

# PHILADELPHIA POLICE HEADQUARTERS

**HISTORIC PRESERVATION STUDIO  
FALL 2012**

**Graduate Program in Historic Preservation  
School of Design  
University of Pennsylvania**

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# **CHAPTER I**

## **INTRODUCTION**

- Executive Summary
- Methodology
- Statement of Significance

# I. INTRODUCTION

## ***Executive Summary***

The following report presents a preservation plan for Philadelphia's Police Administration Building. The building was designed in 1962 by the celebrated Philadelphia firm of Geddes, Brecher, Qualls, and Cunningham (GBQC). Located along the south side of Race Street between 7th and 8th Streets, this iconic building exemplifies innovations in engineering and design.

The announcement made by the City of Philadelphia to relocate the police department to West Philadelphia has left the Police Administration Building vulnerable, with its future uncertain. This has prompted the University of Pennsylvania's Historic Preservation program to select the site as a subject of study for its Preservation Praxis Studio. Throughout the Fall of 2012, the group has performed extensive research and consulted with various parties in order to determine the site's significance and formulate a preservation plan.

The contents of this report includes the development of a historical context for the building. The history of GBQC, the Philadelphia School and the site's evolution all fall within this category. The report also addresses the site's most recent history, with emphasis on the current political climate towards the building.

Following a synthesis of this information is an exploration of the building's strengths, weaknesses, opportunities, and threats. As a result of this analysis, a number

of recommendations are included as part of the overarching preservation philosophy suggested for the Police Administration Building. Recommendations include writing the local nomination for the Philadelphia Register of Historic Places, a conservation plan for the exterior, design solutions for both the interior and exterior, and an advocacy campaign.

Long term goals of this report include an increased awareness for the building both in Philadelphia and nationwide, as well as ensuring the building remains extant so as to be appreciated by future generations.

## ***Methodology***

The Roundhouse Studio project began with a site visit in early September 2012. Our five-person team was immediately struck by the Police Administration Building's the personable scale and the excellent condition of the exterior concrete work. The building's caretakers, Adam Pokrywka and Robert Fischer, led us on a private tour of the interior of the building, which gave us an exciting glimpse into the 911 Call Center, the Real Time Crime Center and the Homicide Unit. It was evident that every floor was suffering from severe overcrowding, with file cabinets and data trays clogging the hallways and temporary partitions unnaturally dividing up the internal office spaces. Shortly after we took this tour we were forbidden from speaking with the City of Philadelphia about the project, which immediately conveyed to us the seriousness of its impending demolition. Rather than being a deterrent, the gravity of the threat to the building acted as a motivation to pursue our preservation initiatives with even more vigor.

After getting a general sense of the existing building, our team delved into the historical and archival research. We divided the bulk of the research into several more manageably sized topics. Background research was conducted on the designers, Geddes, Brecher, Qualls, and Cunningham, the Philadelphia School of modern architecture and comparable pre-cast concrete projects. These topics were pursued through secondary source research and architectural periodicals in the Fine Arts Library. For the history of the site in its urban context, Temple University's Urban Archives were extremely useful for their newspaper archives and visual resources. In addition to the Urban Archives, we also consulted the Philadelphia Historical Commission, the Athenaeum of Philadelphia, the Historical Society of Pennsylvania and the Architectural Archives of the University of Pennsylvania. Research on the Schokkabeton system, concrete technology and the work of August Komendant was also pursued with help from trade journals and the Komendant collection at the Architectural Archives.

To add another dimension to our primary and secondary source research, we also conducted interviews with a large group of stakeholders. Despite being barred from speaking with city officials about this project, we were able to speak with a range of participants about the building's history and the current public perceptions of the structure. These participants ranged from experts in the field of modern architecture and concrete to preservation advocates on the national level.

This extensive background research gave us the tools to properly identify the building's character-defining features and to hone our

preservation philosophy for this project.

For the second half of the semester, we built off our work from the first half by pursuing our individual projects, each of which stemmed from an element of the preservation plan and were informed by our assessment of the building's charter defining features and tolerance for change.

These projects include:

- Local Register Nomination
- Exterior Conservation Plan
- Recommendations for Exterior Additions
- Recommendations for Interior Additions
- Advocacy Campaign

During the course of this semester, we have become academically and personally invested in saving GBQC's Police Administration Building and are looking forward to continued involvement through our advocacy campaign "Save the Roundhouse".

## Statement of Significance

The city of Philadelphia's Police Administration Building was designed in 1959 by the architecture firm Geddes, Brecher, Qualls, and Cunningham (GBQC) (fig. 1). The building, most commonly known to Philadelphians as the Roundhouse, was constructed in 1962 on the south side of Race Street between 7th and 8th Streets. The design for the Police Administration Building employs emblematic principles set forth by GBQC that both stress and celebrate the building's architectural significance. The iconic curvilinear skin that defines the building's form and mass contrasts with the grid plan of Philadelphia, but does so in a sweeping, poetic nature that can be defined as Expressionist rather than Brutalist. In addition to defining the building's envelope, the precast concrete panels also integrate the structural, mechanical, and electrical systems. These panels were manufactured using the Schokbeton process, an innovative method of precasting concrete. This system was skillfully executed by August Komendant, the engineer who worked closely with GBQC as well as other prominent mid-century architects, most notably Louis Kahn. The Police Administration Building is the second known building in the United States to utilize the Schokbeton system.

The cultural significance of the Police Administration Building entails multiple layers creating a unique and telling narrative. Strong visual associations and public perceptions have been attached to the Police Administration Building from its construction date through to today. The building has long been associated with the Philadelphia Police Department and some of the city's most significant figures—Mayor Richardson Dilworth, Frank Rizzo, and

Edmund Bacon. The building has been used as a gathering place for public demonstration and is known for its physical resemblance to handcuffs. The building and its designers are emblematic of the architectural design movement known as the Philadelphia School. As part of the Philadelphia School, Robert Geddes and his firm played a major role in the development of mid-century American architecture. Most of GBQC's work is largely for civic institutions and expressive of the progressive manner in which the firm engaged with the urban context.

Socially, the Police Administration Building is reflective of the vast urban redevelopment projects that swept across the city during the 1960s. When constructed, Franklin Square and its surrounding neighborhood were then known as Skid Row, an area that was laden with crime and blight. Today, the building is located in between several prominent Philadelphia neighborhoods; Independence National Historical Park, Old City, and Society Hill to the east; and Chinatown and Penn Center to the west. This centrally located site was chosen not only to improve the immediate surrounding area but also to benefit the city's other police districts.



Figure 1. Peter Olson, *Police Headquarters*. The Athenaeum of Philadelphia.

## **CHAPTER II**

### **HISTORICAL CONTEXT**

- Geddes, Brecher, Qualls Cunningham
- Design of the Police Administration Building
- Philadelphia School
- Technical Innovation



## II. HISTORICAL CONTEXT

### *Geddes Brecher Qualls Cunningham*

Formed in 1960, the celebrated architectural firm Geddes, Brecher, Qualls, and Cunningham (GBQC) designed many civic institutions in Philadelphia and the surrounding area, as well as internationally. GBQC was awarded the American Institute of Architects' Gold Medal Award for Best Philadelphia Architecture in 1963 for their design of the Philadelphia Police Headquarters.<sup>1</sup> During the early 1970s, the firm won first prize for both the Birmingham-Jefferson Civic Center Design Competition and the Vienna South International Town Planning Competition.<sup>2</sup> In 1979, the American Institute of Architects honored the firm with the highest professional honor awarding them the Architectural Firm Award.<sup>3</sup> This is only a small representation of the actual number of competitions the firm engaged in and awards the firm received. Despite the fact that none of the founding architects are actively working there, GBQC Architects is still an active firm continuing the legacy of its founding principals with an office located in downtown Philadelphia.

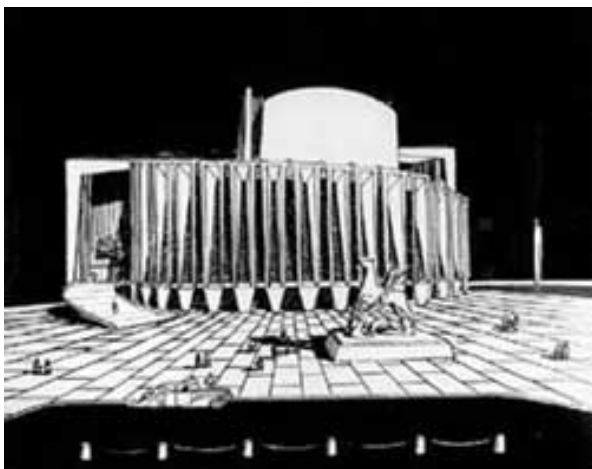


Figure 2. National Opera House, Sydney, Australia, 1957. This design won second prize in the International Competition.



Figure 3. Moore School Pender Laboratory, 1958. Lawrence S. Williams, Inc. *Process Architecture* 62.

Robert Geddes and Melvin Brecher met as classmates at Harvard University's Graduate School of Design where the two earned Master of Architecture degrees in 1950. Three years later, Geddes and Brecher formed a practice that was soon succeeded by Geddes, Brecher, and Qualls in 1956. Prior to the creation of this firm, Geddes and Brecher were the runners-up for the Sydney Opera House competition in 1955 (fig. 2). Warren Cunningham joined the group in 1958 specifically to collaborate with the firm on the Moore School Pender Laboratory for the University of Pennsylvania (fig. 3).<sup>4</sup> GBQC officially formed when Mayor Richardson Dilworth commissioned the architects to design a building for the Philadelphia Police in 1959, the firm's first public building.<sup>5</sup> At the time, the police department was housed in a cramped space in City Hall which prevented the department from functioning efficiently. Headquartered in Philadelphia, GBQC was at the frontline of a changing city undergoing vast redevelopment projects. Philadelphia was vigorously restructuring the way it interacted with the public and soon became a hotbed of innovative architecture during the mid-twentieth-century.

# GEDDES BRECHER QUALLS CUNNINGHAM TIMELINE

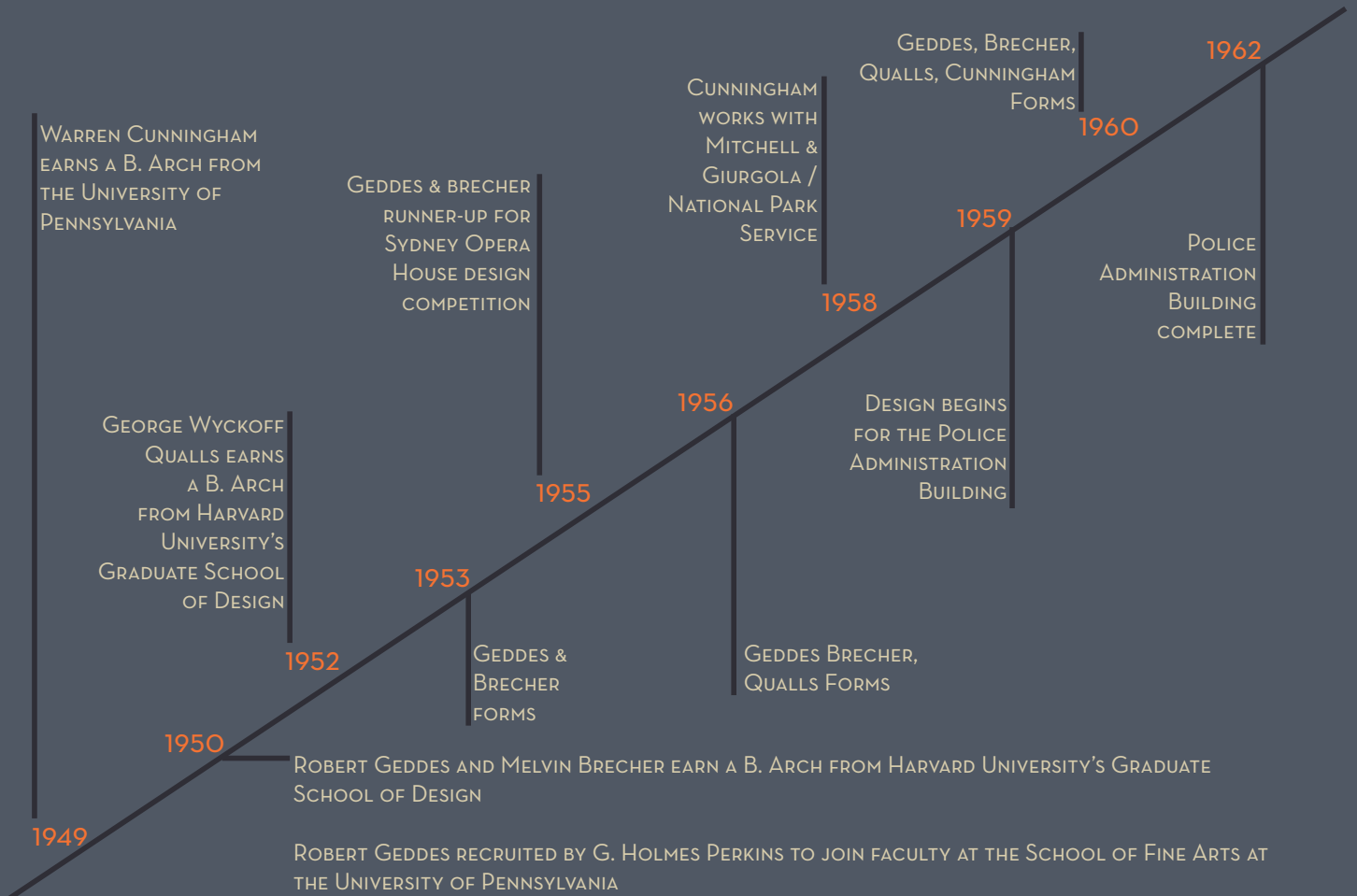




Figure 4. United States Embassy in Pakistan, 1965-1979. *Process Architecture 62.*

In an effort to rebuild architectural education in Philadelphia, G. Holmes Perkins, the new dean of the University of Pennsylvania's School of Fine Arts, restructured the faculty through the inclusion of prominent architects and planners, including both Geddes and Qualls. Perkins laid the foundations for what would come to known as the Philadelphia School, a group of architects and engineers whose beliefs centered on a style that worked to serve the needs of older, pedestrian-scaled cities. Geddes would remain at Penn until 1965, when he would go on to become the new dean of Princeton University's School of Design through to 1982.<sup>6</sup> Qualls stayed with the University of Pennsylvania into the 1990s.<sup>7</sup>

GBQC, alongside Louis I. Kahn, Vincent Kling, Romaldo Giurgola, and others, worked to reshape the city of Philadelphia at the behest of Mayor Dilworth and Edmund Bacon. The architecture that resulted is a representation of the city's desires to expand and adapt to an urban environment that is often largely defined by brick. Mid-century architecture was employed by Philadelphia to erase blight, as well as to implement a series of planning

initiatives that set the direction for redevelopment and growth.<sup>8</sup> The Philadelphia Police Headquarters is one of the many structures built as part of this effort.

Following the construction of the Police Administration Building, GBQC embarked on an ambitious career designing for both civic and educational institutions. The firm embraced large-scale projects that would serve a significant number of people. In 1965, GBQC was commissioned to design the United States Embassy in Islamabad, Pakistan (fig. 4). Here, the building acquiesced to the landscape and respected the site and commanding scale of the surrounding terrain.<sup>9</sup> The complex was completed in 1979.

The same year the firm began the Embassy, they began to design a new dormitory for the University of Delaware. The Rodney Complex was completed in 1967 and accommodated both the private and communal needs of students in a campus setting (fig. 5).<sup>10</sup> Following the Pender Laboratory and aforementioned dormitory project, GBQC would go on to design for many other colleges and universities. This includes an academic building at Beaver College Science in Glenside, Pennsylvania (1971), the Institute for Advanced Study in Princeton, New Jersey (1971) (fig. 6), and Stockton State College in Pomona, New



Figure 5. University of Delaware Dormitories, the Rodney Complex, 1964-1967. *Process Architecture 62.*





Figure 6. The Institute for Advanced Study, 1968-1971. *Process Architecture 62.*

Jersey (1968-1983). These projects embody spaces organized and oriented towards specific functions customized to each given program. The material of choice was concrete, often accented by other materials, and was used in various ways to facilitate a sense of human-scale in their buildings.

As for civic entities, GBQC's projects incorporated



Figure 7. Birmingham Jefferson Civic Center, 1967-1976. *Process Architecture 62.*

widespread planning in addition to architectural design. The commission for the Birmingham Jefferson Civic Center in Alabama was the result of a national design competition held in 1966 (fig. 7). The plan is composed of four entertainment and cultural facilities around a civic plaza.<sup>11</sup> In the wake of expanding downtown development, this civic center created a new focal point for the community.<sup>12</sup> Following the completion of this complex in 1976, GBQC began the design for Liberty State Park in Jersey City, New Jersey. This project commenced in 1979 and was the state's first urban state park and a catalyst for renewing the Hudson River waterfront.<sup>13</sup> One of the larger designs the firm pursued was the Vienna South International Town Planning Competition in 1971. This design was for a new community of 70,000 people along a 2,500-acre area of land extending four miles south of the city's historic core.<sup>14</sup> GBQC won first prize "on the basis of the jury's assessment of its rational distribution of movement and activity systems and flexibility for change and growth, its balanced monumental and human-scaled landscapes, and its varied buildings and open spaces."<sup>15</sup>

Other notable buildings by GBQC include the Architects Housing Company in Trenton, New Jersey (1979), the Mobil Environmental and Health Science Laboratory in Hopewell, New Jersey (1983), and the south wing addition to the J. B. Speed Art Museum in Louisville, Kentucky (1983). Each of these three accommodates and responds to different programmatic needs.

## Design of the Philadelphia Police Headquarters



Figure 8. Peter Olson, *Police Headquarters*. The Athenaeum of Philadelphia.

The design for the Philadelphia Administration Building utilizes emblematic principles set forth by GBQC that both stress and celebrate the building's architectural significance (fig. 8). Philadelphia's post-war years ushered in a newly reformed government and police administration that paralleled innovative architectural explorations in materials and technology. The form and mass of the Police Administration Building was employed not only for its expressive ability, as achieved by the precast concrete panels, but also for the idea that its circular shape fostered efficiency in the building's program. When constructed in 1962, the building became a civic symbol that was meant to appear as inviting as possible in an attempt to avoid negative connotations commonly associated with police or governmental entities.

There is a total of 125,000 square feet in the Police Administration Building accommodating five floors. The basement contains detention cells and prisoner processing facilities,

purposefully placed underground by GBQC to hide it from public view. The ground floor, originally accessed by the plaza on the north side of the building, contains an information desk for controlling traffic and visitors, as well as the Real Time Crime Center, auditorium, cafeteria, and other office space. Shortly after the police began operations in their new building, the main entrance was closed and the entrance found on the south side, facing the parking lot became the primary entrance (fig. 9). As a result, the plaza sits vacant and unused. The design and inclusion of this space was to promote and welcome public engagement while being in conversation with Franklin Square. In addition to the plaza, tall concrete, rectangular panels delineate the majority of the building's perimeter; GBQC included these as a way to relate the rounded masses to the rectangular character of Philadelphia.<sup>16</sup>



Figure 9. Aerial view showing the parking lot in the south.

The upper three floors, each comprised of 24,000 square feet, contain offices that house the various departments of the Philadelphia Police Department. The precast panels that frame the main shaft of the building cantilever outward a total of 12 feet from the walls of the ground floor. The precast panels vary only slightly in size but are typically 5 feet wide by 32 feet in height. They are richly molded and contain a white quartz aggregate finish with a silicone treatment.<sup>17</sup> On the interior, structural elements are treated with a smooth gray finish meant to be



Figure 10. Typical corridor in the Police Administration Building. This photograph was taken during a site visit on September 20, 2012.



Figure 11. Two of the three penthouses on the roof of the Police Administration Building. This photograph was taken during a site visit on September 20, 2012.

painted.<sup>18</sup> The windows that puncture the panels are deep-set and bronzed-tinted, sloping outward to provide space for the necessary mechanical functions.

The circulation throughout the building follows the curvilinear movement created by the overall form. This geometry eliminates the excessive visual length and monotony created by corridors of typical, rectangular office buildings (fig. 10).<sup>19</sup> In addition, the width of the corridors was tailored to the flow of traffic and affords a sense of location within the building.<sup>20</sup> Despite the efforts in maximizing the use of space, employees working in the Police Administration Building complained of dizziness only a few days after the building was occupied.<sup>21</sup>

On the roof, circular, cast-in-place concrete penthouses enclose the mechanical systems (fig. 11). The use of cast-in-place concrete is limited to the Police Administration Building's foundations, the lobby floor and corridor framing, and the cylindrical shafts that enclose the stairs and elevators.<sup>22</sup> These cylindrical cores act as restraining anchors for the precast concrete panels that comprise the building's structure.<sup>23</sup>

### ***The Philadelphia School***

The Philadelphia School is a group of architects and engineers who are loosely defined by their work and subsequent design beliefs. This concept of the Philadelphia School was first introduced in a 1961 Progressive Architecture article by Jan Rowan entitled, "Wanting to Be: The Philadelphia School." The group includes architects Louis I. Kahn, Robert Venturi, Romaldo Giurgola, Robert Geddes, and two engineers, Robert Le Ricolais and August Komendant. Kahn was pinpointed as the group's "spiritual leader" since his design principles were the driving force for most others.<sup>24</sup> Rowan proclaimed that this School was to do for Philadelphia what the Chicago School did for their city during the late nineteenth-century.<sup>25</sup> Some of the architects singled out by the Progressive Architecture article, including Robert Geddes, were hesitant about being classified into one style or group.<sup>26</sup> Yet, the association did provide the men with exposure that won them numerous commissions, even if there were mostly for work located outside of Philadelphia.

The Philadelphia School is also said to be a byproduct of the efforts of G. Holmes Perkins. Perkins worked diligently to redefine



architectural education within both the University of Pennsylvania's School of Fine Arts and the city of Philadelphia. Each individual of this group taught at Penn and influenced students in their own unique way. However, these architects and engineers are each profound in their own right outside of the Philadelphia School. Largely, the Philadelphia School promoted a greater focus on context and developed their modern style by looking critically at history.<sup>27</sup> The architects and engineers understood that there was an inherent need for Philadelphia to return to being a human-scaled city. Their goal was for the public to be engaged in conversation with the architecture via associations that buildings could bring forth.<sup>28</sup>

GBQC's design for the Police Administration Building embodies some of the design theories championed by the Philadelphia School. The rectilinear concrete panels that define the majority of the building's boundaries were meant to relate to Philadelphia's grid plan (fig. 12). The plaza on the north side of the building deliberately faces Franklin Square and acts as a welcoming civic entrance. However, both of these design elements failed to function as they were intended. The concrete barrier marks a



Figure 12. Looking south at the north side showing the plaza and rectilinear concrete panels.

stark delineation between the Philadelphia Police and the public, both physically and figuratively. The plaza sits barren and unused. Shortly after the Police Administration Building was completed, users of the building began entering on the south side for the sake of convenience, as the parking lot is on this side. This forced the main entrance to close and never be used again.

Despite the failure of these good-intentioned civic functions of the Police Administration Building, GBQC were deliberate in designing a structure that was to read as an inviting public entity.<sup>29</sup> The appearance was not meant to elicit the sense of jail, detainment, or an oppressive police force. However, over time the nature of the building's function prevailed.

