the east end of the Cellblock 2's north range of cells. It is a rectangular, two-story block (1956-59).

b. Description of exterior: Cellblock 15 is made of reinforced concrete and surfaced with cut stone. Its flat concrete roof is covered with bituminous pitch. On the east facade appears a steel-framed door with a ashlar surround in addition to fifteen windows with concrete sills and ashlar jambs and lintels. The west facade has a similar door and seven similar windows.

c. Plan and uses: Cellblock 15 was the last structure erected or adapted for punitive segregation and maximum security at Eastern. Probably when Cellblock 15 opened, the cells in Cellblock 13 were demolished. The building earned the epithet "Death Row" because in 1959-61, inmates with death sentences were housed here while awaiting execution at Rockview.

While not freestanding, Cellblock 15 has no direct access to neighboring buildings. The northeast door leads to the perimeter walk, and the northwest door opens onto Cellblock 15's triangular exercise courtyard. It has identically-arranged two floors connected by a stairway on the north wall. Each floor has a core of seventeen cells, a few guard rooms and/or

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 67)

mechanical rooms, and two shower rooms in two rows separated by a service passage. The second floor has another mechanical room in the northeast corner. The typical cell measures 9'1" x 6'6" with a 8' ceiling. A corridor runs along the inner perimeter of the west, north, and east walls. In front of the cells, the corridor is split longitudinally by the remains of metal bars that once defined two walkways: one closer to the cells for inmates and one further from the cells for prison officials.

d. Description of interior: The concrete walls and ceilings are painted, and the corridor and shower room walls feature some ceramic tile finishes. Each cell is fitted with a toilet/sink and a metal bedframe.

17. Greenhouse:¹⁷⁹ The Greenhouse stands between Cellblocks 13 and 2 facing east. The structure was probably built in the early 1930s to serve as a recreational facility for inmates. Its wood frame rises from four concrete corner pillars and a concrete base, which have been scored to imitate ashlar and painted white. Lapped sheets of glass are fastened between grooves in the wood frame of the gable roof and gable ends. Wood frame sashes with concrete sills line the four sides of the structure, and a wood door appears at its east end. Although much of the Greenhouse's framing has rotted and the glass is missing or broken, the west facade of the structure remains relatively intact.

The gable roof is supported by a series of wood kingpost trusses. A metal device beneath the peaked roof served to open and close parts of the roof, and a series of metal pipes served as the Greenhouse's own plumbing system. The concrete shelves lining the perimeter of the space and the central concrete planter now host growing weeds.

18. Kitchen:¹⁸⁰ The Kitchen complex is situated between Cellblocks 4 and 5. By 1836, Haviland built a two-story, keyhole-shaped, stone pumphouse and reservoir, which was used as a kitchen several decades later. Cookhouse, boilerhouse and oven room additions to the southeast and northeast bears a datestone of "1903." Its rusticated, random range granite walls are topped with gable roof decorated with opposing spherical finials. Other contributing structures built in the 20th century appear to the southwest, southeast and northeast.

19. Industrial Building:¹⁸¹ Another Morris and Vaux design, the Industrial Building was constructed in 1905-07 between Cellblocks 5 and 6. This two-and-a-half story, L-shaped building features sturdy gothic motifs, particularly at its west entrance with its stone tracery, shouldered trim, and pointed-arched transom. It has walls of rusticated random-range granite, gable roofs topped with asphalt shingles, and three gable-end chimneys. A long, gabled, skylight runs along the roof ridge of the east wing. The first floor of the main wing served as a laundry, and the second-story space, as a chapel/auditorium by 1916, and soon afterwards, as a movie theater as well (metal-sided projection booth attached to the south wall).

20. Garage:¹⁸² The Garage complex appears along Cellblock 7's northwest range of shops. It consists of several one-story structures constructed during the first half of the 20th century. The main reinforced concrete structure features a half-story loft storage area. A long, concrete block structure and a stone structure connected appear to the northeast.