### **August E. Komendant**

Included in the Philadelphia School was structural engineer August Komendant, the engineer in charge of designing the pre-cast concrete panels of the Police Administration Building. Throughout his career, Komendant was influential in the emerging field of precast concrete engineering. Komendant was born in Estonia on October 2, 1906, but later moved to Germany where he earned his doctorate from the Technical University in Dresden.<sup>30</sup> During World War II, the United States Army recruited him. General George Patton learned of Komendant's expertise in bridges, which he gained from his education and post-educational career in Estonia, and brought him in to determine the stability of bridges before troops passed over them.<sup>31</sup> Following the war, Komendant was assigned to help the U.S. Army rebuild war-damaged bridges across Europe. During this time, he was urged to immigrate to the United States, advice that he finally heeded in 1950.<sup>32</sup>

Upon arriving in the United States, August Komendant set up a consulting practice in Montclair, New Jersey. During his early years here, he established his authority on the subject of precast concrete engineering by publishing a text in 1952 entitled *Prestressed Concrete Structure*, based on the experience he gained with the material while rebuilding bridges damaged by the war.<sup>33</sup> In 1959, Komendant began teaching architecture at the University of Pennsylvania, leading courses in structural engineering until 1974.<sup>34</sup> Towards the end of his teaching career, he published another text on the subject of concrete entitled *Contemporary Concrete Structures* in 1972.<sup>35</sup>

Some of Komendant's most influential works were created during his collaboration with architect Louis Kahn. The two met in 1956 and immediately established a connection. Not only were both men born in Estonia, but Komendant was not afraid to help Kahn attain his design intents that other structural engineers typically shied away from. Their first collaborative project was the Richards Medical Laboratories (1957-1960) on the University of Pennsylvania campus. In the design, Komendant used pre-stressed and post-tensioned concrete beams to achieve the aesthetics that Kahn had envisioned. Despite some personal differences, their partnership continued until Kahn's death in 1974.<sup>36</sup>

Unlike many other structural engineers, Komendant was not hesitant to help architects translate their designs into reality, no matter the level of complexity. He would discover creative ways to make their designs feasible using innovative techniques and materials. Jack Pyburn, the Harrison Associates Visiting Scholar in Historic

Preservation at The Georgia Institute of Technology, calls Komendant a "structural engineering cowboy" for this very reason.<sup>37</sup>

At the height of his career in the early 1960s, Komendant was contracted to assist specifically with the engineering of the precast concrete of Philadelphia's new Police Administration Building (fig. 13). He brought to this project his expertise in the material and not only designed the panels, but also oversaw the manufacturing and installation processes of the precast concrete pieces. As soon as the architects at GBQC decided to design the Police Administration Building as a precast concrete structure, they knew that August Komendant would be able to realize their architectural vision.



Figure 13. August Komendant (left) talking with Robert Geddes (right). Temple University, Urban Archives.



Notes for Chapter II

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37 Jack Pyburn, interview with Karina Bishop and Kimber VanSant, October 10,

## **CHAPTER III**

### **SITE EVOLUTION**

- Neighborhood Context
- City Planning History
- Washington Square East
- Market Street East
- Independence Mall
- Police Administration Building & Neighborhood
- Franklin Square
- Metro Club Condominiums
- Vine Street Expressway

### III. SITE EVOLUTION

#### ***Neighborhood Context***

At the time of the Police Administration Building's construction, the city of Philadelphia was undergoing a period of vast urban renewal. Timing had been essential to the city's redevelopment, and it was during this period that the United States was shifting its attention on the physical appearance of American cities. The federal government passed legislation stressing the importance of urban renewal, and provided funding for renewal programs. An increase in government funding enabled Philadelphia to enact its urban renewal programs. Equally important to the success of these programs were the formation and election of various parties to power who made these issues a priority. Within the context of the Police Administration Building, it is important to take into consideration this period of Philadelphia's history. It not only suggests the motivation towards the site's location, but also more importantly demonstrates that the building was actively involved within the dialogue of the city's redevelopment.

#### ***City Planning History***

##### ***Urban Renewal on a Larger Scale***

In the late 1940s, urban redevelopment emerged as a new planning concept to aid in the reconstruction of the central cores of many American cities.<sup>1</sup> With assistance from various levels of government, these programs were designed to encourage participation from private enterprises in the revitalization of rundown portions of cities. The passing of legislation during the 1940s and 50s demonstrates the increasing importance of urban renewal and enabled cities, like Philadelphia, to fund the majority of their programs.

In 1945, Pennsylvania passed its Urban Redevelopment Law, one of the first urban redevelopment legislations in the country.<sup>2</sup> Under this law, Pennsylvania established the Redevelopment Authority, the first in the United States. The Redevelopment Authority was a city agency responsible for enacting renewal with public monies and was given the power of eminent domain to obtain properties and land.<sup>3</sup> In 1949, the federal government passed the Federal Housing Act in which the government would provide money in the forms of loans and grants to assist in the acquisition of land that could be resold to private developers at a reasonable price.<sup>4</sup> The Federal Housing Act was revised in 1954 to create new programs and to make available a finance mechanism for renewal projects. The law required cities to develop a "workable program" that would identify plans for total city development.<sup>5</sup> The federal government recognized the necessity for comprehensive planning suggesting that the plan of a redevelopment project should adhere to the large, general plan.<sup>6</sup>

##### ***Urban Renewal in Philadelphia***

Although money for urban renewal was not available until the 1950s, Philadelphia was still thinking ahead in terms of redeveloping its city. In 1947, Edmund Bacon co-curated "The Better Philadelphia Exhibition" held at Gimbel's Department Store. It proposed plans for the physical development of Philadelphia and incorporated a strong educational component. The exhibition was meant to demonstrate the benefits of urban renewal. The program broke down a number of comprehensible, interrelated projects that permitted their development to

occur separately, but did not lose sight of their relation to the city's larger redevelopment goals. One of the important aspects of the city's 1947 exhibition was that it was the earliest citywide redevelopment program in post-war America.<sup>7</sup>

At the start of the 1950s, Philadelphia began restructuring its government. In 1951, the city passed its Home Rule Charter, creating a stronger mayoral executive branch. The most significant feature of the Charter in terms of urban renewal is that it gave increasing power to the city's Planning Commission. The Planning Commission was able to influence and better direct the physical planning activities of the entire city government.<sup>8</sup> The urban renewal programs promoted by the federal government also coincided with Philadelphia's municipal reform era from 1952 to 1962. The election of Joseph Clark as the Mayor of Philadelphia in 1952 signaled a shift away from the corrupt, Republican hold on the city's government. Beginning with Clark's administration and vigorously propagated through his successor, Richardson Dilworth, urban renewal within Philadelphia began to take shape. The success of Philadelphia's urban renewal programs depended on government agencies working alongside non-profit organizations that were rapidly forming during this time. These organizations were made up of members who were either concerned citizens or businessmen who were financially invested in the city. Examples of these organizations include the Old Philadelphia Corporation and the Greater Philadelphia Movement. These organizations would work together in neighborhoods subject to urban renewal.

Various neighborhoods that are within a close vicinity to the Police Administration Building were all undergoing urban renewal around the same time. These neighborhoods include Washington Square East, Market East, and Independence Mall.

### **Washington Square East**

The City Planning Commission's ability to more actively pursue the Washington Square East project came with the passing of the Federal Housing Act. Washington Square East was developed as strictly residential and anything deemed incompatible with a residential neighborhood, such as Dock Street Market, was removed. Following increased pressure, the merchants agreed to leave Dock Street Market, and by 1961 the Redevelopment Authority acquired the entire area through eminent domain (fig. 14).<sup>9</sup> In 1957, the Washington Square East Plan was approved and the following year it received a federal planning grant.<sup>10</sup> In that same year, proposals were submitted for what would become the Society Hill Towers (1958-1964) designed by the architect I.M Pei.



Figure 14. 2nd and Dock Streets in 1914. City of Philadelphia, Department of Records Archives.

The redevelopment of Washington Square East demonstrates the influence of the different parties that were involved. The Redevelopment Authority was the government agency with the ability to acquire parcels. The Old Philadelphia Development Corporation acted as the Redevelopment Authority's advisor and consultant on renewal policies and was responsible for finding buyers and developers.<sup>11</sup> Sometime between 1964 and 1967, the redevelopment of Society Hill was deemed a success.<sup>12</sup>

### **Market East**

Although Market East's redevelopment occurred after the Police Administration Building was built, discussions of the area's redevelopment began as early as the 1960s. By 1966, Philadelphia's retail core had suffered a decline also experienced in other American cities. From 1954 to 1963, the Central Business District's share of the metropolitan area retail sales declined from 30% to 26%.<sup>13</sup> Two of Philadelphia's largest department stores went out of business on Market Street East. The goals of the Market Street East plan proposed in 1966 were to reverse the declining conditions of the area and tackle the city's ongoing problems with transportation.<sup>14</sup> In 1977, the Gallery Mall opened followed soon thereafter by the Market East Station in 1984.<sup>15</sup>

### **Independence Mall**

Independence Mall is the closest area to the Police Administration Building that underwent redevelopment during this time. The plans carried out in this area had an effect on the neighborhood where the Police Administration Building would eventually be built, and suggest why this particular location was selected. Redevelopment of the

area surrounding Independence Hall had been discussed for quite some time. Throughout the 1930s and 1940s, design proposals were set forth calling for the creation of a park.<sup>16</sup> One aspect of the design that met little opposition was the proposal of a northern mall.<sup>17</sup> This required the demolition of three full blocks of commercial structures between 5th and 6th Streets. The lack of concern over the demolition of the existing structures in the area was due to the widespread negative perception of the area (fig. 15).<sup>18</sup> General description from the late 1940s and early 50s characterized the neighborhood north of Arch Street to the Ben Franklin Bridge as a slum with few permanent residents and a building stock of abandoned or under-utilized commercial structures and flophouses used for transient lodging.<sup>19</sup> This negative description would shroud the area into the 1960s.



Figure 15. 7th and Race Street, 1916.  
File for Race Street, Philadelphia Historical Commission

Work began on the north mall in 1951.<sup>20</sup> In a letter written by Edmund Bacon that same year he discussed the type of development he envisioned for the area around the Mall.<sup>21</sup> He viewed the space as functioning differently from the residential area south of the park. Ideally, Bacon believed that development north of Independence Hall should be commercial and

institutional.<sup>22</sup> A marketability study performed in 1959 indicated that there was a strong current and continued demand for office use surrounding the Mall.<sup>23</sup> By 1963, this extended to governmental uses.<sup>24</sup> Beginning in the early 60s, buildings began to be constructed in the vicinity of the Mall. In 1963, ground was broken for the Rohm and Haas Building on 6th and Market Streets and construction began on the United States Courthouse and Federal Office Building on 6th and Arch Streets. This new construction generated an increased interest to build in this area.<sup>25</sup> The Rohm and Haas Building, designed by Pietro Belluschi, was completed in 1964 followed shortly thereafter by the Court Building in 1968. In 1969, the federal government finished building the new Mint along 5th and Arch Streets, and the Federal Bank Reserve acquired land from the Redevelopment Authority to construct its building on 6th and Arch Streets.

### ***Police Administration Building & Neighborhood***

In the early planning stages of Washington Square East, two members of the Old Philadelphia Development Corporation, Albert Greenfield and Harry Batten, proposed that the new police headquarters be located within the Dock Street area.<sup>26</sup> The executive vice president at the time, John Robin, had dissuaded the two men. In a later interview, Robin stated that locating the police building at Dock Street would have been a terrible mistake and entirely ruinous to Society Hill.<sup>27</sup> He suggested that Greenfield and Batten made this proposal since they jumped at any opportunity to remove the market.<sup>28</sup> Robin's comments imply that, much like the Dock Street Market, any use that did

not conform to being within a residential area could not be on the Dock Street site.

In 1958, Mayor Richardson Dilworth selected the current location of the Police Administration Building.<sup>29</sup> The press described the building as being badly needed for efficient police work and its location outside the heart of the city was to be advantageous for both the police and the city.<sup>30</sup> Dilworth selected the location in hopes that the new building would aid in improving the appearance of the neighborhood. In her 1961 book *The Death and Life of Great American Cities*, Jane Jacobs describes Franklin Square and its surrounding area,

The second of Penn's little parks is Franklin Square, the city's Skid Row park where the homeless, the unemployed and the people of indigent leisure gather amid the adjacent flophouses, cheap hotels, missions, second hand clothing store, reading and writing lobbies, pawnshops, employment agencies, tattoo parlors, burlesque houses and eateries. This park and its users are both seedy, but it not a dangerous or crime park. Nevertheless, it has hardly work as an anchor to real estate values or to social stability.<sup>31</sup>

By 1963, the Police Administration Building's immediate neighborhood (from 7th to 9th Street and Vine to Arch Streets) fell under the Independence Mall Redevelopment Area. A 1966 description of the area recounts certain buildings in the neighborhood as having "unsafe, unsanitary, inadequate or overcrowded conditions."<sup>32</sup> For the buildings that were demolished, their sites remained either vacant or were converted into surface parking. The Police Administration Building was the neighborhood's only new construction.<sup>33</sup>

In the 1966 Independence Mall Redevelopment Area Plan, the Philadelphia City Planning Commission



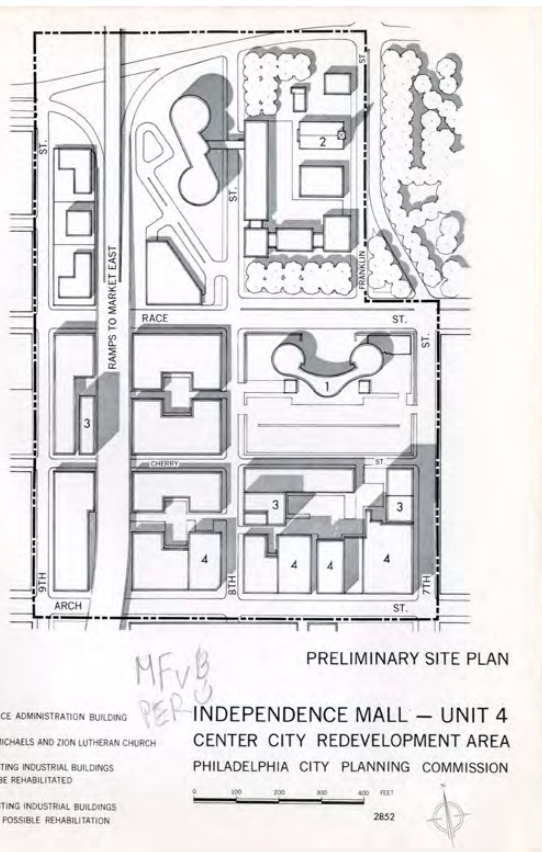


Figure 16. 1966 Independence Mall Redevelopment Area Plan. Philadelphia City Planning Commission. *Independence Mall Center City Redevelopment Area*. October 1962.

proposed a preliminary site plan for the area surrounding the Police Administration Building (fig. 16).<sup>34</sup> Although the site plan was not strictly followed, it is significant to note the changes and similarities between the proposed plan and the area today. The Planning Commission originally envisioned larger scaled buildings occupying parcels. The Plan connotes intentions to rehabilitate many of the existing industrial buildings, however, as of today there appears to be only one building that remains from this time. The St. Michaels and Zion Lutheran Church on Franklin Street (across from the Square) was to remain and is now the site of the former Metropolitan Hospital that was initially proposed for 8th Street. One of the changes that was executed was the closure of Ridge Avenue. In the preliminary site plan, the street is closed to make room for the Vine Street Expressway ramps to Market East and the Metropolitan Hospital. The ramp to Market East

was never built and the land where Ridge Avenue once stood is now a parking lot.

### **Franklin Square**

Originally named “North East Public Square,” Franklin Square was one of the five public squares laid out within the street grid of William Penn’s original plan for the City of Philadelphia in 1682 (fig. 17).<sup>35</sup> Franklin Square was initially used for grazing animals, storing gunpowder during the American Revolution, drilling soldiers for the war of 1812, and as a cemetery by the German Reform Church from 1741-1835. In 1825 it took on the name “Franklin Square” in honor of Benjamin Franklin. In the nineteenth- and early twentieth-centuries, the park was surrounded by a thriving neighborhood. By the 1920s, the neighborhood began to decline, eventually becoming a slum. This decline can be attributed to the rise of automobile usage and the construction of the Benjamin Franklin Bridge (1922-1926). The subsequent steady flow of cars on Vine Street, the square’s northern boundary, essentially cut off pedestrian access on the Square’s northern side. During the urban renewal programs of the 1950s and 1960s, the federal government demolished several blocks of houses and businesses in the area surrounding the Square. In conjunction with the creation of Independence National Historical Park a few blocks to the east, the neighborhood had lost its residential character. The Vine Street Expressway was constructed in the 1980s and made the park even more difficult to access. Eventually, the park became run down and served primarily as an encampment for the homeless.

In July 2006, the Square underwent a three-year, \$6.5 million renovation, funded by Historic Philadelphia, Incorporated, a tourism corporation that runs tours throughout Old City. Executive Director Amy Needle stated that the idea behind the project was to “connect the unused park to the historic district, but also give green space back to the residents.”<sup>36</sup> As part of the renovation, the Franklin Square Fountain, built in 1838 and constructed of marble and surrounded by a wrought-iron fence, was refurbished. In addition, many attractions have been built, including a miniature golf course, carousel, two playgrounds, multiple seating areas, and a Stephen Starr burger stand, Square Burger.

At the northeast corner of Franklin Square is a PATCO (Port Authority Transit Corporation) subway station that originally opened in 1936. This station would be closed several times before being refurbished in 1976 to cater to traffic coming into the city for the Bicentennial Celebration. Due to low patronage, the station has been closed since 1979. In May 2009, the Delaware River Port Authority (DRPA) announced plans to renovate the station and make it compliant with the Americans with Disabilities Act. In July 2009, DRPA Chairman John Estey gave the reasons for the renewed interest in the station stating, “Substantial economic and demographic changes near Franklin Square have increased the viability of the station.”<sup>37</sup> PATCO officials are also studying the idea of running a new



Figure 17. Aerial View of the Police Administration Building in relation to The Metropolitan Hospital, Franklin Square and the Vine Street Expressway.



trolley service from this station to run along the Delaware River waterfront.<sup>38</sup> No date has been set for the renovation or reopening of this long abandoned “ghost station.”

### ***Metropolitan Hospital***

Metropolitan Hospital’s date of construction has been hard to determine, but we know it was built soon after the Police Administration Building (fig. 17). The hospital is a round building, that, according to architectural historian David Brownlee, was built “in sympathy” to the Police Administration Building.<sup>39</sup> The 216,000 square foot facility operated as a stand-alone hospital staffed by osteopathic physicians under the name Metropolitan Hospital until 1981.<sup>40</sup> In that year, hospital operators purchased two regional hospitals from Humana Corporation with plans to create a regional osteopathic health system. This plan ran into trouble when debt payments became too high and the hospital had trouble holding onto physicians who left to join more prestigious local hospitals. Metropolitan Hospital filed for bankruptcy in 1989 and in 1990 the three hospitals were sold to separate organizations.<sup>41</sup> Under new ownership, the hospital changed its name to Franklin Square Hospital with a revitalization plan focused on specializing in cardiac care services. Unable to compete with the city’s academic medical centers, Franklin Square Hospital fell into financial trouble and in 1992 was purchased by Cooper Healthcare of Pennsylvania and renamed Cooper Hospital Center City. Unable to get the hospital out of debt, Cooper closed in August 1993.<sup>42</sup>

After being closed for five years, talks began in 1998 about its acquisition and subsequent redevelopment. In this same year, a plan was proposed that would turn the building into a long-term-care facility, a hospital that serves patients with illnesses that require hospital stays in excess of 25 days.<sup>43</sup> In 2002, the Christian Life Center, a Bucks County evangelical Christian church, had intentions of purchasing the former hospital and turning it into a church and social service center for recovering drug addicts, paroled convicts, and the homeless.<sup>44</sup> The proposed purchase was struck down by politicians and neighborhood groups, including the Philadelphia Chinatown Development Corporation, the Callowhill Neighbors Association, and Councilman Frank DiCicco, because of the fear surrounding the influx of homeless people into the community, and the fact that the neighborhood already had a large number of these kinds of institutions. Opposition mounted and the plan was never realized.

With Philadelphia’s Center City experiencing renewed residential development, Philadelphia Management bought the building in 2002 and financed the \$30 million renovation and conversion into the luxury Metro Club Condominiums. Matthew Koenig of JK Roller Architects designed the Metro Club conversion.<sup>45</sup> Consisting of 130 one- and two-bedroom condos that range in price from \$250,000 to more than \$1 million, Metro Club considers itself unique due to the club-like environment and available amenities for residents.

## Vine Street Expressway

The Police Administration Building is directly adjacent to the entrance of the Vine Street Expressway, the elevated portion of I-676 that bisects Center City Philadelphia (fig. 17). With the opening of the Benjamin Franklin Bridge in 1926, east-west traffic across Vine Street dramatically increased. As early as 1930, the Philadelphia City Planning Commission suggested the concept of an elevated expressway lining the six miles of Vine Street in Center City.<sup>46</sup> By 1945, the era of urban renewal in Philadelphia was in full swing, and the Planning Commission formerly suggested the construction of an expressway in their report entitled, Vine Street Expressway. It was not until 1977 that the road was finally completed with the extension of the expressway from 18<sup>th</sup> Street to the Benjamin Franklin Bridge. The route now provided a link between the Schuylkill Expressway to the west and I-95 along the Delaware to east.

Despite its utility for a culture and a city increasingly reliant on the automobile, the creation of this section of the expressway assured that the bordering neighborhoods would transition from residential to industrial and commercial zones. The construction of this massive form of infrastructure had an obvious negative effect on the area surrounding the Police Administration Building. Chinatown, in particular, suffered the relocation of 558 tenants and 102 homeowners.<sup>47</sup> Despite the expressway's goal of alleviating traffic on the streets, Race Street, which borders the northern edge of the Police Administration Building, still experiences a heavy amount of traffic, acting as another feeder into

the bridge.<sup>48</sup> The pace of the traffic along Race Street contributed to the closing of the Police Administration Building's original northern entrance.

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2 Valerie Sue Halverson Pace, "Society Hill, Philadelphia: Historic Preservation and Urban Renewal in Washington Square East" (Master's Thesis, University of Minnesota, 1976), 97.

3 Ibid., 97.

4 Ibid., 99.

5 Cohen, "Postwar City Planning," 405.

6 Ibid., 405.

7 Ibid., 2.

8 Ibid., 387.

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10 Pace, "Society Hill," 113.

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13 *Market Street East General Neighborhood Renewal Plan* (Philadelphia: Redevelopment Authority of the City of Philadelphia, October 1966), 1.

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- 25 Ibid.
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## **CHAPTER IV**

### **CURRENT CONDITIONS**

- Exterior
- Interior

## IV. CURRENT CONDITIONS

### *Exterior Conditions*

In general, the exterior material of the building is in excellent shape. There are only a few, small exterior spalls occurring on the precast concrete panels. Although there seem to be no structural problems with the panels, there is an uneven build-up of soiling on the originally white panels, which should be cleaned (fig. 18). To determine how the cleaning should occur, a conservation specialist should be hired to conduct tests and recommend the best treatment options. The panels could be in such good shape because of the rigorous Schokbeton process. More tests would need to be conducted to confirm this hypothesis.

The poured-in-place concrete of the perimeter walls as well as the concrete cores exposed at the penthouse level of the Police Administration Building are exhibiting some issues. There are areas where the rebar has corroded and the concrete has spalled off. According to the building's care taker, Robert Fischer, these spalls were exacerbated by the earthquake that affected the Philadelphia area in August 2011.<sup>1</sup> By brief observation it seems that these areas could simply be patched, especially since the public does not see or have access to this area. Further investigation by a specialist should be conducted to determine the full extent of the problem.

On a macro scale, there are other external conditions that are concerning. One major condition that exists is that the Police Administration Building exudes a sense of

exclusion, mainly with its tall concrete court walls that surround a majority of the building. Although installed to create an internal courtyard for the employees on one side and to hide mechanical equipment on the other, these fence-like barriers interrupt both physical and visual access to the building. These walls make it difficult for the passerby to interact with much of the building, especially since they are nearly eight feet tall.

Other external forces affecting the building include the fact that the area is becoming more economically driven and that the City of Philadelphia's plans for the future of the Police Administration Building are unclear. Since the city is feeling the pressure of economic development in the surrounding neighborhoods, it seems that they may be considering turning the building over to developers. City officials, such as Mayor Michael Nutter, have announced plans to move the police department, along with other city agencies, to 4601 Market Street in West Philadelphia. This would leave the structure of the Police Administration Building in jeopardy, especially since they seem to be opposed to the creation of a preservation plan for the building.

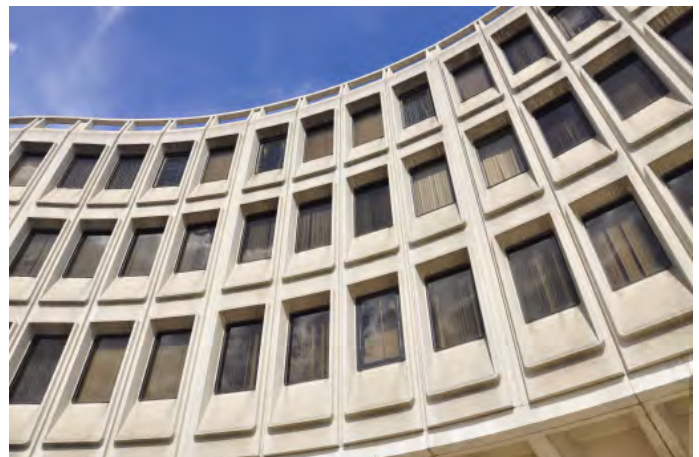


Figure 18. Detail of panels.



## Interior Conditions

The major issues of the interior of the Police Administration Building relate to the mechanical system. The original HVAC equipment installed in the building during construction is still in use today. Unfortunately, at the time the systems were designed, the designers did not anticipate the drastic technologic advances that would occur in the near future. Within 10 years of the building's opening, the police department began to introduce emerging computer technologies to aid in their work. These changes continued to grow exponentially as time went on. These machines impact mechanical systems as they expel many BTUs of heat. This adds to the load that the HVAC system must counteract, whereas the original design took into account the energy put off only by the human occupants of the building.

Another element that factors into the inadequacy of the mechanical system of the building is the fact that the building is overcrowded. Currently, there are twice as many people working in the building than it was originally designed for. This means that even when the HVAC equipment is working at full capacity, it is most likely not meeting the demand of the occupants and equipment. This is confirmed



Figure 19. Photo of tube snaking through one of the workspaces.

by sources claiming that the spaces are too hot in the summer and too cold in the winter.<sup>2</sup> In some spaces, occupants have created unsightly, makeshift add-ons to the mechanical equipment to aid in its performance and air distribution (fig. 19).



Figure 20. Detail of accumulation of dust.

Not only is the HVAC system of the Police Administration Building working overtime, there is only one building maintenance professional, Robert Fischer, for the entire structure. Mr. Fischer is on the building's staff to take care of any day-to-day issues that arise with the building, from lamp replacement to fixing parts of the mechanical system to making sure that the building functions as smooth as possible for its users. Unfortunately, there are spaces within the building that are occupied 24 hours a day, seven days a week, that cannot be closed down for more than several hours at a time. This impedes Mr. Fischer's ability to do his job in these areas of the building and sometimes the issues have to go unresolved. Such is the case in this room where dust has significantly built up (fig. 20). Although Mr. Fischer is working diligently to keep the building running, the Police Administration Building has experienced years of deferred maintenance. This lack of maintenance is due to a scarcity of allocated funds from the city and an

inadequate understanding of both the needs of the building and how to properly take care of it. These maintenance issues, coupled with the design intention of the architects to seal the building and rely on the HVAC system to condition the air, have led to hazardous conditions such as mold for the inhabitants of the building.

Considering all of the building's interior issues, the general conclusion that arises is that the mechanical system needs to be replaced. Generally, elements of mechanical systems have a lifespan of 15 to 30 years.<sup>3</sup> Most of the extant HVAC system was installed at the time of construction making the equipment over 50 years old and in need of replacement. Since some of the mechanical system equipment is incorporated into the precast panels making access difficult, a new layout of the mechanical distribution equipment may be necessary. This exploration also considers options to conceal the data systems of the building. As computers and technological advances were incorporated into the building, there was no ceiling cavity or allotted chase for the data cables leaving data trays exposed along the wall about 6-1/2 feet above the ground through the corridors and work spaces (fig. 21).



Figure 21. Detail view of data trays.

An additional interior problem that needs to be remedied is the lack of space. The mechanical system is not the only item taxed by the number of people in the building. The employees working in the Police Administration Building have limited space per person considering the building is housing twice as many people as was designed for. This creates a less than ideal working environment. Furthermore, a substantial amount of paperwork has accumulated over the past five decades filling up its allotted space. Consequently, filing cabinets have spilled into the corridors of the building. Not only does this cramp the halls, but it also creates a serious fire hazard.

The overarching issue causing the internal problems is that there are too many people and too much equipment in the building. The only way to relieve these issues will be to downsize the number of people in the building and move objects that are not critical to everyday use into storage. With less people and stuff, the building will be able to function properly and will provide a comfortable space for the Police Administration Building employees.

#### Notes to Chapter IV

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## **CHAPTER V**

### **CURRENT POLITICAL CONTEXT**

- Stakeholders
- Public Perceptions: Past and Present
- Development Pressures



## V. CURRENT POLITICAL CONTEXT

### ***Feedback from Stakeholders and Experts***

We spoke with stakeholders and experts in both the fields of Modernism and mid-century Philadelphia architecture. Below are key takeaways from those we approached, as well as feedback from the few who refused to grant us interviews.

### ***Stakeholders***

#### ***The City of Philadelphia***

We have been unable to speak to any of the decision makers for the Police Administration Building because the City of Philadelphia is not supportive of our focusing on the this site for our studio project. We have reached out to City of Philadelphia's Office of Public Property and the Philadelphia Industrial Development Corporation, and both entities declined to speak with us. The City's lack of support for this project reflects their intentions for the building and the potential development of the site. The decision makers' plans were clearly identified in Mayor Nutter's March 2012 Budget Address, during which he stated:

Almost since the day in 1964 when the ribbon was cut on the current Police Headquarters - the Police Administration Building - people have been talking about replacing it. Well today, I am truly pleased to announce that we plan to renovate 4601 Market Street into a new, state of the art police headquarters - the first new police headquarters in nearly 50 years. This is a smart consolidation which will allow us to sell existing assets, create new opportunities for development at those sites, and revitalize part of West Philadelphia much in need of investment.<sup>1</sup>

The Mayor's statement, coupled with the fact that representatives from the City of Philadelphia will not speak with us and would prefer if this studio project ceased, shows that they have clear intentions for this site and the subsequent demolition of the Police Administration Building. The FY 2013 Budget also included \$18.6 million of investments, the largest of which was the allocation of \$9 million from Pennsylvania Intergovernmental Cooperation Authority for the Public Property Department for the initial design work for a new police headquarters, city morgue, and health offices co-located at 4601 Market Street.<sup>2</sup> This line item included the statement that the money would "provide needed facility upgrades while allowing the sale of existing City assets and revitalizing part of West Philadelphia in need of investment."<sup>3</sup>

The FY2013-2018 Recommended Capital Program is the City's financing and implementation plan for the construction and renovation of City-owned buildings, public facilities, and infrastructure. Unlike the capital budget, which provides annual appropriations for such improvements, the Capital Program is the City's six-year plan for investing in its facilities and infrastructure. The recommendations put forth by the Capital Program Office allocate nearly \$10 billion, a majority of which will be borrowed and is dependent on the city's borrowing capacity. The City acknowledges these constraints and recommends "a substantial amount of new City funding" to fund their recommendations.<sup>4</sup> On page 101 of the report there is a line item allocating \$600,000 for "Exterior Improvements" for FY 2013 as well as FY 2014 to "Restore exterior pre-cast fascia at the Police Headquarters Building."<sup>5</sup> These funds are to be garnered through new loans financed through tax-supported general obligation bonds. Even though

this commitment to the restoration of the Police Administration Building appears encouraging, these are simply recommendations for the maintenance of every municipal building in the city.

When the move of the Police Department was first announced in December 2008 it was estimated that it would cost \$70 million to renovate the 87-year-old Provident Mutual Life Insurance Company at 4601 Market Street.<sup>6</sup> At that time the city was facing a \$1 billion five-year deficit, and so the funding for these renovations was, and still is, in question. In the November 2012 General Election, citizens of Philadelphia voted to approve Ballot Question number 4, allowing the City to borrow \$123,670,000 for five identified purposes – transit; streets and sanitation; municipal buildings; parks, recreation and museums; and economic and community development, thereby increasing the city’s indebtedness. This additional funding for municipal buildings could potentially mean that the renovation of the Provident Mutual Life Building at 4601 Market Street could be completed much sooner than anticipated, thus making the impending risk to the Police Administration Building come much sooner.

### **Center City District**

Paul Levy is the founder of Philadelphia’s Center City District and has served as its chief executive since 1991. Levy also heads the Central Philadelphia Development Corporation, a downtown business advocacy and planning organization. We reached out to him for an interview and he responded declining to be interviewed, adding, “The building should [be] demolished. It is totally dysfunctional internally and awful in terms of how it meets the street and turns its back on Franklin Square. The

adjacent surface parking lot is about as non-urban as you can get.”<sup>7</sup> Judging from Levy’s response, it is evident that his feelings about the building are similar to those of the City of Philadelphia.

### **Old City Civic Association**

Rich Thom is the Chair of the Developments Committee of the Old City Civic Association and an architect with an office in the Old City neighborhood of Philadelphia. The mission of the Old City Civic Association is to “preserve our neighborhood’s unique historic character, enhance its residents’ quality of life and promote a cohesive community made up of residents, businesses and institutions.”<sup>8</sup> Thom did not mince words when he let us know that the building “engenders no love” and that we are going to find “very few people who feel that it is significant enough to save.” In order to reuse the building he feels that we are going to have to do a major addition, but that in the end we would just be saving it for aesthetic reasons. He divulged to us a plan that was recommended to the planning commission in 2006 that involved the Police Department building a high-rise office building on the parking lot area and connecting it back to the Police Administration Building via a sky bridge. He stated that the plan never came to fruition because the federal government took ownership over a portion of the lot within the footprint of the new building, essentially killing the plan.

### **Old City District**

The Old City District is a Business Improvement District in the Old City Neighborhood of

Philadelphia. We reached out to them and were informed by Brett Mapp, Director of Operations, that the Police Administration Building is not in their district, which he informed us runs from Walnut Street to the Ben Franklin Bridge and from Front to 6th Streets.

## ***Modern Movement Experts***

### ***Architectural Archives at the University of Pennsylvania***

Bill Whitaker is the Curator and Collections Manager of the Architectural Archives at the University of Pennsylvania and is an expert on Philadelphia Modernism. His chief message to us was pointing out the progressive manner in which the building engaged with the city and how at the time it was built, the City of Philadelphia was investing in the very highest-end of good design. He reminded us that we could persuade the City by showing them how those who sat in the decision-making chair fifty years ago thought about the building and the aspirations they had for it. He also informed us that the Police Administration Building was one of the primary examples of the moment in Philadelphia architecture when there was a significant shift in the direction of Modernism. The group of architects and engineers responsible for this shift were all faculty at the University of Pennsylvania and included Robert Geddes, Louis I. Kahn, Romaldo Giurgola, Denise Scott Brown, Robert Venturi, George Qualls, Robert Le Ricolais, and August Komendant. G. Holmes Perkins, then Head of the City Planning Commission as well as Dean of Penn's School of Fine Arts, led this outstanding group of progressive architects and engineers at Penn, subsequently transforming

the faculty and curriculum of the school. In speaking of the building's reuse, Whitaker affirmed that the building is a piece of sculpture and an impossible thing to deal with unless we figure out how it can be useful.

### ***Georgia Tech Architectural Design Charrette on the Police Administration Building***

Jack Pyburn is a Historic Preservation Architect and a Principal with the firm of Lord Aeck Sargent in Atlanta, Georgia. He is also a lecturer and visiting scholar in Historic Preservation at Georgia Tech's School of Architecture where he is planning to lead a Spring 2013 architectural design charrette focusing on the Police Administration Building. In addition, he serves on the Board of Directors of DOCOMOMO-US, the national advocacy group of the international modern movement. His primary research interest is mid-century architectural precast concrete technology and its relationship to architectural form, and he is currently involved in an effort to examine this technology worldwide and its application on 20<sup>th</sup> century design and construction across a range of building types. When we spoke with him he gave us very detailed background and technical information on the Schokbeton method of precast concrete construction and gave us numerous examples of comparable precast buildings. At the time the Police Administration Building was built, Schokbeton represented the high-end of concrete construction and that the industry was going toward a standard that was more in the middle. Pyburn argued that the City of Philadelphia had to understand this and really want this particular type of high-end precast building. He contended that there is still a certain appreciation for the building, but that most people have lost sight of why such a building was built in the first place. It was an important moment in the police department and political history in Philadelphia,

and the police department's move from the basement of City Hall and into this modern building represented the City's movement towards a progressive future. Regarding the potential demolition of the building, he encouraged us to engage DOCOMOMO in our advocacy campaign and keep moving forward, reminding us that "it ain't over till' it's over."

### **David Fixler**

David Fixler is President of DOCOMOMO-US/ New England and an internationally recognized expert on the Modern Movement and mid-century modern buildings. A Principal of Design and Preservation at the architectural firm of EYP/ AE, Fixler has written for many magazines and journals and lectured and taught at Columbia University, the University of Pennsylvania, MIT, Wellesley College, Wentworth Institute, and the Boston Architectural Center. He gave us numerous examples of comparable buildings, some of which he was personally involved in the redesign. Fixler pointed out that the City is trying to maximize the economic value of the site, so if we want a better chance at saving the building, we should couple it with some intelligent fill-in. Regarding adaptive reuse, he encouraged us to make the building useful, and in doing so look at where it might be appropriate to do an addition, what inside is precious, what inside can be sacrificed, and to examine the types of uses that may be applicable to the building. One caveat is that these types of buildings were so bespoke, so custom-tailored to a particular program, literally cast in concrete, that the idea of flexibility is difficult. Fixler agreed with our assessment that the building should remain a public building, but encouraged a public-private partnership to increase the viability of the site being developed. He made it clear that because

we are feeling development pressure at the site, there must be an addition to add to its real estate value. While reminding us that we are going to have to win over a lot of people who aren't necessarily going to buy into this project, he encouraged us to create visuals depicting everything from additions to little gestures similar to the General Services Administration's (GSA) First Impressions Program. The most valuable instruction he imparted to the group was to "Act in the spirit with which this building was designed to begin with, which is to think boldly. You have to get yourself into that kind of a mindset. You can't be timid around this kind of a building or it will swallow you."

### **PennPraxis**

Harris Steinberg is the founding executive director of PennPraxis, the clinical arm of the University of Pennsylvania's School of Design, and was an architect at GBQC from 1985-1988. He is also an Adjunct Assistant Professor in the City & Regional Planning Department within the School of Design at the University of Pennsylvania. Steinberg explained that the Police Administration Building itself is an oddity, not in the same vein as the Furness library, but one of the kinds of buildings that generations that grow up with it hate it, and those who didn't can understand its importance. It's in that class of buildings that is in a vulnerable position right now because the City sees it as blight and wants to tear it down. The younger generation sees it as an important milestone in the history of architecture, an important piece of Philadelphia's urban fabric. Steinberg agreed with David Fixler on the idea of a public-private partnership, suggesting the building be used as a lobby or ballroom space for a hotel that could go

behind it. With regards to our plan to nominate the Police Administration Building to the Philadelphia Register of Historic Places, he felt that Modernism is a hard period to persuade people to get behind. Steinberg suggested that we locate it within the bigger Bacon-era planning of the 1950s and 1960s. He supported our plans to raise awareness of the threat to the building, suggesting that we reach out to PlanPhilly (a local planning blog and one of his projects) and work to halt the City's plans. Due to the impending threat to the building he suggested that we "get out in front quickly and loudly."

### **David Brownlee**

David Brownlee is a historian of modern architecture as well as a Professor and Chair of the Graduate Group in the History of Art at the University of Pennsylvania. David grew up in Philadelphia and is an expert on Modern Architecture, and in particular the Philadelphia School of architects. David imparted that the Police Administration Building is the only important civic building created by the Philadelphia School and is the most visually prominent building in Philadelphia representing this important Philadelphia contribution to modern architecture. Brownlee explained that the building is emblematic of the move to create more sculpturally present, three-dimensional Modernism, achieving monumentality through greater form that you associate with that period of time. He believes that the building is capable of being adaptively reused "by clever people for almost any purpose you can think of," and suggested that perhaps a high rise could be built on the site, linking back to the Police Administration

Building. He admits that making the historic preservation case for it will be tough. The challenge is that there are so few buildings of the early 1960s on the national and local registers, and making the case for the Police Administration Building will be difficult, especially given the fact that I.M. Pei's Society Hill Towers are not on the local register. The public associations with the building are not positive, particularly the "unfortunate" association with former Mayor and Police Commissioner Frank Rizzo. Secondly, the siting is not ideal and the building does not "present itself well." In the end, he gave us a lot of insight on the design of the building and wholeheartedly encouraged our advocacy campaign.

### **David De Long**

David De Long is Professor Emeritus of Architecture at the University of Pennsylvania and former Chair of the Graduate Group in Historic Preservation, serving from 1984-1996. He is an authority on Modern Architecture and co-authored with David Brownlee the seminal book *Louis I. Kahn: In the Realm of Architecture*. The primary takeaway from our conversation was his encouraging us to reach out and speak to the city, particularly the Historical Commission. He firmly stated that they cannot bar us from speaking to anyone, only discourage us, and that it is our right to speak to those in public offices in the city. Regarding the Historical Commission, he feels that they are not very inventive when it comes to adaptive reuse and that they lack design flexibility. De Long believes that our studio project can provide them with visuals showing ideas for reuse and demonstrate sympathetic uses, which illustrate the key parts of the interior and exterior. He gave us a tremendous amount of insight and background information on the architects of the Philadelphia School, and the history of the building. As an architecture student at Penn, he had the opportunity

to tour the site at the time of construction with professor and chief engineer August Komendant. De Long recalled Komendant's enthusiasm about how technologically advanced the building was, how efficient the structure was, and how beautifully it was designed. He feels that the building should, without question, be landmarked as it is a very important building, not just in terms of architectural history, but also as an important icon representing the city. It is also important because it is one of just a few buildings remaining by GBQC, and he feels it is their best achievement in Philadelphia and one of the best the firm ever designed. Technologically, it is a pioneering building, he asserts even more so than Kahn's Richards Medical Laboratories. Regarding its possible reuse, he feels that it should be easy to adapt due to the open floor plan. He also suggested inserting a high-rise office building, admitting that the self-closing structure and the continuous curved wall, the most beautiful aspects of the design, resist conventional additions. De Long's suggestion for moving the building away from negative associations is to play up the idea of the police as a symbol of safety and civic pride. He suggested reminding the public that it is primarily used for administration and not long-term incarceration. He recommended that we reach out to John Gallery at the Preservation Alliance, Inga Saffron at the Philadelphia Inquirer, and Paul Steinke with Reading Terminal Market. His parting words were to "not hesitate to agitate, not be meek, and take a stand against the city."

### ***Inga Saffron***

Inga Saffron is the architecture critic for the Philadelphia Inquirer and has been writing about Philadelphia's urban design issues for the past thirteen years. She is also a 2012 Loeb Fellow at Harvard University's Graduate School of Design. Saffron was very excited about our desire to work to protect the Police Administration Building from demolition through an advocacy campaign. She felt that the first step must be to educate the public about Modern architecture, more specifically, Brutalism. She feels the Police Administration Building embodies the characteristics of Brutalism and that it would be beneficial to put on a museum exhibition highlighting Brutalist architecture. To further the goal of educating the public, she suggested that we arrange a panel on Brutalism at the Center for Architecture, inviting architects Robert Geddes and Frank Gehry. As for sympathetic developers, she suggested that we reach out to Ron Caplan of Philadelphia Management Corporation. He recently added eight stories to the 1968 glass and steel former AAA Mid-Atlantic Headquarters Building, converting it to apartments. Saffron also recommended reaching out to Jeffrey Brown of Brown Hill developers, calling him an "enlightened developer." She encouraged us to look at the creation of the Race Street Pier and the entire Race Street corridor as part of the improvement of the street and as a potential driver for how the Police Administration Building can be redeveloped. If we were to encounter any pushback from the Historical Commission, she assured us that she would write a story on the threats to the building.



## **Past Public Perceptions**

When the Philadelphia Police Administration Building was dedicated on April 1, 1963, the building was celebrated as a technological and symbolic tour de force. GBQC was awarded the American Institute of Architects' Gold Medal Award for the best Philadelphia architecture of the year. The Police Administration Building brought renewed hope and momentum to a blighted area then referred to as "Skid Row". The pamphlet that accompanied the dedication ceremony praised it as the new "architectural focal point of the northern end of Independence Mall and an important contribution to the city's downtown renewal."<sup>9</sup> In attendance for the ceremony were about 600 people, notably Mayor James Tate, Albert Brown (the Police Commissioner), GBQC, William H. Parker (Los Angeles Chief of Police), G. Holmes Perkins (Chairman of the City Planning Commission).

The decision to build a new police headquarters came in 1958 when Mayor Richardson Dilworth officially announced the proposal. Since the initial plans emerged, the public, via the press, has kept a close eye on the Police Administration Building throughout the years. The Philadelphia Police wanted their new headquarters to promote a positive public image. This paralleled the city's social revitalization efforts as well as the large number of new construction projects. The big-boned sculptural building emulated civic pride and safety. Furthermore, the city's investment in this type of design highlighted the progressive and innovative vision of the City government's decision makers.

However, the Police Administration Building was not without its critics. Philip Klein, the former Public Property Commissioner, disapproved of the design, stating in 1963, "Architects build this type of building for other architects to discuss and admire, certainly not for the utilitarian use needed in a police headquarters."<sup>10</sup> Other criticism surfaced as wary employees complained of dizziness from the curvilinear circulation pattern, and questioned the round elevators where "passengers feel like a can of people."<sup>11</sup> The form and mass of the Police Administration Building was unlike any other public building. The effort by GBQC to create a transparency between the public and the Philadelphia Police through the large amount of windows seemed to backfire; public perceptions viewed these 432 windows as being the eyes of the police, they are everywhere, inescapable.<sup>12</sup>

Modern architecture during the mid-twentieth century was transitioning from the glass box into a more sculpturally expressive style. Additionally, the Roundhouse is reflective of the city's architectural soul-searching for a national heritage.<sup>13</sup> The Expressionist style employed for the design created a sculptural, iconic building that has been prominently keyed into the city. The exterior envelope is both the sin and bones of the building that encompasses the structural, mechanical, and electrical systems. GBQC hastily celebrated technological innovation as is represented by the Schokbeton panels of the building. The use of this precasting system intrigued outsiders and invited inspection. By the 1960s, the Philadelphia Chapter of the American Institute of Architects was considered to be one of, if not the most, energized chapters in the United States.<sup>14</sup> Over the years, admiration for the Police Administration Building became overshadowed by its skepticism. Frank Rizzo, former Police Commissioner and Mayor of

Philadelphia, was largely responsible for generating the condemnation that persists to this day.

### **Present Public Perceptions**

Present-day public perceptions of the Police Administration Building are primarily negative and stem principally from the building's key function, as well as the storied history and brutish reputation of the Philadelphia Police Department. The building is associated with the violence experienced during the tenure of Frank Rizzo, who served as Police Commissioner from 1967-1971 and Mayor of the City of Philadelphia from 1972-1980. The building was designed to be inviting to the public, but because of its function, a grim association has been unavoidable. In his comprehensive study of Philadelphia architecture, Edward Teitelman summed up the public's perception of the Police Administration Building, "Little that is commonly associated with the police station can be found in this ingenious pre-stressed concrete building."<sup>15</sup>

More recently, Police Chief Charles Ramsey has been very vocal about his dissatisfaction with the building, stating in March 2012: "It's no secret that our facilities are in pretty poor condition. This is a way in which we can improve that situation. 4601 Market is going to require a lot of work. But it's a good solid building, and once it's rehabbed, it'll make a good police headquarters."<sup>16</sup> Once the announcement was made in December 2008 of the Police Department's intentions to move the headquarters, the occupants' dissatisfaction with the building began making news. In an *Inquirer* story from December 24, 2008, Ramsey stated, "I've never seen anything like that, and that's not a positive statement, it's a very negative statement. It's just not a good building," citing cluttered

hallways filled with file cabinets and a homicide division where witnesses share space with suspects.<sup>17</sup> In 1988, Police Commissioner Kevin M. Tucker's frustration with the building was so great that he proposed selling the Police Administration Building. John McNesby, president of the Fraternal Order of Police, called the headquarters inhumane, saying "It's a disgrace." He claimed that the homicide unit was routinely infested with fleas and that the building was blistering hot in summer and freezing cold in winter.<sup>18</sup> When we toured the building, we heard many of the staff working in the building express their feelings, stating, "It's just so old," "what a dump," and "deplorable, huh?" Often referred to as a "dump" by citizens of Philadelphia on public forums, the public's perception of the building stems from statements like the preceding that have more to do with the overcrowding of the building, than with its quality or functionality. The complaints from the users of the building are purely a reflection on the Police Department's poor management of space and organization of departments within the building.