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 68)

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PART IV. PROJECT INFORMATION

The documentation of Eastern State Penitentiary was undertaken in the summer of 1996 by the Historic American Buildings Survey (HABS) of the National Park Service, E. Blaine Cliver, Chief of HABS/HAER by funding provided through a congressional appropriation for the documentation of historic sites within southeastern Pennsylvania. The project was cosponsored by the Chesapeake Field Directorate, Bill Bolger, National Historic Landmarks Coordinator, as local project manager; Eastern State Penitentiary, Sean Kelly, Manager; and HABS, Paul Dolinsky, Chief HABS. The field project was developed and executed under the director of Catherine C. Lavoie, HABS historian. The written history was produced by Sarah E. Zurier (University of Pennsylvania) and the large-format photography was produced by HABS staff photographer, Jack E. Boucher.

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EASTERN STATE PENITENTIARY
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23. Act of 27 February 1833 in *Acts of Assembly Relating to the Eastern State Penitentiary*, 12; Report of the Building Committee, *5th Annual Report*, 1834, 10-11.
24. Haviland to Building Commissioners, 31 December 1834, III:287-88, Haviland Papers; Architect's Report and Report of the Building Committee, *6th Annual Report*, 1835, 13-16.
25. Inspectors' Report, *8th Annual Report*, 1837; McElwee, 9-10.

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 77)

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28. Roger W. Moss and Sandra L Tatman, *Biographical Dictionary of Philadelphia Architects, 1700-1930* (Boston: G.K. Hall, 1985), 343-47.
29. Haviland, *The Builder's assistant, containing the five orders of architecture. . . for the use of builders, carpenters, masons, plasterers, cabinet makers, and carvers. . .*, Vols. 1-3 (Philadelphia: John Bioren, 1818, 1819, 1821); Cohen, "John Haviland" in *Master Builders: A Guide to Famous American Architects*, edited by Diane Maddex (Washington, DC: The Preservation Press, 1985), 36-39.
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31. Moss and Tatman, 344-46; Johnston, "John Haviland," 144-151.
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EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 78)

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42. McElwee, 6; Haviland, *Description*, 11; Paul Dolinsky, interview by Zurier, Historic American Buildings Survey, 6 August 1996. In their 1957 history of ESP, Teeters and Shearer proclaimed the location of the cornerstone as "[o]ne of the mysteries of old Cherry Hill" (p. 55).
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EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 79)

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58. Inspectors' Report, *25th Annual Report*, 1854, 21; *32nd Annual Report*, March 1861 in Cohen, "Chronological. . .1919," II:379, HSR; *16th Annual Report*, March 1845.
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EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 80)

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EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 81)

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EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 82)

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106. Takagi, "Walnut Street Jail," 23-25; Teeters, 45.
107. The respect between Howard and the Prison Society was mutual. In 1788, the Prison Society sent the Englishman a letter and a copy of their constitution. While Howard did not reply directly, his opinions of their organization were expressed in a letter pledging L500 towards "establishing a permanent charity under some such title as that at Philadelphia, viz: A society for alleviating the miseries of Public Prisons." Teeters, 37-41; PSAMPP minutes as quoted by Teeters, 40; John Howard as quoted by Teeters, 41; Johnston, *Crucible*, 26.
108. Act of 5 April 1790, as quoted by Sellin in "Introduction: Tocqueville and Beaumont and Prison Reform in France" in Gustave de Beaumont and Alexis de Tocqueville, *On the Penitentiary System in the United States and Its Application in France* (Carbondale: Southern Illinois University Press, 1964), xxviii-xxix; Johnston, *Crucible*, 26; Lewis, 27.
109. Duc de la Rochefoucauld-Liancourt as quoted by Sellin in "Introduction" to Beaumont and de Tocqueville, *On the Penitentiary*, xxx; Hornum, "Penological Philosophy: General Background," I:30-31, HSR; Teeters, 51-55; PSAMPP, Memorial 5 in Teeters, 453-55; Sellin, "Philadelphia Prisons," 328.
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111. Teeters and Shearer, 18-19; Act of 20 March 1831 in Vaux, *Brief Sketch*, 33-51.
112. ESP Building Commissioners, *Letter, Report and Documents, on the Penal Code*, 1828, quoted in Johnston, *Crucible*, 32.
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EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 83)