Additionally, the building is seen as a gathering place for groups who feel the police have treated their members unfairly. This includes people in support of those they feel have been unjustly treated, like Mumia Abu-Jamal, as well as protesters. Most recently Occupy Philadelphia staged "Occupy the Roundhouse" in December 2011 protesting the incarceration of fifty-two protesters arrested following the eviction of the movement from Dilworth Plaza. The introduction of residences in the immediate vicinity of the Police Administration Building abruptly butted-heads with the protesters, with a woman living in the Metro Club condos



across the street from the Police Headquarters saying to the Philadelphia Weekly, “People in my building were complaining that they could hear the protesters shouting from inside the [apartment] building.”<sup>19</sup> In order to have an effective advocacy campaign, we will need to overcome all of these perceptions and work to show the Police Administration Building in a better light, highlighting the architecture, civic pride, and iconic status of the building within the fabric of the City.

### ***Development Pressures***

The development pressures for the Police Administration Building and its site are directly related to the recent development of the area surrounding the site. The \$6.5 million renovation of Franklin Square, coupled with the \$30 million renovation and conversion of the former Metropolitan Hospital into the MetroClub Condominiums have contributed to the area becoming more economically driven. These drivers, in conjunction with the Police Department’s desire for space, are the impetus behind the speculation that the City of Philadelphia plans to demolish the Police Administration Building and sell the land to developers. Mayor Nutter’s March 2012 Budget Address in which he stated that moving the Police Headquarters to West Philadelphia would “allow us to sell existing assets, [and] create new opportunities for development at those sites,” coupled with the City’s refusal to speak to us, are the chief indications regarding the City’s plans for the building.<sup>20</sup> Pressure to develop the site can also be traced to the City of Philadelphia’s budget problems and the financial gains that would come from selling the

site to developers. In his budget address, the Mayor referenced “painful budget cuts,” stated that the economy is recovering slower than anticipated, and that the City still faces the threat of cuts from the state and federal governments.<sup>21</sup>

Notes for Chapter V

<sup>1</sup> Mayor Michael A. Nutter, "2012 Budget Address," March 8, 2012, transcript, City of Philadelphia, accessed November 12, 2012, [www.phila.gov/pdfs/2012-budgetAddress.pdf](http://www.phila.gov/pdfs/2012-budgetAddress.pdf).

<sup>2</sup> Ashley Hahn, "Provident Mutual Life Insurance Building to be reused as Police Command Center," Plan Philly, March 8, 2012, accessed November 12, 2012, <http://planphilly.com/eyesonthestreet/2012/03/08/provident-mutual-life-insurance-building-to-be-reused-as-police-command-center/>.

<sup>3</sup> Nutter, "2012 Budget Address."

<sup>4</sup> "The Recommended 2013-2018 Capital Program," Philadelphia City Planning Commission, accessed November 12, 2012, [www.phila.gov/CityPlanning/programs/Capital%20Programs/rcpgm13.pdf](http://www.phila.gov/CityPlanning/programs/Capital%20Programs/rcpgm13.pdf).

<sup>5</sup> Ibid.

<sup>6</sup> Tony Graham and Allison Steele, "Nutter Pushes to Move Police HQ to West Phila. Site," *Philadelphia Inquirer*, March 9, 2012, accessed November 12, 2012, [http://articles.philly.com/2012-03-09/news/31139971\\_1\\_police-headquarters-Police-Administration-Building-building](http://articles.philly.com/2012-03-09/news/31139971_1_police-headquarters-Police-Administration-Building-building).

<sup>7</sup> Paul Levy, email message to Kimber VanSant, October 4, 2012.

<sup>8</sup> "Mission and Vision," Old City Civic Association, accessed November 12, 2012, <http://oldcity.org/about/mission-and-vision>.

<sup>9</sup> City of Philadelphia, "Dedication of Police Headquarters," Monday, April 1, 1963, pamphlet from Temple University, Urban Archives, Philadelphia, PA.

<sup>10</sup> Maurice M. Lewis, "Klein Views New Police Building: 'Ugly, Cost too High, Overcrowded,'" *The Evening Bulletin*, March 31, 1963.

<sup>11</sup> Smart, "In Our Town."

<sup>12</sup> Michelle Osborn, "A Building That Invites Inspection," *The Evening Bulletin*, December 10, 1965.

<sup>13</sup> G. Holmes Perkins, "Part Four: Philadelphia Phoenix: Postwar Civic Renaissance and the Philadelphia School," in *Drawing Toward Building: Philadelphia Architectural Graphics 1732-1986*, ed. James F. O'Gorman et. al. (Philadelphia, PA: Pennsylvania Academy of the Fine Arts, University of Pennsylvania, 1986), 204.

<sup>14</sup> Clendenin, "Thematic Context Statement."

<sup>15</sup> Edward Teitelman and Richard W. Longstreth, *Architecture in Philadelphia: A Guide* (Cambridge, MA: MIT Press, 1974), 77.

<sup>16</sup> Mike Dunn, "Plans For A New Police Headquarters Listed Under Mayor Nutter's Budget," CBS Philadelphia, March 10, 2012, accessed November 12, 2012, <http://philadelphia.cbslocal.com/2012/03/10/plans-for-a-new-police-headquarters-listed-under-mayor-nutters-budget>.

<sup>17</sup> Shields and Davis, "Wish-List."

<sup>18</sup> Ibid.

<sup>19</sup> Randy LoBasso, "51 of 52 Occupiers Released From Jail After Wednesday Morning Arrests," *PhillyNow*, December 1, 2011, accessed November 12, 2012, <http://blogs.philadelphiaweekly.com/phillynow/2011/12/01/51-occupiers-released-from-jail>.

<sup>20</sup> Nutter, "2012 Budget Address."

<sup>21</sup> Ibid.

## CHAPTER VI

### ANALYSIS

- SWOT Analysis
- Comparables
- Character Defining Features
  - Location
  - Form and Mass
  - Plaza
  - Building Program
  - Structural System
  - Precast Concrete Panels
  - Custom-Designed Interior Fixtures

# VI. ANALYSIS

## SWOT ANALYSIS

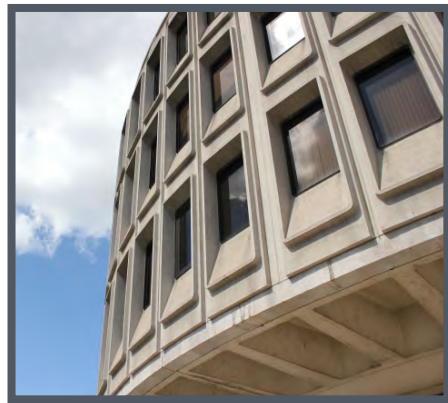
### STRENGTHS

QUALITY OF ARCHITECTURAL DESIGN.

THE LOT CAN EASILY BE RE-DENSIFIED.

LOCATION WITHIN THE CITY.

STRONG ASSOCIATION WITH PHILADELPHIA'S HISTORY.



### WEAKNESSES

A FULLY INTEGRATED BUILDING SYSTEM THAT MAY MAKE REUSE DIFFICULT.

LOCATED IN AN AREA BECOMING MORE ECONOMICALLY DRIVEN.

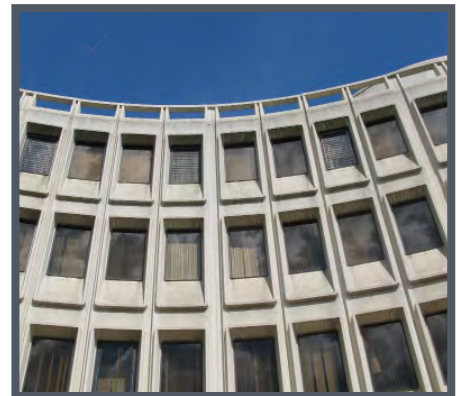
APATHETIC PUBLIC AND CITY GOVERNMENT.

### OPPORTUNITIES

PRIME FOR REDEVELOPMENT AND ADAPTIVE REUSE.

PRESERVATION OF ONE OF THE LEADING EXAMPLES OF THE SCHOKBETON SYSTEM AND PRECAST CONCRETE PANELS.

LOCATED IN AN AREA BECOMING MORE ECONOMICALLY DRIVEN.



### THREATS

NO PROTECTION FROM DEMOLITION.

FACING AN UNCERTAIN FUTURE WITH THE POLICE DEPARTMENT RELOCATING TO WEST PHILADELPHIA.

## COMPARABLES

Comparisons to the Police Administration Building were created based on several variables: style, use of Schokbeton, and comparisons for possible additions and adaptive reuse.

### *Schokbeton Comparables*

**Banque Lambert**  
**Brussels, Belgium**  
**Skidmore, Owings & Merrill, 1962**

For SOM's first commercial building in Europe, the firm employed the use of cross-shaped Schokbeton units. These units were held together with "jewel-like" stainless steel joints. The geometry of the Schokbeton panels is emphasized by the rectangularity of building's form.



**Lake Pavilion,**  
**New Canaan, CT**  
**Philip Johnson, 1962**

This concrete "folly" was designed in 1962 by Philip Johnson and was the first employment of Schokbeton technology in the United States. Given Johnson's prominent influence in the architecture world of the time, GBQC was undoubtedly aware of Johnson's use of this concrete technology for his New Canaan house. Because of its aqueous environment, the pavilion's Schokbeton panels have suffered from severe deterioration and are therefore not representative of the system's superior durability.



**Embassy of the United States**  
**Dublin, Ireland**  
**John Johansen, 1962-1964**

The U.S. Embassy in Dublin employs the Schokbeton method of precast modular units and a circular form that give it a resemblance to the Police Headquarters Building. The architect John Johansen intended for the circular shape to serve as a representation of the "close relationship between Ireland and the United States... and symbolize the same strength and unity evident in the placement of the thirteen stars in the first American flag."





## Stylistic Comparables

### **U.S. Department of Housing and Urban Development Building Washington, D.C. Marcel Breuer, 1963-68**

The curvilinear, Y-shaped forms of Breuer's buildings immediately evoke the façade of the Police Administration Building. The HUD building employs precast, reinforced concrete panels to create a façade of honeycomb modular windows. The overall effect is a structure of geometric simplicity and a complete elimination of ornament.



### **UNESCO Building Paris, France Marcel Breuer, 1953**

Due to the curvilinear emphasis of Breuer's concrete works during this period, which is exemplified at the UNESCO Headquarters in Paris, these buildings are more Expressionistic, than Brutalist in style. Breuer employed the materiality of concrete to achieve a soft, sculptural effect.



### **Unite d'Habitation Marseille, France Le Corbusier, 1947**

GBQC's use of modular concrete, is also reminiscent of the work of Le Corbusier, in particular the deeply depressed modular facades of his Unite d'Habitation in Marseille (1947). In the issue of Process Architecture devoted to GBQC's work, they note that Le Corbusier provided much of the inspiration for their early buildings.



## Character Defining Features

### Location

Located along Race Street, the Police Administration Building continues to be a prominent feature within the neighborhood and serves as a familiar landmark to those driving along I-676 (fig. 22). At the time of its construction, Philadelphia was experiencing a period of significant urban renewal, especially within the neighborhoods surrounding the Police Administration Building. Mayor Richardson Dilworth saw the building as being a positive contribution to the city. He placed the Police Administration Building in one of Philadelphia's least desirable neighborhoods, as he believed it would significantly improve the area's appearance. Within the context of this moment in Philadelphia's history, the construction and placement of the Police Administration Building symbolized the local government's continual commitment towards the improvement of the city's physical appearance.

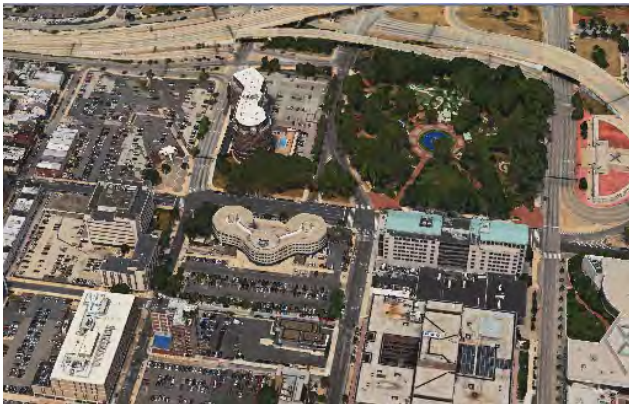


Figure 22. Aerial view showing the neighborhood surrounding the Police Administration Building.

### Form and Mass



Figure 23. Detail showing the sweeping walls.

The curvilinear form of the Philadelphia Police Headquarters Building is one of its most prominent character-defining features (fig. 23). GBQC first developed the basic scheme for the building, a central square flanked by two symmetrical wings, based on the “kind of interior and exterior space the Police Department wanted.”<sup>4</sup> The architects were adamant that the building should not look like a “grim, forbidding fortress, scaring the wits out of the citizenry,” but rather, act as a welcoming addition to the urban landscape of Philadelphia.<sup>5</sup> This reflected GBQC’s mission, that their architecture had the responsibility to embody a social institution and to positively influence the urban environment with its form.<sup>6</sup>

At first the wings were squares, then hexagons, and finally evolved into circles, in order to eliminate the deep awkward corners that were created in the building’s forecourt that faced the street.<sup>7</sup> The building’s external composition follows the classical order of base, shaft, and capital. The base serves primarily as public space, the shaft as private offices, and the capital is a sloping, pierced parapet, completing the building’s “elegant silhouette.”<sup>8</sup>



GBQC also claimed that the use of circular geometry was exploited for its innovative technology, as the curves could only be produced through the Schokbeton precast concrete panel system. GBQC were eager to employ the technological possibilities of modern architecture and to design a structure where the “skin, bones and services” are all fully integrated.<sup>9</sup>

While the building’s social function and its technological innovation were large influences on the curving arcs of the building’s wings, this form and mass were clearly influenced by the Expressionist works of the architect Marcel Breuer. The sculptural, concave form of Breuer’s UNESCO Building in Paris (1953) and his U.S. Department of Housing and Urban Development Building in Washington, D.C. (1963-68), both bear striking resemblance to the façade of Police Administration Building (See Comparables Section). Breuer’s work was undoubtedly known to the architects, who have also cited the concrete structures of Le Corbusier as an influence on their own work. According to the General Services Administration’s definition, these “sweeping, curved wall surfaces” of the Police Headquarters Building make it Expressionist, rather than Brutalist in style.<sup>10</sup>

On an even larger scale, some people may automatically identify the Police Administration Building as Brutalist since it is made of concrete. But this assumption projects unfounded negative connotations on the building. Brutalist buildings tend to be boxy, massive structures with a sense of weight. We argue that the Police Administration

Building more closely identifies with the U.S. General Services Administration’s definition of Expressionism that includes “sweeping, curved rooflines and wall surfaces... [and] faceted, concave, or convex surfaces.”<sup>11</sup> The Police Administration Building is more gentle and elegant than most of the iconic Brutalist buildings that have recently been in the public eye and deserves to be differentiated.

The circle is ultimately a stubborn shape in which to construct a building and it has impeded the City of Philadelphia from making the necessary additions to the interior spaces. GBQC acknowledged the difficulty of the circle by stating that it “is a tyrannical form, difficult to enter and limiting in its spatial configuration.”<sup>12</sup>

### **Plaza**

In Robert Geddes’ article on “The Possibilities in Architecture”, he states “perhaps the most permanent example of an idealized institution is embodied in the concept of the plaza, which serves as the functional and symbolic center of a community.”<sup>13</sup> GBQC envisioned the plaza, or forecourt, for the Police Administration Building much in this manner, as an essential component to the building’s civic identity and to give the building a



Figure 24. The plaza of the Police Administration Building on the north side.

grand, public presence on Race Street (fig. 24).

The architects hoped the generous and welcoming forecourt might have a positive moral effect on the derelict Franklin Square, which at this time was the epicenter of Philadelphia’s Skid Row.<sup>14</sup> In order to prevent dark, right-angled crevices on either side of the plaza, the architects adjusted the form of the wings from squares to circles, giving the outline of the plaza a more gentle, flowing shape.

The plaza currently lays desolate as the entrance was moved, for the sake of convenience, to the southern side of the building just two years after the building’s completion so as to face the parking lot on Arch Street. Given the importance of the plaza in the original design and the potential for it to engage with the neighborhood, we are calling for the rehabilitation of this space as one of the first steps in our recommendations for future improvements to the building.

### **Building Program**

Despite the limitations that the round form inevitably imposed, the building program is one of the Police Administration Building’s character-defining features. The circular form that both defines and characterizes the building also organizes the interior space (fig. 25). The use of this form was deliberate; GBQC believed that this was the most efficient use of space creating a usable space ratio of 78%.<sup>15</sup> The curvilinear circulation prevents the excessive and monotonous visual lengths that often result from rectangular office buildings. The floor plan entails “highly efficient circular



Figure 25. View of one of the corridors along the north wall of the Police Administration Building.

wings at the ends of a less efficient, but spatially exciting, single-loaded corridor” that “proved to be an excellent solution.”<sup>16</sup>

### **Structural System**

Yet another character-defining feature of the Police Administration Building is the complete structural system supporting the building (fig. 26). There were several structural engineers brought on to design the complex building; including David Bloom as the principal engineer, and the more well-known August Komendant to oversee the precast concrete panels.<sup>17</sup> With his expertise in concrete in all of its forms, it is understandable why Komendant was brought on for this project, seeing as over 90% of the entire structure is made of concrete, whether cast-in-place or precast.

Cast or poured-in-place concrete was used for several features of the buildings, specifically the footings, foundations, corridor floors, and the four elevator-stair cores. These components created a formwork for the building and the four cores “act as restraining anchors for the precast structure.”<sup>18</sup> Special bearing pockets were made in the cast-in-place elevator cores so that the precast panels and cast-in-place floor slabs could be keyed in.<sup>19</sup> Two

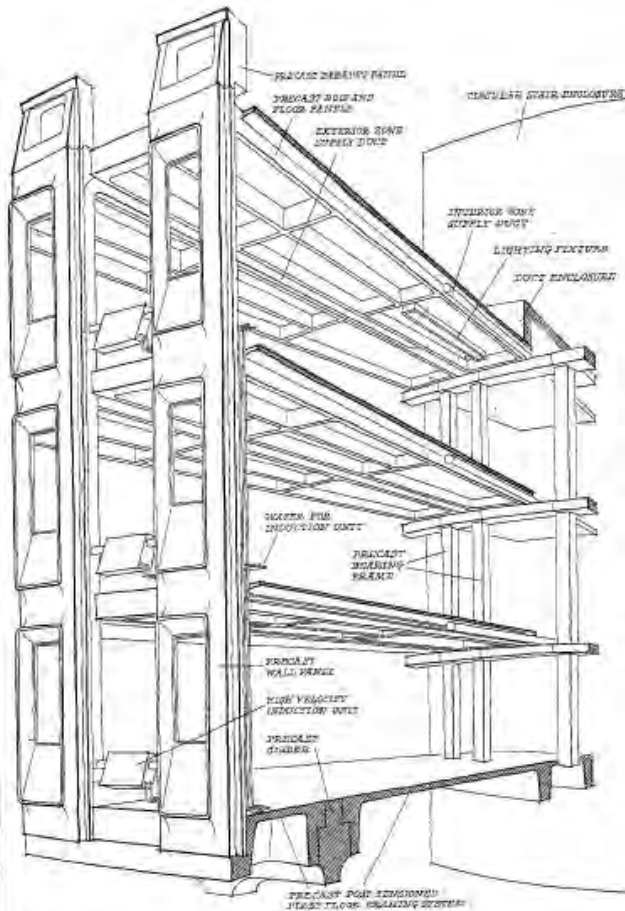


Figure 26. Diagram showing the assembly of the precast concrete panels. "Circling in the Square," *Architectural Forum* 718.

basic panels were created for the upper three floors: the exterior wall panels and a wedge-shaped floor panel. For the lower floors, other precast elements created a bearing platform that cantilevers out to carry the load of the exterior panels and the columns along the hallways of the upper floors.<sup>20</sup>

Another unique feature of the structural system of the Police Administration Building is the use of the pre-stressing technique. To utilize the potential of concrete, it is preferred that the material is in compression since it has little tensile strength. There are several techniques used to pre-stress the concrete to ensure that the entire concrete element is in compression to counteract any loads bearing on it: pre-tensioning and post-tensioning.<sup>21</sup> In

the case of the Police Administration Building, it was decided to post-tension many of the structural members. Post-tensioning requires that hollow steel tubes are cast into the concrete section. After the section is cured and brought on site, steel wire tendons are threaded through the tubes and connected to jacks on either end to administer more tensile stress than would normally be applied in the opposite direction. After the post-tensioning process, the tubes can be grouted to ensure the tensile bars remain in place. This pre-stressing procedure better ensures that the concrete will be able to handle both the dead and live loads applied during occupation of the building.<sup>22</sup>

At the Police Administration Building, the first floor framing was subjected to the post-tensioning process with high-strength reinforcing bars with an ultimate strength of 150,000 psi. Eight tendons were placed in the top of the ribs and carried all the way through the interior span of the floor panels. In addition, six tendons were threaded through the inner-most third of the span to resist the moment of the cantilever over the exterior columns.<sup>23</sup> While erection and post-tensioning of the panels was occurring during August of 1961, four of the first floor panels failed causing construction to halt. The city brought in two third-party consulting engineers, representatives from Schupack and Zollman and James R. Libby, to determine if the rest of the panels that had been installed should be removed as well. Upon investigation of the panels and the preliminary testing results, it was determined that the post-tensioning process caused the failure which was acceptable because the stress applied to the panels during the process was much more than would ever be applied during occupation.<sup>24</sup> Construction resumed a month after being halted with no more incidences causing alarm. Today, the panels and structural system of



the Police Administration Building are in great shape and performing the job for which they were designed.

### **Precast Concrete Panels**

The panels installed on the Police Administration Building were created using a system of precast concrete known as Schokbeton, which translates to “shocked concrete.” This process was originally created in Holland and patented in 1932. According to legend, the benefits of precasting concrete in this way were observed as a worker was moving a wheelbarrow of concrete over a rough road.<sup>25</sup> Eventually, this precise process was developed through years of engineering research and testing. The resulting system incorporated

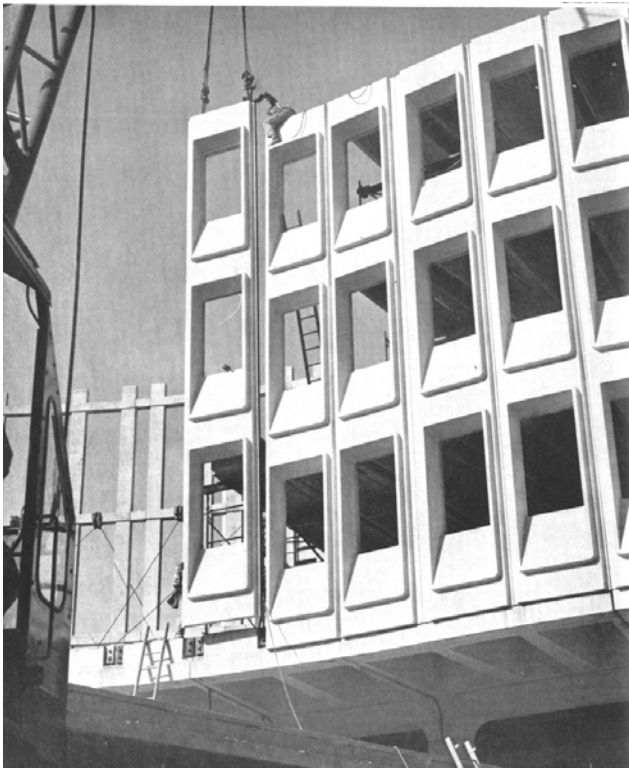


Figure 27. Showing the installation of the precast concrete panels. “Next Round for the Roundhouse,” *Skyline Online*, December 24, 2008.

optimal water to cement ratios, carefully and creatively constructed molds, and calibrated shocking during the placement of the concrete.<sup>26</sup>

Although many researchers were working on the development of different concrete technologies at the time, there were several aspects of Schokbeton that set it apart from the others. The major factor that differentiated this process from other concurrent precast processes was that the concrete mixture was created to have zero slump. In other words, only enough water to activate the chemical processes of the cement in the concrete is added to the mixture.<sup>27</sup> This is important in the precasting process since concrete with a low water content can dry quickly to develop early strength, or green-strength, so that the panels can be removed from the mold and another panel can then be made.<sup>28</sup> Zero-slump concrete, in combination with the maximum amount of stone, allowed the Schokbeton precast concrete piece to have optimum finish, strength, and economy.<sup>29</sup>

Another unique characteristic of the Schokbeton process is how the concrete is consolidated. Since the workability of zero-slump concrete is very low, a force other than gravity is needed to compact the concrete before it dries too rapidly with void inclusions. To achieve the necessary compaction, a shocking table was invented. After the concrete was mixed in upright drums with counter-rotating paddles (originally designed for the glass industry), it was poured into custom-designed, high-quality molds resting on a steel-framed shock table that measured 32.8 feet by 8.2 feet. Once the concrete was in the apparatus, the table would raise and lower the mold about a 1/4 inch in the air about 250 times per minute.<sup>30</sup> These precise measurements were gathered empirically by engineers in search for the

best way to evenly distribute the force.