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118. See Dickens's *American Notes* (New York: St. Martin's Press, 1985), Johnston's *Eastern State Penitentiary*, and Blake McKelvey's *American Prisons: A History of Good Intentions* (Montclair, NJ: Patterson Smith, 1977).
119. Michelle Taillon Taylor, 8. Neighborhood and Prison Management during the Early 19th Century, HSR, 166; 'A Correct View of the State Penitentiary in the Vicinity of Philadelphia, *Atkinson's Casket* 2 (1827); J.C. Wild, 'The Eastern Penitentiary' in *Views of Philadelphia and its Vicinity* (Philadelphia: J.T. Bowen and J.C. Wild, 1848).
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126. Hornum, "Prison Labor: General Background and Early Years," I:36-39, HSR.
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128. Dorothy Gondos Beers, "The Centennial City: 1865-1876," in *Philadelphia*, 419-22; Inspectors' Report *38th Annual Report*, 1867; Teeters and Shearer, 218.
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130. Johnston, *Crucible*, 52; Cassidy, 58-62. In *American Notes*, Charles Dickens describes the cell of one convict who had "extracted some colours from the yarn with which he worked, and painted a few poor figures on the wall. One, of a female, over the door, he called 'The Lady of the Lake' (92). Vaux, *Brief Sketch*, 93; Teeters and Shearer, 169.
131. *Ibid.*, 159-60; Eastern State Penitentiary, *Catalogue of the Library*, (Philadelphia: Eastern State Penitentiary, 1862, 1868, 1872, and 1902), held by Historical Society of Pennsylvania; Amos T. Mylin, *State*

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 84)

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133. Leslie C. Patrick-Stamp, "Investigation of ESP, 1897," I:203-08, HSR; Teeters and Shearer, 111.
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137. *Ibid.*, 173; Barnes, *Story*, 145-47, 209-13; Eriksson, *Reformers*, 98-102; Cassidy, *Warden Cassidy*, 57.
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139. Act of 18 June 1897, *Acts of Assembly*, 79-80; Hornum, "Prison Labor, 1866-1923," I:223-24, HSR.
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141. Act of 11 May 1901, *Acts of Assembly*, 39-42; Warden's Report, *75th Annual Report*, 1905, 10-11.
142. *Laws of the General Assembly of the Commonwealth of Pennsylvania Passed at the Session of 1913* (Harrisburg, PA: 1913), 708; Cohen, "Accommodation," *Crucible*, 88.
143. Barnes, *Evolution*, 358, 362; William B. Cox, F. Lovell Bixby, and William T. Root, eds., *Handbook of American Prisons and Reformatories*, vol. 1 (New York: Osborne Association, Inc., 1933), 834.
144. Cohen, "Accommodation," *Crucible*, 92; Interview with Joseph R. Brierly (staff and warden 1940-73), OHP, PCP; Interview with William Zielinski (son of ESP guard of 1923-39), OHP; Warden's Report, *Annual Report*, 1924, 30.
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147. "New Riot at Cherry Hill," *Philadelphia Inquirer*, 29 August 1934; Cox et al., I:823.
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EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 85)

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153. [articles], *Philadelphia Inquirer*, 2 and 6 July 1970; [article], *Philadelphia Inquirer*, 14 January 1971; [cell documentation project-----]; Commonwealth of Pennsylvania through Department of Property and Supplies to General State Authority, 21 February 1938, transfer sheet at Records Unit, Philadelphia City Hall; Commonwealth of Pennsylvania and General State Authority to City of Philadelphia, 5 August 1977, transfer sheet at Records Unit, Philadelphia City Hall; "23 Years, \$20,000 later, 'Catman' remains faithful," 25 February 1994, *Philadelphia Inquirer*.

154. Dennis Montagna, "Philadelphia's Eastern State Penitentiary: These Stone Walls Do Not a Shopping Center Make" in *Changing Places: ReMaking Institutional Buildings*, Lynda H. Schneekloth, Marcia F. Feuerstein, and Barbara A. Campagna, eds. (Freedonia, NY: White Pine Press, 1992), 258-80. Montagna's thoughtful narrative of debate over ESP in the 1970's and 1980's pays particular notice to the various redevelopment proposals offered in 1983 and 1986-88. "Council Panel Oks Purchase of Old State Prison Site," *Evening Bulletin*, 8 June 1977.

155. Montagna, 265-71; Office of the Mayor, "Press Release," 12 March 1974 in "2109-2199 Fairmount Avenue -Eastern State Penitentiary" file, Philadelphia Historic Commission (PHC); [Philadelphia] Office of Housing, "Housing News" [press release], 14 January 1987 in "2109-2199 Fairmount Avenue Eastern State Penitentiary" file, PHC.

156. Montagna, 271; "Eastern State Penitentiary Task Force," ca. 1990, in "Newspaper" file, Philadelphia Historic Commission; Kenneth Finkel to John Street, 15 April 1988 in "2101-2199 Fairmount Avenue ESP" file, PHC.

157. Thomas Turcol, "Goode scuttles conversion of Eastern Pen," *Philadelphia Inquirer*, 30 April 1988; ESP Task Force, "On-Site Meeting to Discuss Reuse of Site," 25 May 1994 in "ESP: Marketing" File, PHC.

158. Elk and Kelley, interview; ESP Task Force, "Report of the ESP for the Pew Charitable Trusts," 15 November 1994, PCP.

159. Pennsylvania Prison Society, "Remembering Our Past, Thinking of the Future," *Annual Report*, 1994-95; ESP Committee, "Fact Sheet: ESP, Philadelphia," 1996.

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 86)