Unfortunately, the Schokbeton process was expensive compared with other precasting techniques emerging at the time. A bulk of the cost came from having to acquire necessary and unique equipment such as the shocking table.<sup>31</sup> But it was a great solution for projects that could afford the high-end process. Schokbeton concrete sections could be cast as large as 12 feet by 40 feet and still retain their strength. Similarly, this type of concrete could be as little as 2 inches thick and still perform well. Additionally, the required aggregate, sand, and cement ratio along with the compaction process created a surface that proved to be extremely water resistant.<sup>32</sup> The concrete provided a flexibility of design to the architects that chose to use the Schokbeton system that was further enhanced by allowing the designers to choose aesthetic aspects of the concrete such as color. In the case of the Police Administration Building, GBQC wanted a white exterior, therefore Eastern Schokbeton used a mix of white cement, white sand from Maryland, and white quartz from Georgia. Although this mixture ended up costing six times more than the gray concrete of the coffered floor slabs, the architects were able to achieve their design intents.<sup>33</sup>

After the early development of the Schokbeton process began in Holland in 1932, visiting Americans began to see its potential in the fast-growing construction industry following the Second World War with post-war renewal. In 1959, George Santry bought the exclusive rights to license the Dutch process in North America.<sup>34</sup> Soon after in 1960, Donald

Rothenhaus and three of his colleagues bought the first American license from Santry and created Eastern Schokbeton located in New Jersey.<sup>35</sup> Philip Johnson commissioned the company's first project utilizing Schokbeton concrete for the design of Lake Folly on his personal property in New Canaan, CT. Soon after completing this small-scale project, Eastern Schokbeton was hired to create the precast concrete panels for the Police Administration Building that were designed by engineer August Komendant.<sup>36</sup>

Although precast panels were used for several different components of the Police Administration Building, we believe that the exterior panels represent a character-defining feature (fig. 27). They alone create the well-recognized façade of sweeping lines crafted in white. These 144 bearing wall panels are 5 feet wide by 35 feet high and have 2-1/4 inch thick webs with flanges that are 21 inches deep. Made using the Schokbeton process, these curved sections were created not only to act as the envelope and bearing members on the cantilevered first floor, but also to house the mechanical and lighting equipment throughout the building, eliminating the need for a suspended ceiling.<sup>37</sup> To create the space for the piping, heating units, air conditioning ducts, diffusers, and lighting fixtures, the manufacturers molded several different joint details. Engineering News Record describes these joint details extending from the plane of the windows as connecting "ears." Specifically, the narrow "ears" house heating piping while the wider "ears" enclose high-velocity air risers.<sup>38</sup> The practicality of the panels was not the only objective of the designers. Throughout the design process of the panels, the effects of light versus shadow as well as problems of water runoff and dirt collection were considered.<sup>39</sup> These panels are evidence of the collaboration that went into the

realization of the Police Administration Building by the entire design team.

### ***Custom-Designed Interior Fixtures***

The interior is filled with custom-designed fixtures that add to the aesthetics of the Police Administration Building. The exit signs above the doorways are round with the word “EXIT” punched out, allowing for light to illuminate the voids created by the letters (fig. 28). A majority of the light fixtures in the coffering of the concrete ceiling panels remain intact except for those in the 911 Call Center and a few other rooms. These fixtures were designed to fit within the dimensions of the coffering and, today, exhibit minimal signs of wear (fig. 29). Wood paneling runs along a majority of the walls of the hallways on the first three floors and can also be found in the auditorium. Additionally, the Commissioner’s Office contains custom-made cabinetry and wood paneling (fig. 30). Aside from unavoidable wear and tear from usage of the building, all paneling appears to have remained in good condition throughout the years. The distinctive round elevators were custom made in Philadelphia by the Houghton Elevator Company and paralleled the idea that by being round, these would contribute to the efforts of saving space.<sup>40</sup> However, the curved doors for the elevators began to jam and prevented usage of the elevators. In 1977, these were replaced with square doors.<sup>41</sup>



Figure 28. One of the many exit signs found throughout the Police Administration Building.



Figure 29. Detail view of the custom lights.



Figure 30. Custom cabinetry in the Commissioner's Office.

Notes for



Chapter VII

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- 2 Geddes, "Principles and Precedents," 5.
- 3 "Concrete: A Special Report," *Architectural Forum* (September 1962): 92.
- 4 "Circling in the Square," 121.
- 5 Ibid.
- 6 Robert Geddes, "Possibilities in Architecture," *Architectural Record* 108 (November 1977): 108.
- 7 "Circling in the Square," 121.
- 8 Ibid.
- 9 Geddes, "Principles and Precedents," 17.
- 10 Robinson & Associates, *Growth, Efficiency, and Modernism*, 15.
- 11 Ibid.
- 12 Geddes, "Principles and Precedents," 17.
- 13 Geddes, "Possibilities in Architecture," 107.
- 14 "Circling in the Square," 120.
- 15 "Circling in the Square," 122.
- 16 Komendant, "Precasting Makes New Strides," 186.
- 17 "Pioneering," 60.
- 18 Komendant, "Precasting Makes New Strides," 189.
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- 20 Komendant, "Precasting Makes New Strides," 189.
- 21 Edward Allen and Joseph Iano, *Fundamentals of Building Construction* (Hoboken, NJ: Wiley, 2004), 494-495.
- 22 Ibid., 493-494.
- 23 "Pioneering," 50.
- 24 Donald C. Wagner, letter to Mayor James H. J. Tate, September 27, 1961.
- 25 Bernard P. Spring and Donald Canty, "Concrete: The material that can do almost anything," *Architectural Forum*, (1962), 92.
- 26 Jack Pyburn, "The Role of Architectural Precast Concrete Technology in the Internationalization of Postwar Modernism," in *Eighth International Docomomo Conference: Postwar Modernism in an Expanding World, 1945-75* (New York, 2004), 115.
- 27 Komendant, "Precasting Makes New Strides," 189.
- 28 G. Husken and H. J. H. Brouwers, "On the early-age behavior of zero-slump concrete," *Cement and Concrete Research* 42 (2012): 501, accessed November 12, 2012, <http://josbrouwers.bwk.tue.nl/publications/Journal80.pdf>.
- 29 Pyburn, "Precast Technology," 115.
- 30 Ibid.
- 31 Pyburn, interview.
- 32 Spring and Canty, "Concrete," 92.
- 33 Ibid., 95.
- 34 Pyburn, "Precast Technology," 116.
- 35 Ibid.
- 36 Ibid., 117-118.
- 37 "Pioneering," 50.
- 38 Ibid.
- 39 Komendant, "Precasting Makes New Strides," 189.
- 40 George L. Kerns, "Even Elevators Round in Police Building," *The Evening Bulletin*, July 1, 1962.
- 41 "What's New: Squaring off the Police Administration Building," *The Evening Bulletin*, April 18, 1977.

## **CHAPTER VII**

### **RECOMMENDATIONS**

- Exterior Conditions Assessment  
    Individual Project by Christine Beckman
- Interior Additions  
    Individual Project by Chelsea Troppauer
- Exterior Additions  
    Individual Project by Karina Bishop

## VIII. RECOMMENDATIONS

### EXTERIOR CONDITIONS ASSESSMENT

In general, the exterior of the Philadelphia Police Headquarters Building is in good condition. Although there are minor signs of deterioration and failure, they are few and far between and easily remediated without much cost to the owner. After performing a condition survey of the building, we created a conditions glossary containing images of all of the maladies found on the exterior of the building as well as their specific definitions. The next step was prioritizing the conditions based on several factors such as the severity and extent of the damage. Finally we explored possible options for remediation of the top priority options. This study was completed to show that the restoration of the exterior of the Roundhouse is possible and financially feasible.

To begin this process, we studied the exterior of the building closely to discover any and every condition present on the face of the building. Because we were not able to easily access most of the structure, we depended on our naked eyes and the use of a telephoto lens to pick out the irregularities of the façade. Even with the aid of the telephoto lens, we were still not able to see portions of the building elevations that were obscured by the courtyard walls. For this reason, before any preservation work begins on the building, a detailed and thorough condition survey should be executed. From this exploration we created two glossaries using the definitions outlined by “ACI 201.1 R: Guide for Making a Condition Survey of Concrete in Service”; one concerning the conditions of the concrete of the building and the courtyard walls and the other detailing the types of window replacements of

the building.<sup>1</sup> These glossaries can be found in Appendix C. Please keep in mind that although there are many conditions found on the building and courtyard walls, only the biological colonization occurs prolifically. Most of the conditions are only exhibited a handful of times across the entire building and can only be seen when looking for problems.

While we were compiling a list of the conditions, we were also taking note of how often they were found to help determine the prioritized list of preservation initiatives for the Police Administration Building. We wanted to make sure that the serious and prolific conditions were taken care of first because they influence the safety and appearance of the building the most. Then with our knowledge of the history of the building, the types of building materials used, and the conditions found, we began researching possible preservation treatments to return the exterior of the building to its original appearance. We believe that our recommendations are feasible and with subsequent treatment maintenance could ensure the longevity and integrity of the external materials.

#### ***Biogrowth***

Because it is the most prolific condition that we encountered, we believe that if nothing else is addressed, the biocolonization of the concrete should be taken care of. We believe that the discoloration of the concrete surfaces is due to biogrowth and not environmental soiling because the stains are accumulating in areas that are

exposed to lots of moisture and minimal drying processes. This is confirmed by the fact that the north elevation of the building is affected the most by the staining and exposed to the least amount of direct sunlight. Even though the exterior concrete panels were designed to shed water, there are details that cause moisture to build up and not dry properly or quickly.<sup>2</sup>

The presence of this moisture enables colorful colonies of biogrowth to accumulate and mar the white and grey surfaces of the concrete. On the building and courtyard walls we found examples of green, black, red, and white biogrowth living on different portions of the building. There are also other stains present on the concrete surfaces in localized areas from sources such as leaking window air conditioning units.

To address the biogrowth problem and the other stains, several options should be tested both in the lab and in situ before applying the chosen treatment to the entire façade and courtyard walls. The first recommended treatment is washing the surface of the concrete gently with water and scrubbing with a stiff fiber or nylon brush since it is the least aggressive option.<sup>3</sup> Additionally, mild detergents can be added in this process if more stain removing power is needed.<sup>4</sup> Another removal technique that should be tested is chemical compound removers. There are solutions available that will kill the biological growth and wash away the stains when applied properly.<sup>5</sup> Typical products include ProsoCo's BioWash and D/2 Biological Solution. But these chemical solutions can easily damage the surface of the concrete that was originally finished by sandblasting and a subsequent application of a chemical treatment in the shop.<sup>6</sup> The surfaces are in great shape and integral to the

character and integrity of the concrete panels. Great care should be taken when evaluating the effectiveness of these treatments so that the surface is not harmed during the cleaning process.

### ***Corrosion Staining***

Another prioritized item to address on the façade of the Police Administration Building is the corrosion staining. It is typically occurring on the "ears" or protruding connection points between two vertical wall panels. The corrosion is most likely not occurring on the rebar of the concrete because the pattern of staining does not follow the path of the designed rebar in the panels. Rather we believe that pins used during the creation process of the panels are corroding and the rust is being swept away and deposited by moving water. Since the pins are only fractions of an inch in diameter, this would explain why one cannot see the metal that is actually corroding but only the stain left behind. Most of the stains should be washed away with the cleaning methods used to dispose of the biogrowth. Since the areas of corrosion are so small that someone from the ground cannot see them, no other treatments need to be considered at this point in time to arrest the corrosion process. If the condition worsens and becomes visible, a corrosion engineer should be brought in to determine the extent of the corrosion and possible remediation efforts.

### ***Spalls and Erosion***

There are several instances where chunks of concrete have disassociated from the substrate leaving spots of missing concrete or holes

in the surface. From what we could see this phenomenon was only happening in fifteen to twenty locations on the building surfaces. On the courtyard walls there were a few more examples but most of them are relatively small, being about two inches in diameter. Typically this type of failure is associated with corrosion of the rebar within the concrete. As the metal undergoes these chemical changes, it expands causing the concrete to fail in different ways exhibited by popouts or joint spalls.<sup>7</sup> Erosion is usually caused by a different mechanism including the disintegration of the materials from weathering.

Popouts, joint spalls, and erosion can all be remediated by filling in the voids with a compatible replacement mix. To make a replacement mix that matches not only the aesthetics but also the material properties of the original concrete, materials similar to those used to create the original mix should be gathered and used to generate different combinations to determine the most compatible replacement. Once this exercise has been completed in the lab, it should be tested in situ on one or two problem areas to make sure that it is the correct mix to use. This process of recreating the mixes should not be too difficult because we have access to records of where the materials were originally gathered to create the white concrete used for the Schokbeton exterior panels.<sup>8</sup> To make sure that the replacement material adheres well, a portion of the exposed erosion should be removed. Ideally, once the replacement patches are allowed to cure properly, only eyes specifically looking for anomalies in the façade should be able to see the repairs.

Next, any poor replacements or inappropriate infill campaigns like the one seen in figure 31 should carefully be removed and repatched with the new replacement mix. Additionally, this mix can be used to grout any large cracks that are not deemed to be structural. If the building steward is nervous about a problem area, they should call in expert engineers to determine if the issues are structural and pose a danger to the building users and others passing by. After the necessary repairs have been completed, records of the new replacement mix should be kept so that future spalls, popouts, and areas of erosion can be filled.

### **Joint Sealant**

Another remediation that could be considered would be the replacement of the deteriorated and missing joint sealant, specifically between the courtyard wall panels. Even though the sealant is not necessary to keep out moisture like it is on the building, it does help control the expansion and contraction of the concrete panels. To determine the appropriate replacement sealant,



Figure 31. Detail of inappropriate concrete infill.

several types of sealants should be applied to a testing section of the courtyard wall to see how the concrete reacts to the different compositions. Once an appropriate sealant is chosen, the deteriorated sections of sealant should be removed. Then the voids should be filled with the new sealant.

### **Window Replacement**

Only fixed, translucent windows were included in the original design of the upper three floors of the Roundhouse. Since it's opening, nine types of replacement windows have been added to the building ranging from opaque window panels to metal louvers and operable windows. For a description of the different types of windows in the Roundhouse, please see the Appendix C for the Window Typology.

Originally the HVAC system of the building was designed to condition all of the air entering the building and did not account for operable windows. For this reason, the HVAC system is overloaded even more than usual when windows and doors to the exterior are open. For this reason, we recommend that if the building continues to use the same HVAC equipment and the amount of occupants is limited to that which the building can comfortably handle, all of the fixed windows should be reinstated. If operable windows are desired, the HVAC system must undergo changes to accommodate the introduced infiltration of air from the openings. Also, the operable windows should appear uniform across the entire façade rather than having several types. A viewer should not be able to differentiate these windows from the fixed windows located throughout the rest of the

building. Replacing the windows will reinstate the uniformity of the elevations along with the restoration of the concrete.

As for the curved windows on the lobby floor of the structure, the building maintenance department has replaced them in kind when needed. This process is extremely expensive because the glass is curved but we recommend that this practice continue to ensure that the façade of the building remains uniform and honors the original design of the Police Administration Building.

### **Lasting Maintenance**

An important thought to keep in mind is the necessity for continued maintenance of not only the original concrete but also of the repairs outlined in the previous sections. Without proper maintenance, the same sort of issues will keep appearing and slowly deteriorating the concrete farther and farther. Since we feel that the concrete panels are one of the character defining features of the Philadelphia Police Administration Building, we urge that the concrete is taken care of. With a refreshed building façade, the Roundhouse will boldly stand out among its neighbors and return to its former glory.



Notes to Chapter VII

1 ACI Committee 201, "ACI 201.1R-92 (Reapproved 1997): Guide for Making a Condition Survey of Concrete in Service," in ACI Manual of Concrete Practice 2003: Part 1 (Farmington Hills, MI: American Concrete Institute, 2003).

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3 Sidney Freedman, "Architectural Precast Concrete," in *Twentieth-Century Building Materials*, ed. Thomas C. Jester, (Washington D.C.: McGraw-Hill Companies, 1995), 112.

4 Robert C. Mack and Anne Grimmer, "Preservation Brief 1: Assessing Cleaning and Water-Repellent Treatments for Historic Masonry Buildings," Washington DC: National Park Service, U.S. Department of the Interior, 2000, accessed December 2, 2012 <http://www.nps.gov/hps/tps/briefs/brief01.htm>.

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## INTERIOR ADDITIONS

Discussions of the Police Administration Building's interior have often been overshadowed by the building's current conditions. While these issues should be addressed immediately, they should not be the only conversation one has about the interior. The interior of the Police Administration Building reflects the architecture firm's innovative design and demonstrates the space that could be formed using the Schokbeton precast concrete panel system. The group has shown that there are many character defining features within the interior that warrant preservation. This individual report takes the first initial steps in determining what aspects of the interior should be maintained, and proposes future uses for the space.

In order to determine the most appropriate preservation practices, the group's proposed character defining features and the Secretary of Interior Standards were referenced. Of the four treatment approaches proposed by the Secretary of Interior Standards, the rehabilitation approach may be the most appropriate, if the building continued its current use. The Secretary of Interior Standards defines the rehabilitation approach as "the act or process of making possible a compatible use for the property through repair, alteration and additions, while preserving those portions or features that convey its historical, cultural, or architectural value." This approach recognizes the importance of preservation, but with a degree of flexibility. The rehabilitation approach may be the most suitable if the building remains as a police use, because more extensive renovations or alterations may be required.

The ground thru third floor interior was examined and color-coded based on what degree should



Figure 32. Photo of the current lobby.

the interior be retained and preserved. The areas in blue represent the space that has retained its original features and should be preserved because those features influence the building's significance. The yellow indicates space that needs to be further investigated by reviewers and they are advised to use their best judgment for what would be the best preservation practices for that space. Many of the rooms were determined to be yellow because of the group's limited access to certain spaces, thus an accurate judgment could not be made. The red indicates parts of the interior that have either been drastically altered or eliminated all together. These spaces may be open to changes, because its interior may have already been compromised.

### LOBBY/ GROUND FLOOR

The lobby or ground floor is the floor with the largest area dedicated to preservation (SEE Lobby Floor). The concentration of preserved space is within the lobby area. The merge photo shows the current appearance of the lobby (figure 32). The photo illustrates the lobby's open floor plan, attention to curved/ rounded architectural forms and retention of original materials and features. It also conveys associations to the Philadelphia Police Department through the placement of police imagery and memorabilia throughout the

space. If the building were to convert into a new use, this author hopes that some of these objects would remain, in order to continue this association to the Philadelphia Police Department.

Two other areas that fall under the “preservation” category include the stairways and elevators at either end of the building, and the “multi-purpose room.” The multi- purpose room retains much, if not all, of its original features including the lighting fixtures, seating, and acoustic wooden paneling along the far wall.

There are three areas on this floor marked in red. Two of these represent objects that are no longer present in the current space. The first is within the lobby. The original floor plans show an information desk along the south wall for the public. If the original entrance were restored, this author would propose having the desk reconstructed. The second group of objects no longer within the space is the former storage cabinets in the lunchroom. These cabinets stored vending machines. The space on the entire floor that has undergone the most change is the Real Time Crime Center, formally known as the Radio Room. Originally conceived as three dispatch booths, the room today is completely open and oriented towards the northwest wall.

## FIRST FLOOR

On the first floor, the space that must be preserved is the main corridor (SEE First Floor). This will continue for each of the following floors. The remaining interior must be further investigated to determine the presence of character defining features.



Figure 33. 911 Call Center

## SECOND FLOOR

The second floor observes the same area for preservation (SEE Second Floor). On this floor, there is a large space that has underwent renovation that may have seriously jeopardized the interior. This red area is the current location of the 911 Call Center.

From touring the 911 Call Center, the group identified changes to the interior (figure 33). This includes the addition of a drop ceiling to the space. It is unclear whether the original lighting fixtures are simply covered or taken out all together when the new ceiling was put in. This needs to be further investigated. One will also notice that the floor has been elevated. The elevated floor provides more air circulation into the room and space for data cords to run through.

## THIRD FLOOR

Similar to the first floor, much of the third floor requires further inspection to determine how many of the rooms need to be preserved (SEE Third Floor). One particular room that is clearly identifiable as worthy of preservation is the Police Commissioner’s office. The Commissioner’s office is significant both in terms of its specially design

interior fixtures and its association to the highest ranking police officer. The wooden cabinetry seen in the Commissioner's office originally extended to the deputy officers' rooms. It was unclear from the tour of the facility, whether these built in features remain in the space or not.

## POLICE USE

If the Police continued to use the building, they would need to address the problem of overcrowding. Due to the high occupancy number currently within the building, an addition may be necessary. Assuming an addition to the rear of the site is possible, figure 34 proposes what one floor of the building could look like.

The homicide department is one of the largest in the building and represents one of the worst areas of overcrowding. It has been estimated that about one hundred people currently work within the department. This number varies depending on the time of day and whether detectives are out in "the field" or not. The entire group agreed that if the homicide department were to remain in the building, they would need to occupy an entire floor. The proposed plan shows one hundred desks throughout the floor. The plan assumes that the rooms in the center of the first floor (currently housing Differential Response) have been altered to the extent of the 911 Call Center.

In order to open up the space, the non-load bearing wall in the center was eliminated. More interrogation rooms were added within the space, because there are no more than six rooms today for the unit to use. These newly added rooms could also function as interview rooms for witnesses. One of the biggest design problems expressed by the department is having witnesses

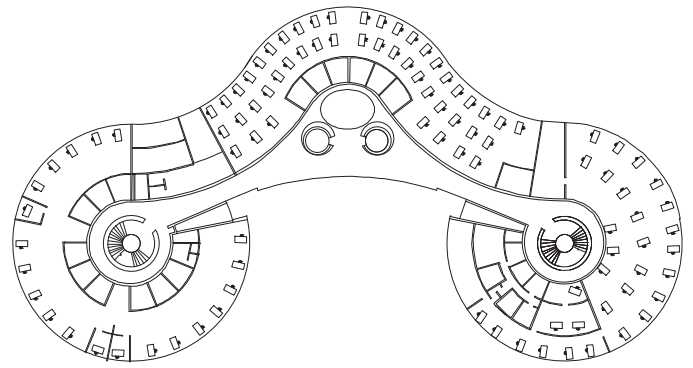


Figure 34. Proposed Layout for Homicide Unit

and suspects cross paths within the space. The addition of more rooms would lessen this problem.

Every room was not used as potential office space. Some were purposely left unoccupied in order for the department to determine the best use of the space based on their particular need. For example, the series of rooms along the right side of the building were once processing rooms for the photography unit. They could now function as additional interrogation or interview rooms. The unoccupied rooms could also be used as storage space, conference or reference rooms, and rooms to write up reports.

## NEW USES

The most ideal use for the building would be if the Police continued to occupy the space, because it conforms to what the structure was originally designed for. If the Philadelphia Police Department did move to 4601 Market Street, alternative uses would have to be proposed for the site. The building's size and open floor plan, combined with its location, make it attractive to multiple, private and public uses. Examples of these uses include a school, library, residential, medical or office space.

This individual report examines the building as if it

were used as a hotel. The plan proposes restoring the building's original main entrances in order to reengage the space with the plaza (figure 35). The lobby would retain its original function, with the addition of the recreated information desk along the south wall. The open plan of the lunchroom would make it compatible with a restaurant or bar use. The layout of the multi purpose room is similar to that of an auditorium and could potentially be used as a type of conference room space, where one could make presentations. The degree of flexibility available within the interior of the Real Time Crime room could allow it to function as conference rooms as well.

The plan envisions there being a limited number of hotel rooms within the building. It is unclear how this change in use will affect the physical structure of the building. An engineer should be hired to better determine this. The proposed hotel room plan assumes that rooms within the building would be possible (figure 36). The space selected for a hotel room is on the second floor and is the former deputy commissioner squad room and interrogation room. These two rooms on the second floor were selected because of their accessibility to the main corridor and overall layout. The deputy commissioner's squad room is approximately 820 square feet and allows enough space for a king size bed and sitting area. The interrogation room would be used as a bathroom.

The proposal of a hotel would mean that the building would be moving away from a public to private use. It is the author's hope that aspects of the building would still be publicly accessible. Hotels within historic buildings have attempted to address this issue. The Loews Hotel in the PSFS Building on Market Street has both the lobby level in addition to its 33<sup>rd</sup> Floor accessible to the

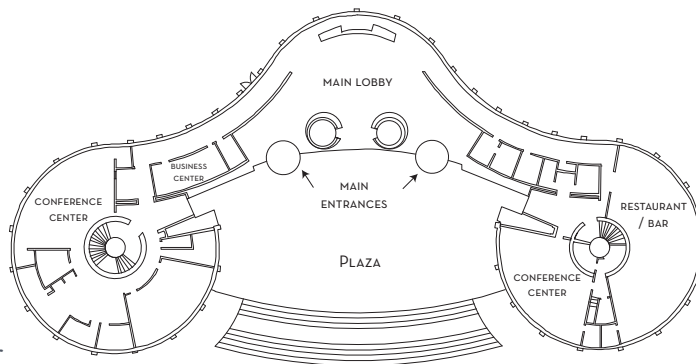


Figure 35. Layout of Ground Floor for Hotel Use

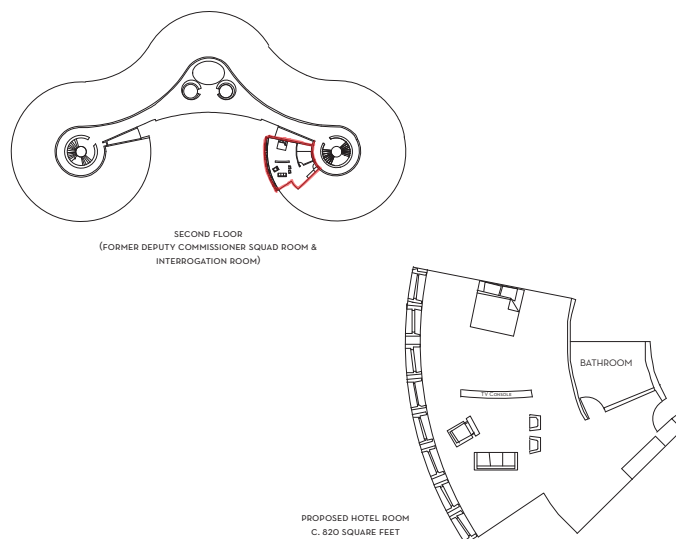


Figure 36. Layout of Proposed Hotel Room.

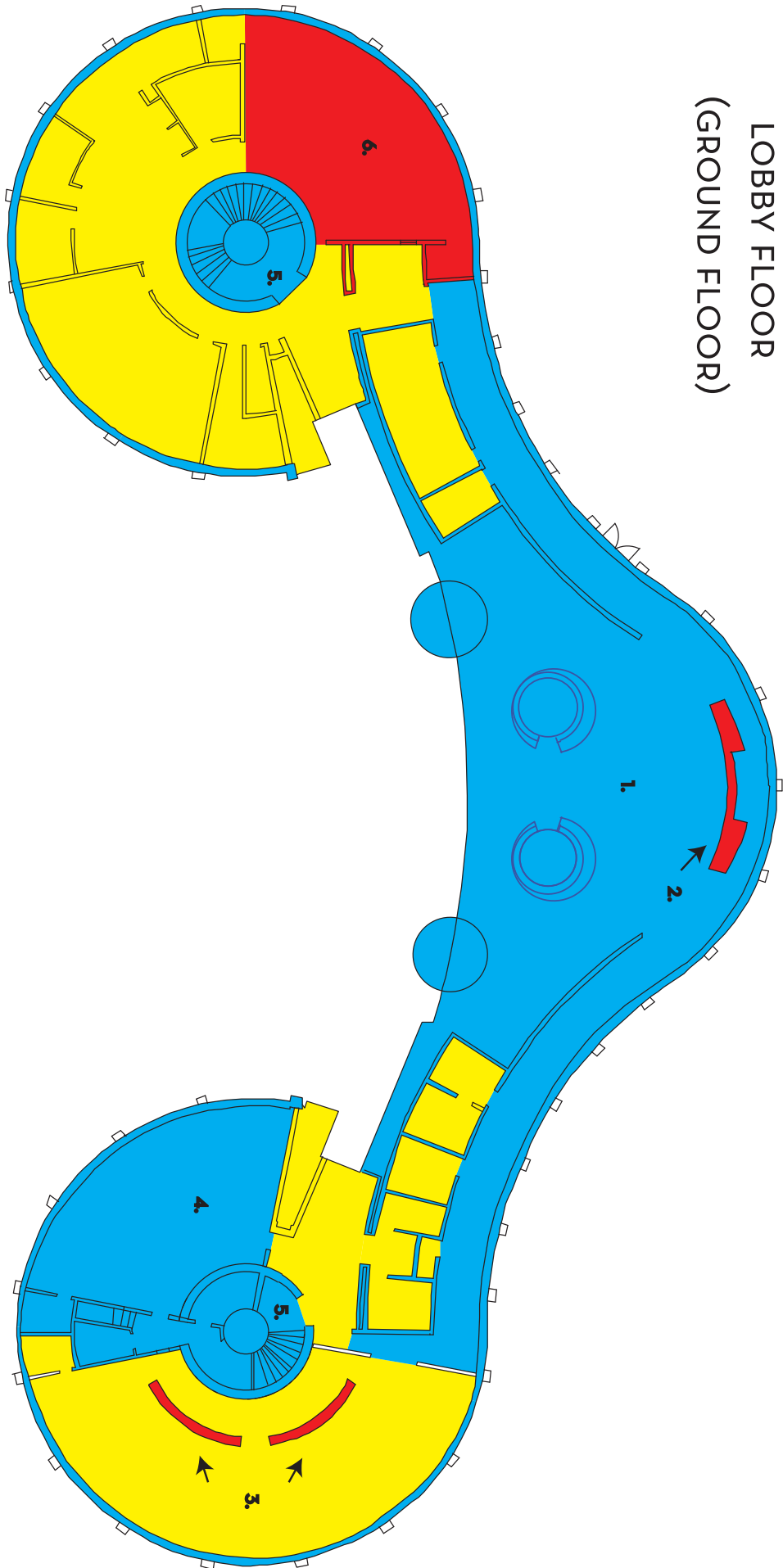
public. Once known as an executive office floor, the Loews Hotel has restored and retained many of the historical features within the space. The Police Administration Building would adopt a similar model, allowing the public to have access on the ground level. The Police Administration's version of the 33<sup>rd</sup> floor could be the Police Commissioner's Office on the 3<sup>rd</sup> floor.

#### Endnotes

1Kay D. Weeks and Anne E. Grimmer, "Standards for the Rehabilitation and Guidelines for Rehabilitating Historic Buildings," Washington DC: National Park Service, U.S. Department of Interior, 1995, accessed December 3, 2012, [http://www.nps.gov/hps/tps/standguide/rehab/rehab\\_index.htm](http://www.nps.gov/hps/tps/standguide/rehab/rehab_index.htm).



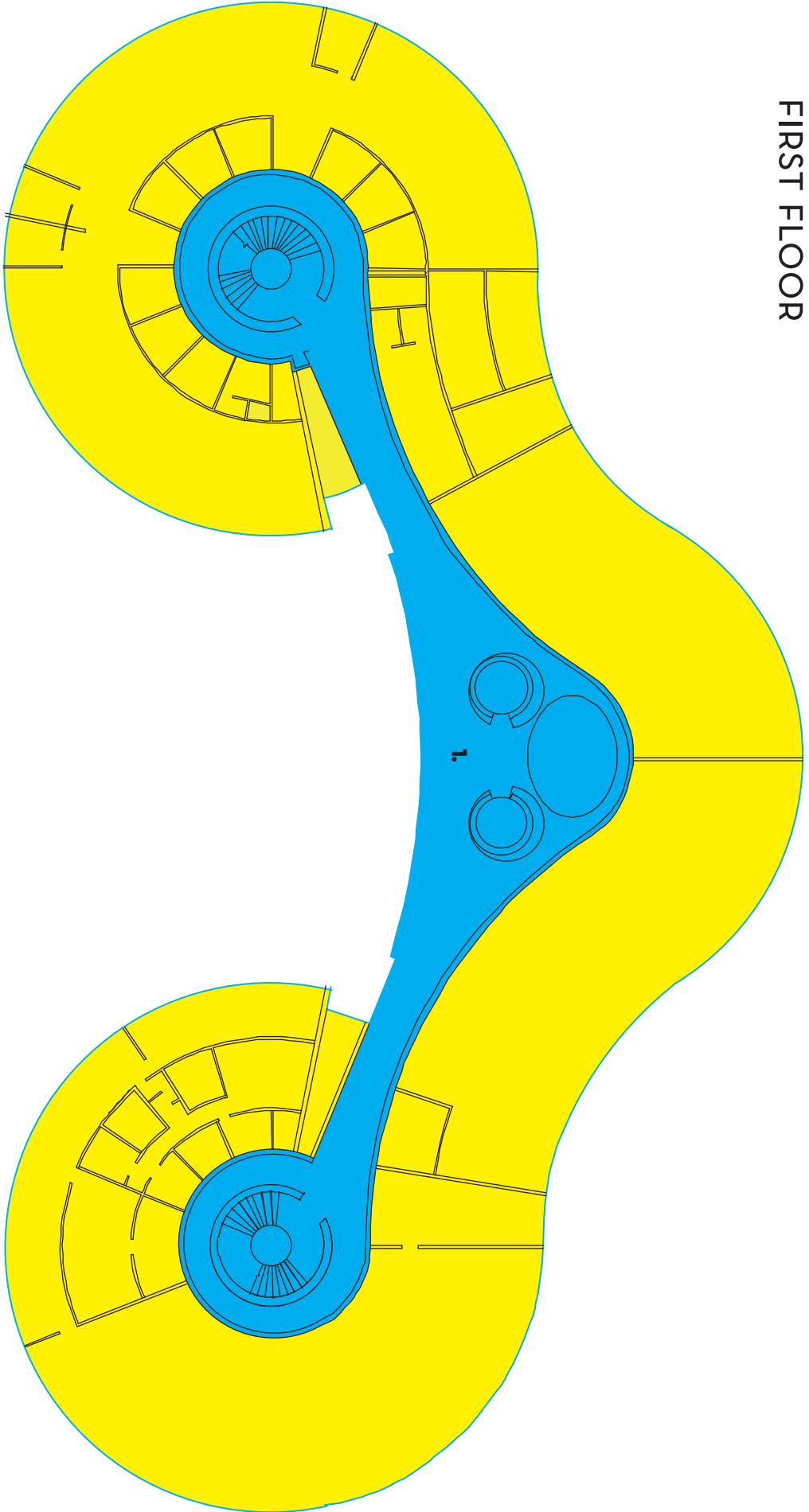
# LOBBY FLOOR (GROUND FLOOR)



- INTERIOR MUST BE PRESERVED
- NEEDS FURTHER CONSULTATION
- INTERIOR SEVERELY ALTERED

- 1. LOBBY
- 2. FORMER INFORMATION DESK
- 3. FORMER STORAGE CABINETS
- 4. MULTI PURPOSE ROOM
- 5. ELEVATOR & STAIRWAY
- 6. REAL TIME CRIME CENTER (FORMER RADIO ROOM)

FIRST FLOOR



INTERIOR MUST BE PRESERVED

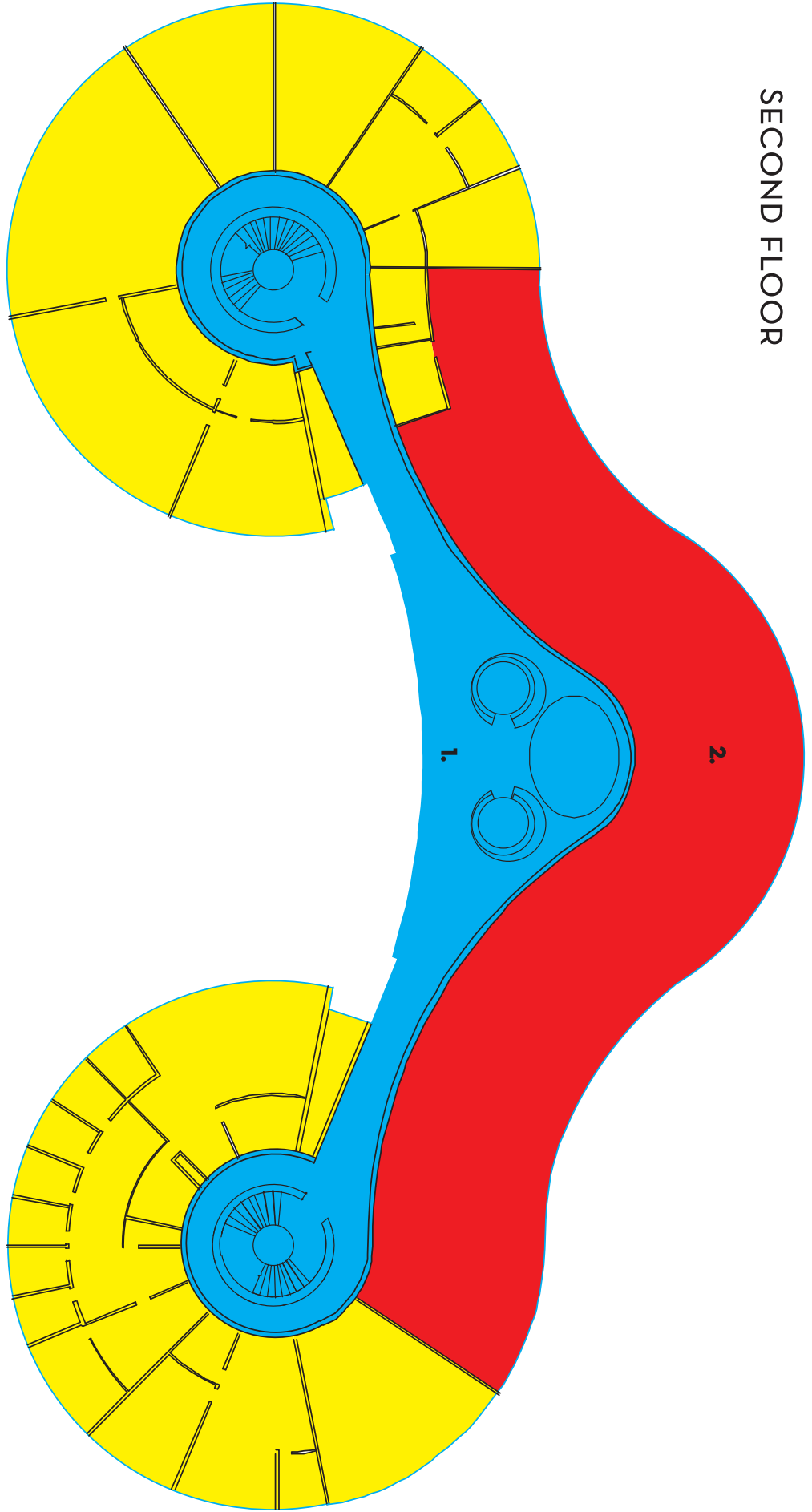
NEEDS FURTHER CONSULTATION

INTERIOR SEVERELY ALTERED

1. CORRIDOR  
WITH ELEVATORS, STAIRWAYS AND RESTROOM

SECOND FLOOR

- INTERIOR MUST BE PRESERVED
- NEEDS FURTHER CONSULTATION
- INTERIOR SEVERELY ALTERED

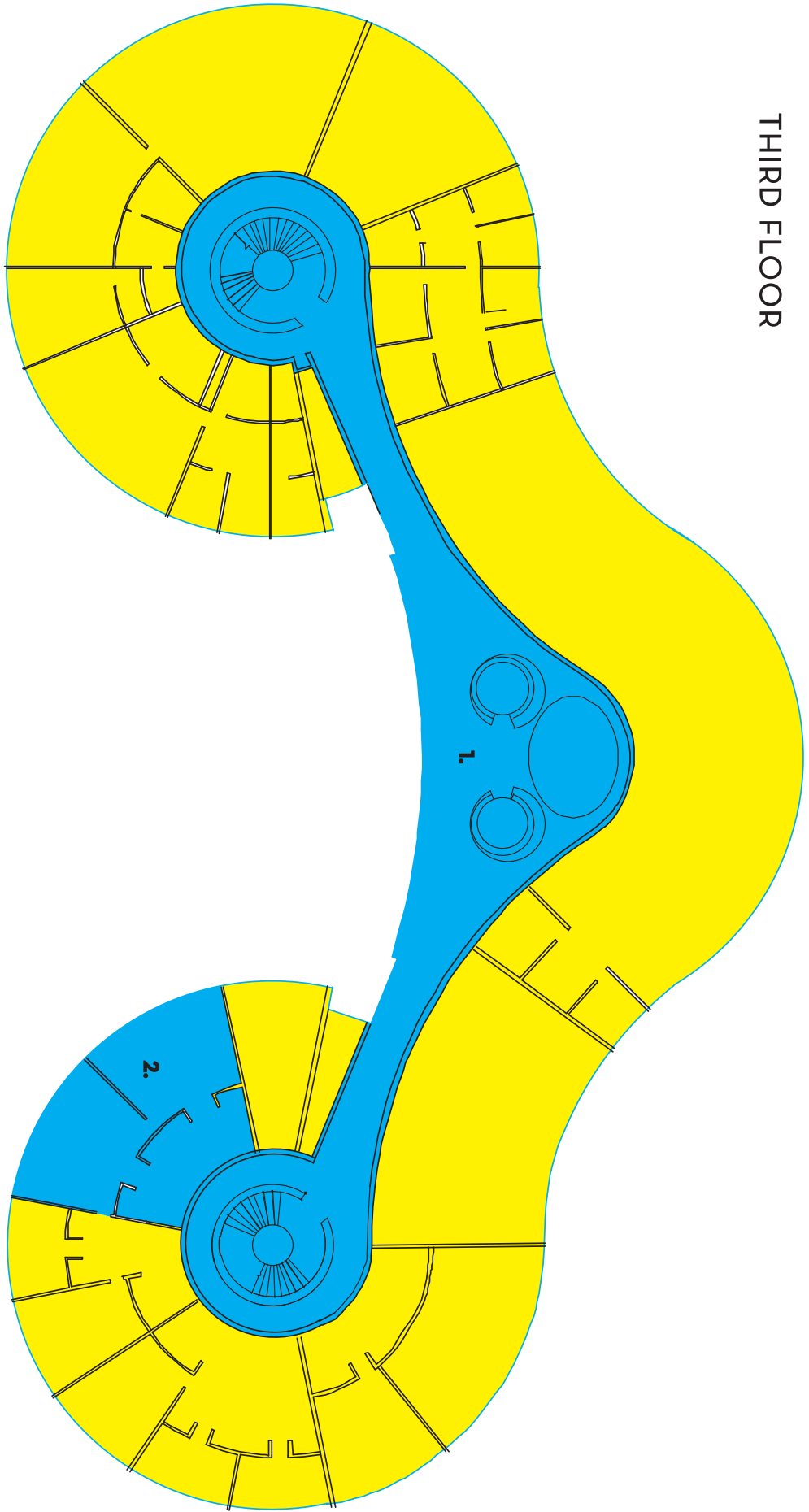


1. CORRIDOR  
WITH ELEVATORS, STAIRWAYS AND RESTROOM

2. 911 CALL CENTER

THIRD FLOOR

- INTERIOR MUST BE PRESERVED
- NEEDS FURTHER CONSULTATION
- INTERIOR SEVERELY ALTERED

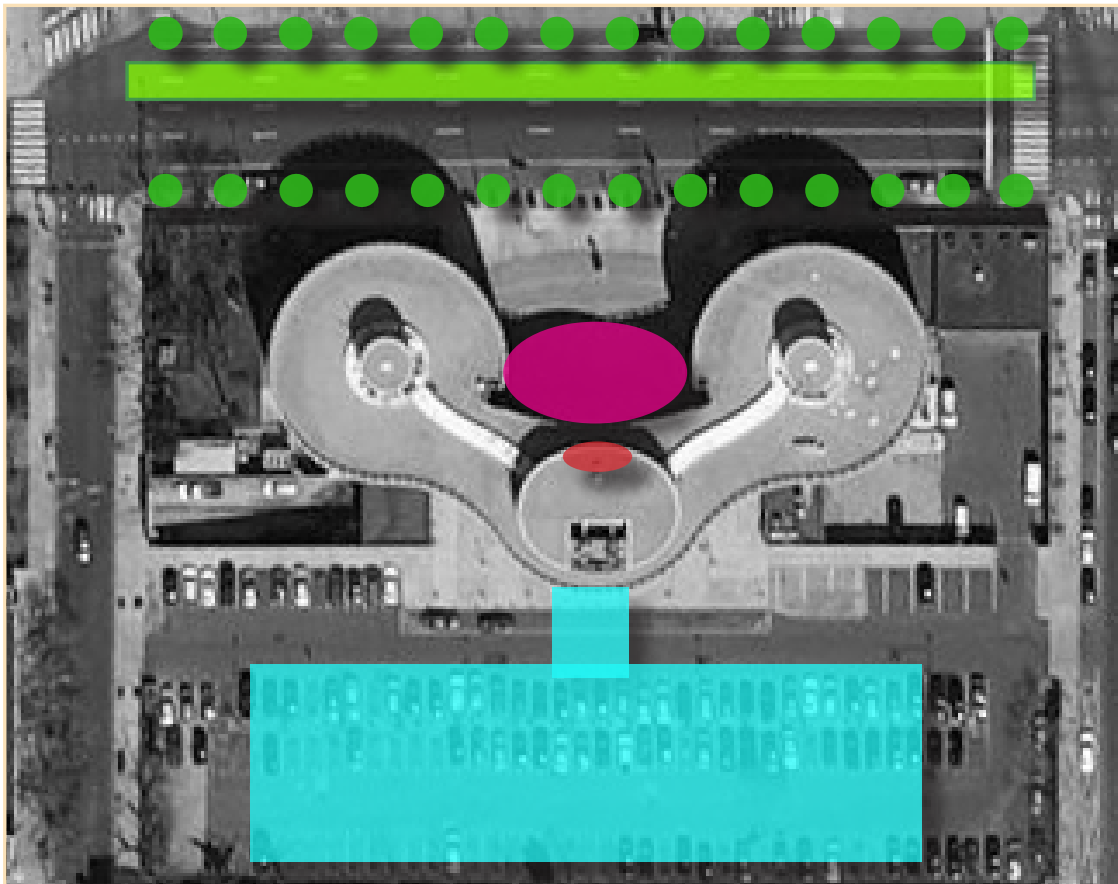


1. CORRIDOR  
WITH ELEVATORS, STAIRWAYS AND RESTROOM

2. POLICE COMMISSIONER'S OFFICE

## EXTERIOR ADDITIONS

- Given the fact that the Philadelphia Police Department has outgrown their current headquarters, the concept of adding an addition to the building was suggested. Making an addition work with such an unusually shaped structure such as the Roundhouse is a difficult task, so I began my individual project with extensive research into comparable additions to mid-century modern buildings that have been designed in the recent past. Taking specific features from these comparable projects and adapting them to the needs of the Roundhouse, I then proposed a set of interventions that would restore the building to the architects original design intentions for the building and thus give it greater accessibility and function for the 21st century.
- The urban design interventions proposed are a simple set of changes to the surrounding environment of the Roundhouse that could be implemented with or without an addition. By making the adjacent street and new entrance more pedestrian friendly, the schemes could go a long way in changing the public's opinion of the building.
- While the addition suggested is for the continued use of the police department, this scheme of a building placed in the parking with a connecting bridge could be used for a multitude of alternative new uses, including a hotel, library, office space or medical facility.