160. Elk and Kelley, interview; ESP Committee, "Fact Sheet: ESP, Philadelphia," 1996.
161. Kieran, Timberlake & Harris (KTH), "Protection and Stabilization Plan for Eastern State Penitentiary, Philadelphia, Pennsylvania," 1990, i-ix, National Park Service Chesapeake and Allegheny System Support Office (NPS); Catherine S. Myers, "Report on the Conservation Treatment of the Mural Paintings, Catholic Chapel, Eastern State Penitentiary," 26 January 1995, 2-3, PCP.
162. Information on the Walls and Corner Towers includes the following secondary sources: KTH, "BUILDING #17--WALLS AND CORNER TOWERS" in vol. 5, "National Historic Landmark Building Condition Assessment Report: Eastern State Penitentiary, Philadelphia, PA" (BCAR), 1989, NPS; Cohen, "Perimeter" (II:325) and "Research. . .Location" (II:488-89), HSR; Johnston, *Crucible*. Primary sources include: various photographs, engravings, and plans; Haviland, various sources; Crawford, *Report*; Demetz and Blouet, *Rapports*; McElwee, *Concise Sketch*; Vaux, *Brief History*; Cassidy, *Warden Cassidy*; Teeters and Shearer, *Cherry Hill*.
163. See Venturi Scott Brown Associations, "Historic Recordation of the Administrative Building, Eastern State Penitentiary and the Feasibility Study and ---- Design for its Rehabilitation," 1994, PCP; Dan McCoubrey and Sally Elk, interview by Zurier, 21 June 1996, ESP; KTH, "BUILDING #16--ADMINISTRATION BUILDING" and "BUILDING #20--ADMINISTRATION ADDITIONS," vols. 5 and 1, BCAR; Cohen, "Front Building" (II:282-84) and "Research. . .Location" (II:482-87), HSR; Johnston, *Crucible*; Teeters and Shearer, *Cherry Hill*. See also various photographs, engravings, and plans; Haviland, various sources; Crawford, *Report*; Demetz and Blouet, *Rapports*; McElwee, *Concise History*; Vaux, *Brief Sketch*; Cassidy, *Warden Cassidy*.
164. Each of these two towers is pierced by a cross-shaped iron fabrication. These devices appear to be the ends of tie rods; however they do not span across to similar devices in the end walls, nor do they appear to [intersect/interrupt] the windows on the north wall.
165. See KTH, "BUILDING #15--OBSERVATORY," vol. 5, BCAR; Cohen, "Hub Structure" (II:314-16) and "Research. . .Location" (II:514-16), HSR; Johnston, *Crucible*; Teeters and Shearer, *Cherry Hill*. See also various photographs and plans; Haviland, various sources; Crawford, *Report*; Demetz and Blouet, *Rapports*; McElwee, *Concise History*; Vaux, *Brief Sketch*; Cassidy, *Warden Cassidy*.
166. See KTH, "BUILDING #1--CELL BLOCK 1," vol. 1, BCAR; Cohen, "Cellblock 1" (II:292-94) and "Research. . .Location" (II:490-96), HSR; Marianna Thomas Architects (MTA), "CELLBLOCK ONE" in "Detailed Cell Study," 1995; Johnston, *Crucible*; Teeters and Shearer, *Cherry Hill*. See also various photographs and plans; Haviland, various sources; Crawford, *Report*; Demetz and Blouet, *Rapports*; McElwee, *Concise History*; Vaux, *Brief Sketch*; Cassidy, *Warden Cassidy*.
167. See KTH, "BUILDING #2--CELL BLOCK 2," vol. 5, BCAR; Cohen, "Cellblock 2" (II:289-291) and "Research. . .Location" (II:496-98), HSR; Johnston, *Crucible*; Teeters and Shearer, *Cherry Hill*. See also various photographs and plans; Haviland, various sources; Crawford, *Report*; Demetz and Blouet, *Rapports*; McElwee, *Concise History*; Vaux, *Brief Sketch*; Cassidy, *Warden Cassidy*.
168. See KTH, "BUILDING #3--CELL BLOCK 3 (Infirmary)," vol. 4, BCAR; Cohen, "Cellblock 3" (II:292-94) and "Research. . .Location" (II:498-501), HSR; Johnston, *Crucible*; Teeters and Shearer, *Cherry Hill*. See also various photographs and plans; Haviland, various sources; Crawford, *Report*; Demetz and Blouet, *Rapports*; McElwee, *Concise History*; Vaux, *Brief Sketch*; Cassidy, *Warden Cassidy*.

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 87)

169. See KTH, "BUILDING #4--CELL BLOCK 4," vol. 4, BCAR; Cohen, "Cellblock 4" (II:295-97) and "Research. . .Location" (II:502-07), HSR; MTA, "CELLBLOCK FOUR," DCS; Johnston, *Crucible*; Teeters and Shearer, *Cherry Hill*. See also various photographs and plans; Haviland, various sources; Demetz and Blouet, *Rapports*; McElwee, *Concise History*; Vaux, *Brief Sketch*; Cassidy, *Warden Cassidy*.

170. See KTH, "BUILDING #5--CELL BLOCK 5," vol. 4, BCAR; Cohen, "Cellblock 5" (II:298-300) and "Research. . .Location" (II:507-08), HSR; Johnston, *Crucible*; Teeters and Shearer, *Cherry Hill*. See also various photographs and plans; Haviland, various sources; Demetz and Blouet, *Rapports*; McElwee, *Concise History*; Vaux, *Brief Sketch*; Cassidy, *Warden Cassidy*.