## ADDITIONS COMPARABLES

### GSA FIRST IMPRESSIONS PROGRAM

The GSA First Impressions program is a nationwide initiative, designed to reinvigorate the derelict public spaces of mid-century federal buildings. Many of these buildings are Brutalist concrete structures and, much like the Police Headquarters Building, are suffering from lack of maintenance. In order to improve the efficiency and public's perception of these buildings, the program suggests a series of small improvements, focused particularly around public plazas and lobbies. These suggestions include making entries more identifiable, improving signage, and removal of clutter from public spaces. All of these components could be helpful in rethinking the ground floor of the Police Administration Building. For example, as part of our recommendations for additions to the building, we are advising that the entrance plaza on Race Street be reinstated.



### ADDITIONS TO THE WHITNEY MUSEUM

**Renzo Piano Building Workshop, 2004**  
**New York, NY**

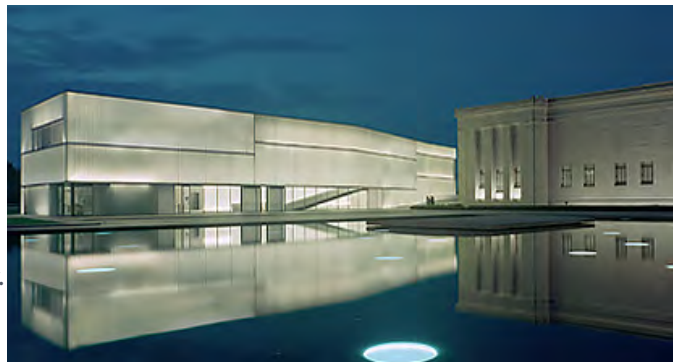
Renzo Piano is an architect who is known for his sensitivity to existing structures. In Piano's unbuilt scheme for an addition to Marcel Breuer's Whitney Museum of American Art, he proposed the insertion of a tower in the lot adjacent to the existing museum. The tower would not interfere with the Whitney's uniquely shaped box but instead the two were connected by elegant glass bridges. These walkways between the tower and the Breuer building have served as inspiration for the glass bridge that might connect the Roundhouse to the proposed new tower in the parking lot.



### THE NELSON-ATKINS MUSEUM OF ART

**Steven Holl, 2007**  
**Kansas City, MO**

Steven Holl's addition to the Nelson Atkins Museum in Kansas City, Missouri, is a prime example of how a contemporary addition can simultaneously contrast and respect an earlier building of another style. Holl created glass boxes or "lenses" that let natural light into the galleries, and at night cast a beautiful glow on the Block Building, their Beaux-Arts predecessor. Holl's addition also reorganized the entrance sequence and flow of movement on the interior of the existing museum.



## ADDITIONS COMPARABLES

### YALE ART + ARCHITECTURE BUILDING

Gwathemy Siegel, 2008

New Haven, CT

Much like GBQC's Police Administration Building, at the time of the construction of Paul Rudolph's Yale's Art & Architecture building, it was hailed as an visionary masterpiece in the architectural press. Yet by the 1980s, the A+A was also suffering the same fate as the Roundhouse, with an overcrowded interior that resulted in the mutilation of large spaces into cramped sections. The recent renovation of the A+A by Gwathemy Siegel Architects has returned the interior to the bright, spacious glory that Rudolph intended. This project is can be used as a model for the Police Administration Building, not only for its sensitive restoration, but also for the steps that were taken to galvanize community support for the building.



### PRENTICE WOMEN'S HOSPITAL

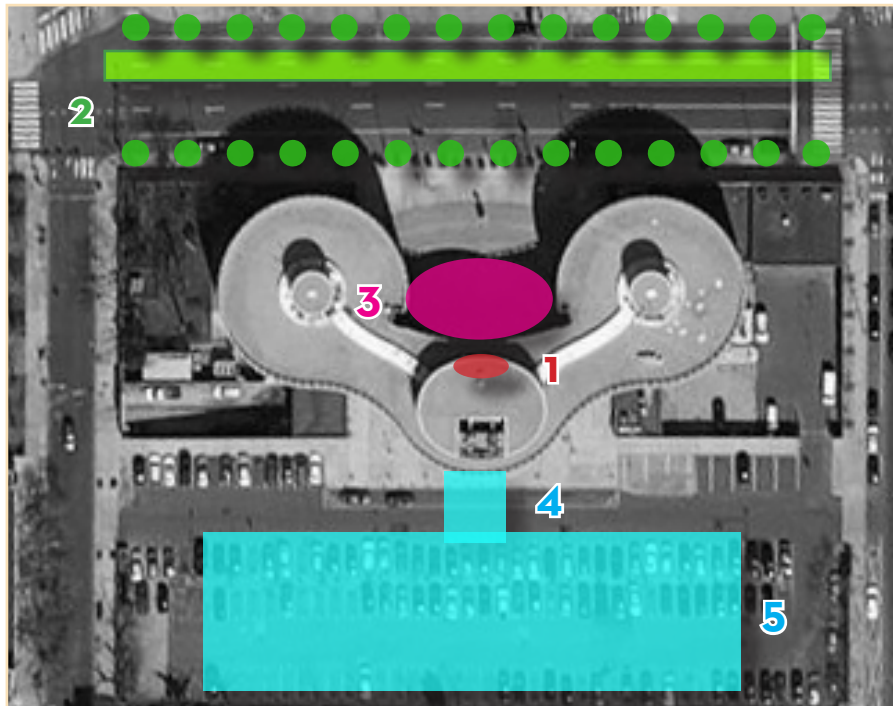
Cyril Marsollier & Wallo Villacorta, 2012

Chicago, IL

With the impending demolition of Bertrand Goldberg's Prentice Woman's Hospital, the Chicago Architecture Foundation recently mounted the exhibition, "Reconsidering an Icon: Creative Conservations about Prentice Women's Hospital". The exhibit challenged the city's young architects to visualize schemes for the future of Prentice. The winning entry by Marsollier and Villacorta, envisioned the addition of a large glass tower placed directly behind Goldberg's clover shaped building. Ingeniously, the tower would envelope half of the existing structure but the reflection of the glass would give the illusion of a complete building. The concept seen in this scheme of weaving of the rigid concrete walls within a new structure, inspired the bridge addition to the Roundhouse, and would allow for a similar up-close appreciation of the finely detailed concrete work.



# PROPOSED EXTERIOR ADDITIONS



## 1 Restore Original Entrance

- Restore the original entrance the architects intended as a grand civic gesture.
- This will improve the public's perception of the building since they will no longer enter through the parking lot.

## 3 Improvements to Plaza

- Along with the new entrance, the plaza on Race Street was one of the most important components of the exterior of the building.
- By adding landscaping and tables and chairs, the plaza will become an actively used public space, feeding off the proximity of the new Franklin Square.

## 2 Narrow Race Street

- Race Street is currently a busy corridor leading to the Benjamin Franklin Bridge
- Narrowing the width of the street will provide better pedestrian access to the new northern entrance of the Roundhouse
- This would also fit in with the city's plans to "improve the pedestrian experience around Franklin Square."

## 4 Connecting Bridge on 4th Floor

- This glass bridge will provide an elegant connection the Roundhouse with the new addition.

## 5 New Addition

- The new addition will house the departments that require 24/7 operation.



# RACE STREET REDESIGN

- **WIDEN SIDEWALKS**
- **ADD BIKE LANE**
- **LINE THE STREET WITH TREES**



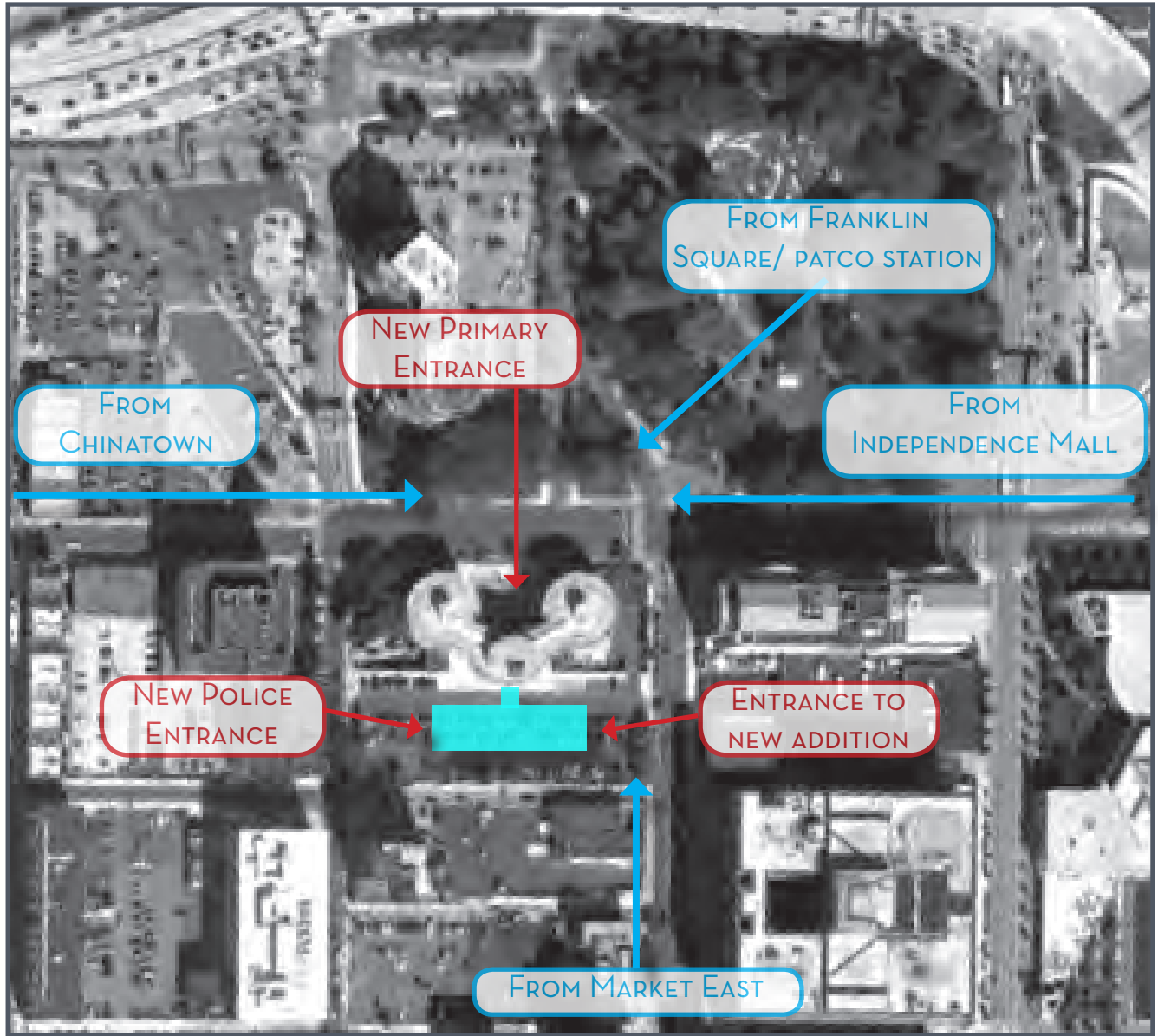
# PLAZA REDESIGN

- REOPEN ORIGINAL ENTRANCE
- ADD SIGNAGE AROUND PLAZA
- ADD URBAN FURNITURE AND LANDSCAPING





# CIRCULATION TO NEW ADDITIONS



## OCCUPANCY OF NEW ADDITION: PROPOSED POLICE DEPARTMENT EXPANSION

- While this set of numbers represents potential occupancy for the expansion of the police department into the new addition, the form and size of this addition could also be applicable to a myriad of alternate reuses, such as a hotel, library, offices or medical facility.

### Proposed Police Department Addition

- Approx. 281 occupants total
- 5 floors
- 18,760 square feet per floor

### Departments

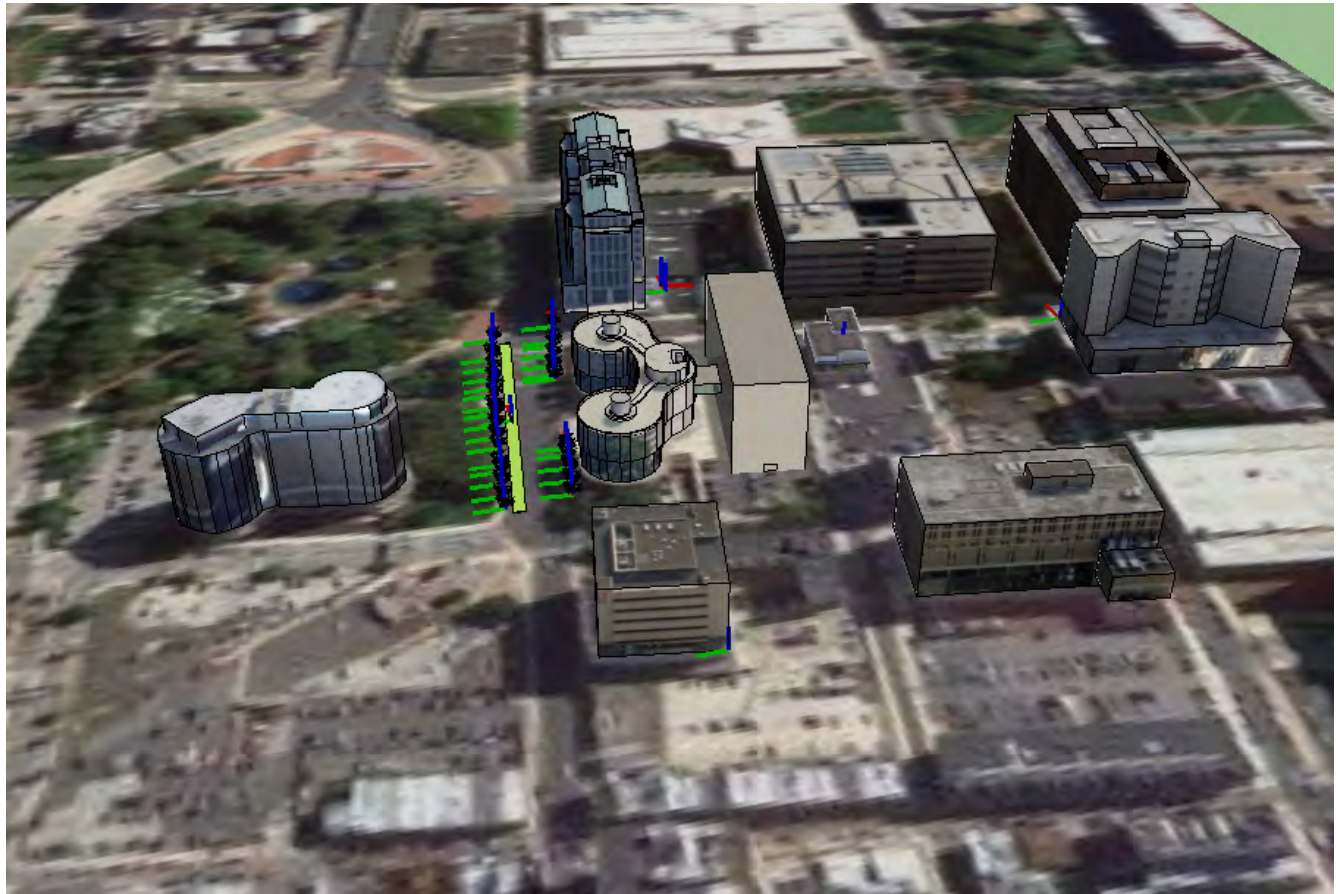
All 24/7 Departments with reliance on technology will be moved to the new addition

- 1. Differential Response
- 2. 911 Call Center
- 3. Real Time Crime
- 4. Information Technology
- 5. Personnel
- 6. Finance
- 7. Staff Services
- 8. Reports Control
- 9. Records and Identification
- 10. PPD 2020



## SKETCHUP MODEL OF SELECTED ADDITIONS AND SURROUNDING AREA

- I created a massing model in Sketch Up to convey in 3D what this set of interventions might look like in juxtaposition to the Roundhouse and the buildings in the surrounding area. The model shows the adjustments to Race Street (trees, a bike lane, and the narrowing of the street) and the addition in the parking with a bridge connecting to the Roundhouse.



# **CHAPTER VIII**

## **LOCAL REGISTER NOMINATION**

Individual Project by Allee Berger

## VIII. LOCAL REGISTER NOMINATION

### NOMINATION - PHILADELPHIA'S REGISTER OF HISTORIC PLACES

The impetus for writing the nomination for the Police Administration Building came early on in this studio project and quickly became of interest to me for my individual project. After learning of the city's intended plans to relocate the police department to West Philadelphia, and that there was nothing preventing the demolition of the Roundhouse, my group and I felt strongly about providing the building some much-needed protection. Although specific plans for the Police Administration Building remain uncertain, we want the city to responsibly explore all options for the building's preservation. After reviewing the criteria set forth by the Philadelphia Historic Preservation Ordinance, the Police Administration Building falls under seven out of the 10 for designation. This establishes a strong case for the building's listing on Philadelphia's Register of Historic Places. Successfully listing the Police Administration Building on Philadelphia's Register will prevent demolition. In addition to this level of protection, any proposed changes to the building's exterior will be subjected to stringent review by Philadelphia's Historical Commission.

This is just the first step in obtaining the Police Administration Building the necessary protection and acknowledgement. After the nomination is submitted, my individual project will continue beyond the Fall 2012 semester as I intend to complete a Historic Resource Survey Form to be submitted to Pennsylvania's State Historic Preservation Office—the Pennsylvania Historical and Museum Commission. This

form will be reviewed to determine the Police Administration Building's eligibility for listing on the National Register of Historic Places, as well as Pennsylvania's Register of Historic Places. If, and when, the building is deemed eligible, this will trigger the Section 106 review if any federally funded projects are considered to affect the property in any way. Listing the building on the National Register will make available Historic Preservation Tax Credits as an incentive for developers. The use of these credits subjects any work done to the Police Administration Building to the Secretary of the Interior's Standards. This further ensures that this important, and iconic, building retains its integrity via its significant character-defining features.

There is no questioning the importance of the Police Administration Building. The significance that lies in the structure, design, materials, and cultural history has become embedded in not only Philadelphia's history, but also the nation's history. If the city neglects to acknowledge this then a sizeable piece of tangible history will be stripped away creating an irreplaceable void.

The draft found in Appendix D is a **working draft** of the nomination. This is a work in progress that requires great care to ensure the that final product is thorough and well written. This nomination will be rigorously revised and edited. The necessary images still need to be placed throughout the text. These steps will be completed in the coming weeks.



# **CHAPTER IX**

## **ADVOCACY CAMPAIGN**

Individual Project by Kimber VanSant

## IX. ADVOCACY CAMPAIGN



### Drivers

The Philadelphia Police Roundhouse is a threatened building, and as such, an advocacy campaign in support of its preservation and reuse is imperative. Although the City of Philadelphia has not yet specifically stated that it plans to demolish the Roundhouse, there are currently a number of known threats to the building. The first is the Philadelphia Police Department's eventual move to the Provident Mutual Life Insurance Building at 4601 Market Street. In his 2012 Budget Address, Mayor Nutter stated that this move would allow the city to sell existing assets, presumably referring to the Roundhouse and the site upon which it sits. Additionally, the City of Philadelphia did not support our Studio class in the Historic Preservation Program in the School of Design at the University of Pennsylvania, thus exposing that the administration is resisting efforts to study potential reuses for the building. Another potential threat is that there is a strong possibility that the Roundhouse may not be included on the not-yet-published Philadelphia City Planning Commission's 2035 Comprehensive Plan for the Central District.

### Strategic Plan Development

The goal of the strategic plan is the formation of a deliberate and coherent course of action that will drive the Roundhouse advocacy campaign. The plan was developed through the researching of past advocacy campaigns as well as interviews with preservationists who have led or are currently leading advocacy campaigns.

Lisa DiChiera, Advocacy Director for Landmarks Illinois, has been an organizer of the Save Prentice campaign since 2003, when her organization began approaching the Chicago Landmarks Commission to grant the building landmark status. Prentice Women's Hospital was designed by noted Chicago architect Bertrand Goldberg and constructed in 1975 on the downtown Chicago campus of Northwestern University. Since the building was vacated in 2011, the campaign and the debate over the building's demolition has become a well-publicized national advocacy movement. In November 2012, the Chicago Landmarks Commission voted against landmark designation, and soon thereafter the building received a stay that bars the city from issuing a demolition permit. In December 2012, the Save Prentice Coalition filed a lawsuit against the City

and the Commission on Chicago Landmarks that will keep the stay in place through January 11, 2013.

With regards to the Roundhouse Advocacy Campaign, she feels that we are in a very good position right now, as the administration has not yet clearly stated their plans for the building. Her chief suggestion was to immediately begin the campaign and get proactive evaluation and commentary on the building out into the public arena ahead of the announcement of the city's ultimate plans. Initially, she feels we should get the building nominated to the local register as well as obtain a Determination of Eligibility (DOE) from the Pennsylvania Historical and Museum Commission (PHMC). She suggested we reach out to developers who would "get" this building and talk to them about reuse options that would complement the area. Using the talking points from developers, we should begin meeting with neighborhood and business groups and have conversations about working together to evaluate opportunities at the site. She suggested that we don't view those groups as our enemies and that we approach them saying that we want to partner with them to find a solution. A public design charrette would be a way to engage the public and get people thinking about the building and ideas for its reuse. After all of this has been accomplished, we can go to the City of Philadelphia and ask them that as they move forward with their plans to sell the site, and put out an RFP to developers to redevelop the site, that they leave the building in place so that a developer can make the choice to reuse. Once a DOE is obtained, the city would be foolish not to give developers the option to rehab the building knowing that they can use the 20% Federal Rehabilitation Tax Credit. If the building is to be reused for some income producing use, whether apartments, office space, or a hotel, then that developer should want to use federal rehab

tax credits, or at least have the option. She asserted that doing a lot of homework is critical now, so that we can integrate it into our campaign as it develops.

Christine Madrid-French is the former Director of the Modernism + Recent Past Program for the National Trust for Historic Preservation and the Co-founder of the Recent Past Preservation Network. In 1999 she began working on an advocacy campaign for Richard Neutra's 1962 Gettysburg Cyclorama Building, which the National Park Service had allowed to fall into disrepair so that it could easily make the case for its demolition. The campaign has been actively fighting the demolition of the building for the past fourteen years and waged a three-year legal battle against the National Park Service. In August 2012, the NPS released its District-Court-ordered site-specific Environmental Analysis in which the final recommendation was for demolition of the building.

She stressed that volunteer energy and personal commitment were going to be very important for the campaign. She suggested we avoid the urge to keep the fight local because that that never really works in the end for advocacy. We should look for support from people outside of Philadelphia because the city is going to be under increased pressure to act cautiously if they know that the entire country is watching Philadelphia because of this building. In order to engage the public in support of the building, she insisted that we have two-sentence statements on "why this building is significant." When dealing with the general public, it cannot be about the architects or the concrete, so she suggests we tailor our talking points to be adapted to all audiences. Regarding the extreme dislike of the building by many Philadelphians, she

suggested that we work to educate the public on the building and approach it in a way that one would pitch something that's hard for people to accept at first, but once they see it and better understand it, they will be able to appreciate its significance. Getting letters of support from important architects and historians is important, but she reminded us that this alone will not save the building, and that with advocacy campaigns, we will end up doing a lot of things that aren't actually going to save the building in the end, but are done simply to raise awareness. She also suggested that even though the building is technically Expressionist, that we label it Brutalist for the purposes of gaining a wider audience for our campaign, stating that historians are not the ones who are going to ultimately save the building. In the end, she feels that this campaign will be successful if we have a strong social media presence and work to engage the next generation of preservationists who are getting more organized and are angry that these iconic concrete buildings are vanishing at a rapid pace.

We also received extraordinarily beneficial feedback from John Lumea of the Save Gabe's advocacy campaign, Harris Steinberg of PennPraxis, Ben Leech of the Preservation Alliance of Greater Philadelphia, and Inga Saffron of the Philadelphia Inquirer. The strategic plan for the Save the Roundhouse campaign could not have been developed without the recommendations and guidance from the aforementioned. These conversations have provided us with invaluable information on how to structure this campaign, most notably, best practices, things to anticipate and things to avoid.