171. See KTH, "BUILDING #6--CELL BLOCK 6," vol. 4, BCAR; Cohen, "Cellblock 6" (II:301-02) and "Research. . .Location" (II:509), HSR; Johnston, *Crucible*; Teeters and Shearer, *Cherry Hill*. See also various photographs and plans; Haviland, various sources; Demetz and Blouet, *Rapports*; McElwee, *Concise History*; Vaux, *Brief Sketch*; Cassidy, *Warden Cassidy*.

172. See KTH, "BUILDING #7--CELL BLOCK 7," vol. 4, BCAR; Cohen, "Cellblock " (II:303-05) and "Research. . .Location" (II:510-13), HSR; MTA, "CELLBLOCK SEVEN," DCS; Johnston, *Crucible*; Teeters and Shearer, *Cherry Hill*. See also various photographs and plans; Haviland, various sources; Demetz and Blouet, *Rapports*; McElwee, *Concise History*; Vaux, *Brief Sketch*; Cassidy, *Warden Cassidy*.

173. See KTH, "BUILDING #8--CELL BLOCKS 8 AND 9, AND INTAKE," vol. 3, BCAR; Cohen, "Cellblock 8" (II:306), "Cellblock Nine" (II:307), "Main Approach, Yard 8-9" (II:317), and "Research. . .Location" (II:517-19, 525-26), HSR; ; MTA, "CELLBLOCK EIGHT," DCS; Johnston, *Crucible*; Teeters and Shearer, *Cherry Hill*. See also various photographs and plans; Cassidy, *Warden Cassidy*.

174. See KTH, "BUILDING #10--CELL BLOCK 10 AND CELL BLOCK 13 (SOLITARY CONFINEMENT)," vol. 3, BCAR; Cohen, "Cellblock 10" (II:308), "Cellblock 13" (II:311) and "Research. . .Location" (II:520-22), HSR; Johnston, *Crucible*; Teeters and Shearer, *Cherry Hill*. See also various photographs and plans; Cassidy, *Warden Cassidy*.

175. See KTH, "BUILDING #11--CELL BLOCK 11," vol. 3, BCAR; Cohen, "Cellblock 11" (II:309) and "Research. . .Location" (II:520), HSR; Johnston, *Crucible*; Teeters and Shearer, *Cherry Hill*. See also various photographs and plans; Cassidy, *Warden Cassidy*.

176. See KTH, "BUILDING #12--CELL BLOCK 12," vol. 2, BCAR; Cohen, "Cellblock 12" (II:310) and "Research. . .Location" (II:521), HSR; MTA, "CELLBLOCK TWELVE," DCS; Johnston, *Crucible*; Teeters and Shearer, *Cherry Hill*. See also various photographs and plans; various photographs and plans.

177. See KTH, "BUILDING #14--CELL BLOCK 14," vol. 2, BCAR; Cohen, "Cellblock 11" (II:312) and "Research. . .Location" (II:522-23), HSR; Johnston, *Crucible*. See also various photographs and plans.

178. See KTH, "BUILDING #21--DEATH ROW," vol. 1, BCAR; Cohen, "Cellblock 15" (II:313) and "Research. . .Location" (II:523-24), HSR; Johnston, *Crucible*. See also various photographs and plans.

179. See KTH, "BUILDING #13--GREENHOUSE," vol. I, BCAR; Cohen, Yard 1-2" (II:319), HSR. See also various photographs and plans.

EASTERN STATE PENITENTIARY
HABS NO. PA-1729 (page 88)

180. See KTH, "BUILDING #18--KITCHEN," vol. II, BCAR; Cohen, Yard 4-5" (II:323-25) and "Research....Location" (II:523), HSR. See also various photographs and plans.

181. See KTH, Building #19--INDUSTRIAL BUILDING," vol. II, BCAR; Cohen, Yard 5-6" (II: 326-27) and "Research....Location" (II:532), HSR. See also various photographs and plans.

182. See KTH, "Building #9--Garage," vol. II, BCAR; Cohen, Yard 6-7" (II:328) and "Research....Location" (II:533), HSR. See also various photographs and plans.

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