### **Strategic Plan**

(Please See the Appendix B for full strategic plan)

The strategic plan follows two approaches: a proactive and a reactive approach. The goal of the proactive approach is to gather support towards the reuse of the Roundhouse and, through the public campaign, influence the administration to leave the building in place and not proactively demolish it, thus giving a developer the change to utilize Federal Rehabilitation tax credits. If we raise the issue with the public and put pressure on the administration, we believe that we can shift the dynamic. The steps of the proactive approach are to get the building nominated to the local register, get a DOE by the PHMC, reach out to preservation-friendly developers and get their thoughts and opinions regarding reuse, then use those talking points when talking to neighborhood groups, business districts, and eventually the city. We also plan to solicit the local media and preservation blogs to write about the threats to the building, highlighting its significance. The primary goal of the proactive approach is to change the conversation about the building before the city makes their decision regarding its future and shape an alternate response to whatever plan they propose.

The reactive approach will be implemented if the city formally announces its plans to demolish the building. At that point we will begin to reach out to national publications and create a formal coalition of local and national preservation groups. Even though we plan to begin meeting with people from these groups and building up allies at the start of the new year, the coalition will most likely activate once demolition plans have been announced. The goal of the coalition is to bring together local and national groups in support of the building and meet at regular intervals to strategize on a plan of action

against the city. We will also reach out to noted architects and architectural historians for letters of support and design interventions that can be publicized in the national media.

### **Campaign Execution**

We have been working on strategy with Ben Leech, the Advocacy Directory at the Preservation Alliance, and following a meeting in December 2012, It was determined that the campaign should commence immediately. In that same month, the Roundhouse was listed on the Alliance's year-end Endangered properties list.<sup>1</sup> In an effort to begin publicizing the threat to the building while simultaneously engaging the public, we have created a "Save the Roundhouse" Facebook page.<sup>2</sup> This page will serve as the primary web presence for the campaign, with the goal of educating our supporters on the significance of not just the building, but concrete/Modern architecture in general. The educational component of the page will be primarily executed through educational photo essays on Modernism in Philadelphia, Philadelphia's demolished Modern buildings, GBQC, and the building itself. At this point the campaign is primarily an educational effort and a public process that will raise the issue of the future of Modernism in Philadelphia. If the city determines that the building should be demolished, then we will add a petition to the page and begin to activate our supporters to reach out to the administration in opposition of their plans and in support of the building.

### **Forthcoming Steps**

In the coming months, we plan to raise awareness locally about Philadelphia's Modern architectural legacy through lectures, a panel on concrete/Modern Architecture in Philadelphia, and an exhibition on regional mid-century concrete architecture. We also support the plan for a design competition regarding the Roundhouse's reuse that will involve Jack Pyburn's Spring 2013 Georgia Tech Architectural Design Studio, which is focusing on reuse ideas for the Roundhouse. Additional plans include nominating the building to the National Trust for Historic Preservation's 2013 Most Endangered List, working to get the building listed as one of the National Trust's America's National Treasures, contributing to local blogs with essays on the building, creating a photo essay to send to blogs and organizations, organizing an exhibition on Philadelphia's Modern/Concrete buildings, organizing a panel on Philadelphia's Modernist legacy/Concrete architecture, and writing a Wikipedia entry on the building. This advocacy campaign is starting out small and over time, if we continue to keep the issue front and center, it will gain momentum, thus garnering the support of the public, the preservation community, both locally and nationally, and the City of Philadelphia.



<sup>1</sup> "Endangered Properties List," Preservation Alliance for Greater Philadelphia, accessed December 15, 2012, [http://www.preservationalliance.com/advocacy/2012\\_epl\\_police.php](http://www.preservationalliance.com/advocacy/2012_epl_police.php).

<sup>2</sup> "Save the Roundhouse," Facebook Profile Page, accessed December 15, 2012, <http://www.facebook.com/SaveTheRoundhouse>.



## **APPENDIX**

A. Bibliography

B. Strategic Plan

C. Conditions Glossary

D. Local Register Nomination

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## B. STRATEGIC PLAN

Proactive approach >

WE DO NOT KNOW THE CITY'S PLANS FOR THE BUILDING

Approach: Influence the administration as to how they market the property. Encourage the City of Philadelphia to give a developer the opportunity to rehab and reuse the building, in turn giving them the chance to utilize Federal Rehabilitation Tax Credits. If we are able to get the Determination of Eligibility from the PHMC then it will look foolish for the city to take that incentive off the table if they want the site redeveloped privately. The primary goal of this approach is to change the conversation about the building before the City makes their decision regarding its future.

Steps:

1. Reach out to others who have led similar campaigns & gain an understanding of their plan of action, suggestions, and what mistakes to avoid.
  - a. Lisa Dichiera, Prentice Women's Hospital (Goldberg)
  - b. Christine Madrid-French, Gettysburg Cyclorama Building (Neutra)
  - c. John Lumea, Save Gabe's
  - d. Chris Grimley, Mark Pasnick, and Mickael Kubo of Pinkcomma, Heroic Concrete
  - e. Similar campaigns to solicit
    - i. Orange County Government Center
    - ii. Friends of Miami Marine Aquarium
    - iii. Third Church of Christ Scientist
    - iv. Landmark West, 2 Columbus Circle
2. Nominate the building to the Philadelphia Register of Historic Places
3. Work with the PHMC to get a Determination of Eligibility (do not need to complete full National register listing)
4. Launch Online Campaign
  - a. Create a logo
  - b. Create a Facebook page
    - i. Include all information on the building and any design awards up front
    - ii. Gather all of the best photographs ever taken of the building.
      1. Advice from both LD & CF: never publish a bad photograph of the building
5. Develop consistent message
  - a. Develop one- to two-sentence "Why is this building significant?" message and adaptations of the talking points that can be applied to any group.
    - i. LD & CF suggest we should come up with a whole series of talking points that everyone works from as a script
    - ii. Chris said we will have to be on our feet and suggested that we have all of our academics tight, all our scholarship super tight, so we can talk to anyone and talk all the way at the highest level.
  - b. You have to have a quick message that people can grasp easily, and once you get their attention you can give them more of the academic detail behind the structure.
  - c. Groups
    - i. The General Public
      1. Your explanation of significance can't be about the architects or the

## B. STRATEGIC PLAN

- concrete.
- 2. The comments that people make about late-modernist and Brutalist architecture now (e.g., their personal distaste for some of it makes it historically worthless) are EXACTLY the same kind of comments that people used to make about Art Deco, early modern, Art Nouveau, and Victorian architecture. As always, the tragedy is that a critical mass of people who care about these buildings enough to save them will not emerge until after many of them are gone.
- ii. The City of Philadelphia
  - 1. It should be imperative to a contemporary, resurgent city like Philadelphia to preserve its dwindling stock of iconic Modern buildings.
- iii. Preservationists & Modern Architecture/ Concrete/Brutalist admirers
  - 1. A focus on the building's architects, design, and innovative engineering will be paramount.
- iv. Environmental & Sustainability advocates
  - 1. A building of this size and mass would take up a considerable amount of space in a landfill. Aside from the impact on the landfill, we are throwing away the embodied energy incorporated into the building. Embodied energy is the total expenditure of energy involved in the creation of the building and its constituent materials.
- v. Those who have negative associations with the Roundhouse
  - 1. The building was used as administration rather than long-term incarceration. It helped us maintain our security and it was, and still is, a symbol of safety as well as civic pride. The visual impact of it is a strong and an important iconic part of Philadelphia.
- 6. Solicit the Media/Blogosphere to write on the threat to the building
  - a. Write an article and/or Photo Essay and send out to preservation organizations and online publications
  - b. Solicit/write Letters to the Editor
  - c. Local Media Outlets
    - i. Inga Saffron, Philadelphia Inquirer [http://www.philly.com/philly/columnists/inga\\_saffron/](http://www.philly.com/philly/columnists/inga_saffron/)
    - ii. Plan Philly <http://www.planphilly.com>
    - iii. WHYY
      - 1. Radio Times, Marty Moss-Cohane
      - 2. Elizabeth Fiedler, WHYY
      - 3. Newsworks <http://www.newsworks.org/>
    - iv. Many More
  - d. Enlist a coalition of people to respond to negative online press/commentary
    - i. Have people ready to write good, valid responses that are educated and sound rational.
- 7. Engage the Public
  - a. Arrange a lecture series to educate people about the significance of the building, as well as buildings of this period in general
  - b. Arrange a panel on Brutalism
    - i. Inga suggests we recruit Frank Gehry, Bob Geddes
    - ii. Use the panel to inform design principles of the charrette/design competition.

## B. STRATEGIC PLAN

Interlock with the larger strategy.

- c. Museum exhibition on Brutalism/Modern concrete architecture
- d. Organize fieldtrips, tours, open houses of Philadelphia Brutalist/ Modern concrete buildings
- e. Public Design competition/charrette
- f. Create a website detailing mid-century Brutalist/concrete buildings in Philadelphia in the vein of <http://www.overcommander.com/heroic/>

### 8. Build up allies

- a. Local Preservation/Architecture/Design Organizations
  - i. Preservation Alliance of Greater Philadelphia
    - 1. Get the Building listed on the Philadelphia Preservation Alliance's "Endangered Properties List"
  - ii. AIA Philadelphia - Historic Preservation Committee
  - iii. Docomomo-Philadelphia
  - iv. Design Advocacy Group
- b. State Organizations
  - i. Preservation Pennsylvania
- c. National Organizations
  - i. Docomomo-US
  - ii. National Trust for Historic Preservation
    - 1. Petition to get the building listed on the National Trust's "11 Most Endangered Historic Places"
      - a. Deadline for 2013 list: March 1, 2013
    - 2. Work to get on the "National Treasures" list
  - iii. AIA (National)
  - iv. Recent Past Preservation Network <http://recentpast.org/>
- d. Meet with preservation-friendly developers who have done rehab projects
  - i. Whether or not they would want to bid on the building is irrelevant. Ask for their opinions/advice on the building's reuse and gather good talking points on the building for when we meet with others.
- e. Talk to city planners
  - i. How can the building's reuse advance the mission of the administration in trying to revitalize this section of the city?
- f. City of Philadelphia
  - i. Mark Squilla, Councilperson for District 1

### 9. Engage local neighborhood and business organizations

- a. Lead a conversation with them about how we want to work together on evaluating opportunities
  - i. Old City Civic Association
  - ii. Old City District
  - iii. Callowhill Neighborhood Association (Sarah McEaney, President)
  - iv. Northern Liberties Neighbors Association

### 10. Meet with City Officials

- a. Present the information and the research on possible reuses.
- b. Present the building as a potentially profitable redevelopment for a developer.
- c. Encourage them to sell the land together with the building.

## B. STRATEGIC PLAN

### Reactive Approach >

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WE KNOW THE CITY PLANS TO DEMOLISH THE BUILDING AND SELL THE LAND TO A DEVELOPER

Approach: Influence the public, the preservation community, the city, and the nation on the building's importance through a media campaign outlining its significance, showcasing design interventions and proposals for its reuse. Raise community awareness about Philadelphia's Modern architectural legacy and galvanize the public to act to preserve historically and architecturally important Modern architecture.

Steps (continued from above):

1. Create a coalition
  - a. Work with Ben Leech, Advocacy Director of Philadelphia Preservation Alliance on strategy and making contacts
  - b. Pull together local & national groups to form a unified coalition (see allies list above)
    - i. Prentice created a coalition in June 2011 made up of the National Trust, Landmarks Illinois, Preservation Chicago, AIA Chicago, Docomomo-Chicago, "Five groups speaking one voice."
  - c. Develop a timeline
  - d. Meet weekly to discuss strategy
2. Additional coalition members/network of experts and supporters
  - a. Noted Architects & Architectural Historians
    - i. Solicit letters of support
    - ii. Solicit reuse designs
  - b. Georgia Tech Design Charrette, Jack Pyburn
  - c. PennPraxis
  - d. David De Long
  - e. David Fixler
  - f. Chris Madrid French
3. Funding?
  - a. PR/Marketing
  - b. Legal

## C. CONDITIONS GLOSSARY

### CONDITION

### IMAGE

### DESCRIPTION

#### BIOGROWTH



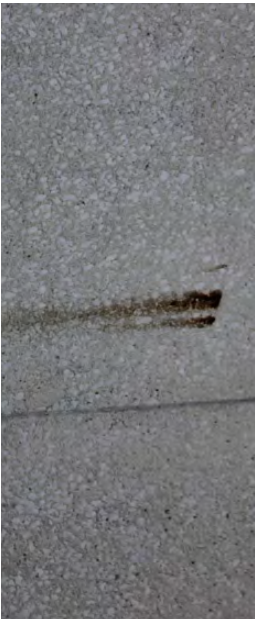
Areas of the concrete that appear discolored, specifically black, green, red, or white stains on the white or grey concrete surfaces.

#### WATER STAINING



Areas of the concrete that appear discolored, specifically under elements that expel water such as window air conditioning units.

#### CORROSION STAINING



Rust colored stains caused by the destruction of metal by chemical, electrochemical, or electrolytic reaction with its environment

#### POPOUT



The breaking away of small portions of concrete surface due to localized internal pressure which leaves a shallow, typically conical, depression.



## C. CONDITIONS GLOSSARY

### CONDITION

### IMAGE

### DESCRIPTION

JOINT SPALL



A significant loss of concrete material adjacent to a joint.

EROSION



Progressive disintegration of a solid by the abrasive or cavitation action of gases, fluids, or solids in motion.

CORROSION




Destruction of metal by chemical, electrochemical, or electrolytic reaction with its environment.

FILLED VOID



A patch in the concrete surface that is filled with joint caulking, re-placement concrete or some other material.

## C. CONDITIONS GLOSSARY

CONDITION	IMAGE	DESCRIPTION
INAPPROPRIATE INFILL		A repair patch of concrete, especially one that does not blend or integrate well with the original surface of the concrete.
FILLED CRACK		A crack in the concrete surface that has been filled with joint caulking or some other similar material.
HAIRLINE CRACKS		A separation of the concrete into two or more parts produced by breaking or fracturing having widths so small as to be barely perceptible.
DIAGONAL CRACK		A separation of the concrete into two or more parts produced by breaking or fracturing that is not parallel to either the lateral or longitudinal direction.

## C. CONDITIONS GLOSSARY

CONDITION	IMAGE	DESCRIPTION
PATTERN CRACKING		Fine openings on concrete surface in the form of a pattern; resulting from a decrease or increase in volume of the material near the surface.
JOINT SEALANT FAILURE		Open or partially open joints between two precast concrete floor or wall panels due to the deterioration of the joint sealant.



## C. CONDITIONS GLOSSARY: WINDOW CONDITIONS

### WINDOW

### IMAGE

### DESCRIPTION

FIXED PANE



Fixed bronze-tinted window panes as shown in original plans. Only original type of window.

BOTTOM HINGED



Fixed bronze-tinted window pane on the top two-thirds of the opening with an operable awning opening for the bottom third.

MIDDLE HINGED



Fixed bronze-tinted window pane on the top and bottom thirds of the opening with an operable awning opening for the middle third.

## C. CONDITIONS GLOSSARY: WINDOW CONDITIONS

WINDOW

IMAGE

DESCRIPTION

CASEMENT



Side-hinged, full height operable window.

DOUBLE-HUNG SASH



An operable sash window that can open from above or below by sliding one half of the window.

WINDOW VENT



Fixed window pane with a cut opening that is fixed with an HVAC exhaust vent.



## C. CONDITIONS GLOSSARY: WINDOW CONDITIONS

WINDOW

IMAGE

DESCRIPTION

WINDOW LOUVER



Operable louvered window pane.

WINDOW LOUVER  
WITH OPAQUE  
BOTTOM PANEL



Operable louvered window pane on the top two-thirds of the opening with an opaque panel originally cut for HVAC duct work. Hole now covered with plywood.

METAL LOUVER



Metal operable HVAC louver.

## C. CONDITIONS GLOSSARY: WINDOW CONDITIONS

WINDOW

IMAGE

DESCRIPTION

OPAQUE PANEL



Fixed black opaque panel.

## D. LOCAL REGISTER NOMINATION

### NOMINATION OF HISTORIC BUILDING, STRUCTURE, SITE, OR OBJECT

#### PHILADELPHIA REGISTER OF HISTORIC PLACES PHILADELPHIA HISTORICAL COMMISSION

SUBMIT ALL ATTACHED MATERIALS ON PAPER AND IN ELECTRONIC FORM ON CD (MS WORD FORMAT)

**1. ADDRESS OF HISTORIC RESOURCE** (must comply with a Board of Revision of Taxes address)

Street address: 700-734 Race Street

Postal code: 19106-1509

Councilmanic District: 1<sup>st</sup> District

**2. NAME OF HISTORIC RESOURCE**

Historic Name: Philadelphia Police Headquarters, Philadelphia Police Administration Building

Common Name: The Roundhouse

**3. TYPE OF HISTORIC RESOURCE**

Building

Structure

Site

Object

**4. PROPERTY INFORMATION**

Condition:  excellent  good  fair  poor  ruins

Occupancy:  occupied  vacant  under construction  unknown

Current use:

**5. BOUNDARY DESCRIPTION**

**SEE ATTACHED**

**6. DESCRIPTION**

**SEE ATTACHED**

**7. SIGNIFICANCE**

Period of Significance (from year to year): 1962

Date(s) of construction and/or alteration: 1962

Architect, engineer, and/or designer: Geddes, Brecher, Qualls, and Cunningham; August Komendant, David Bloom

Builder, contractor, and/or artisan: Sovereign Construction Co., Ltd.

Original owner: City of Philadelphia

Other significant persons:

## D. LOCAL REGISTER NOMINATION

### CRITERIA FOR DESIGNATION:

The historic resource satisfies the following criteria for designation (check all that apply):

- (a) Has significant character, interest or value as part of the development, heritage or cultural characteristics of the City, Commonwealth or Nation or is associated with the life of a person significant in the past; or,
- (b) Is associated with an event of importance to the history of the City, Commonwealth or Nation; or,
- (c) Reflects the environment in an era characterized by a distinctive architectural style; or,
- (d) Embodies distinguishing characteristics of an architectural style or engineering specimen; or,
- (e) Is the work of a designer, architect, landscape architect or designer, or engineer whose work has significantly influenced the historical, architectural, economic, social, or cultural development of the City, Commonwealth or Nation; or,
- (f) Contains elements of design, detail, materials or craftsmanship which represent a significant innovation; or,
- (g) Is part of or related to a square, park or other distinctive area which should be preserved according to an historic, cultural or architectural motif; or,
- (h) Owing to its unique location or singular physical characteristic, represents an established and familiar visual feature of the neighborhood, community or City; or,
- (i) Has yielded, or may be likely to yield, information important in pre-history or history; or
- (j) Exemplifies the cultural, political, economic, social or historical heritage of the community.

### 8. MAJOR BIBLIOGRAPHICAL REFERENCES

**SEE ATTACHED**

### 9. NOMINATOR

Name with Title: Allee Berger

Email: alleeb@design.upenn.edu

Organization: Preservation Alliance for Greater Philadelphia

Date:

Street Address: 1608 Walnut Street, Suite 1300

Telephone: (215) 546-1180

City, State, and Postal Code: Philadelphia, PA, 19103

Nominator  is  is not the property owner.

### PHC USE ONLY

Date of Receipt: \_\_\_\_\_

Correct-Complete  Incorrect-Incomplete Date: \_\_\_\_\_

Date of Notice Issuance: \_\_\_\_\_

Property Owner at Time of Notice

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Postal Code: \_\_\_\_\_

Date(s) Reviewed by the Committee on Historic Designation: \_\_\_\_\_

Date(s) Reviewed by the Historical Commission: \_\_\_\_\_

Date of Final Action: \_\_\_\_\_

Designated  Rejected

3/16/07



## 5. BOUNDARY DESCRIPTION

### PARCEL 270

Beginning at a point on the north side of Cherry Street, 30' wide and the east side of 8<sup>th</sup> Street, 50' wide. Thence north  $11^{\circ} 21'$  east, 179.7-3/8" to a point. Thence  $78^{\circ} 24' 30''$  east, 49' 1" to a point. Thence north  $110^{\circ} 21'$  east. 111' to south side of Race Street, 122' wide. Thence south  $78^{\circ} 59' 35''$  east al. same 188.4 to the west side of Franklin Street, 20' wide. Thence south  $110^{\circ} 26' 25''$  west. Along same 110' to an offset. Thence north  $78^{\circ} 59' 35''$  west along said offset, 2'. Thence south  $110^{\circ} 26' 25''$  west along Franklin Street, 24' wide. 117.10-1/2 to a point of offset. Thence south  $78^{\circ} 55' 45''$  along said offset 2'. Thence south  $11^{\circ} 26' 25''$  west along Franklin Street, 20' wide. 62.6 to north side of Cherry Street, 30' wide. Thence north  $78^{\circ} 55' 45''$  west along said Cherry Street. 236.11-3/8 to east side of 8<sup>th</sup> Street and beginning point.

### PARCEL 271

Beginning at the intersection of the south side of Race Street, 97' wide and west side of 7<sup>th</sup> Street, 50' wide. Thence south  $11^{\circ} 26' 25''$  west along the west side of 7<sup>th</sup> Street. 290.6-3/4 to north side of Cherry Street, 30' wide. Thence north  $78^{\circ} 55' 45''$  west along north side of Cherry Street. 141.8 to the east side of Franklin Street, 20' wide. Thence north  $11^{\circ} 26' 25''$  east along south side of Franklin Street. 62.6 to an offset. Thence south  $78^{\circ} 55' 45''$  east along said offset 2'. Thence north  $11^{\circ} 26' 25''$  east along Franklin Street, 24' wide. 117.10-3/4 to a point of offset. Thence north  $78^{\circ} 59' 35''$  west along said offset 2'. Thence north  $11^{\circ} 26' 25''$  east along Franklin Street, 20' wide. 110' to the south side of Race Street. Thence south  $78^{\circ} 59' 35''$  east along south side of Race Street. 141.8 to west side of 7<sup>th</sup> Street and point of beginning.





## 6. DESCRIPTION

Situated on the south side of Race Street between 7<sup>th</sup> and 8<sup>th</sup> Streets in Philadelphia, Pennsylvania is the Philadelphia Police Headquarters, also known as the Roundhouse. The building was designed by the architectural firm Geddes, Brecher, Qualls, and Cunningham (GBQC) in 1959 and constructed in 1962 by Sovereign Construction Co., Ltd. Including the three penthouses on the roof, the four-story building rises to a total of 105 feet and is comprised of roughly 2,000 precast concrete units, which includes the vertical panels and the floor slabs. The precast concrete units used for the Roundhouse are white in color. These were manufactured using Schokbeton, a system that allowed for a high quality of casting using zero-slump concrete.<sup>1</sup> Cast-in-place concrete was used only for the footings, foundations, corridor flows, and elevator-stair cores.<sup>2</sup> Defining the site's perimeter at the sidewalk are rectilinear precast concrete panels. These panels are a darker shade of white than the precast units for the building.

In plan, the Roundhouse is a curvilinear, symmetrical amoeba-like shape often referenced as resembling a pair of handcuffs. Both the east and west wings are robust, circular forms that are connected by an additional curving form. On the north side of this central connecting form, the wall is concave whereas on the south side the wall is convex and resembles an upward bell curve.

The overall form of the Roundhouse when viewed in elevation has sweeping, curving wall surfaces that create both convex and concave planes. The building is composed of a traditional base, shaft, and capital. Acting as the base, or *piloti*, the ground floor of the Roundhouse rises 17 feet in height and is set back on all sides from the upper three floors. The north elevation, facing Race Street, is where the original entrance is located with two rotating doorways and a large concrete, terraced plaza that meets the sidewalk. The south elevation faces a large parking lot and has two entrances accessed by ramps on either side of the convex, curving wall surface.

The shaft of the Roundhouse consists of the upper three floors that cantilever 12 feet from the base, or ground floor. Each floor is 11 feet in height. There are a total of 144 precast concrete panels that define the form of the shaft. These panels measure approximately 5 feet by 32 feet. Each panel is punctured with three rectangular windows, one window for each floor, creating a total of 432 windows. The windows on the concave surface on the north side of the building are slightly more elongated than the other windows. These other windows each have a sill that slopes outwards. Although there have been a number of replacement windows since the Roundhouse's construction, the remaining original windows are ¼ inch thick with a bronze glaze. Replacement windows vary and are randomly placed; replacement window types include louvered, casement, operable bottom, and modifications for accommodating additional air conditioning units.

At the roofline, a perforated parapet wall snakes along the entire undulating form of the shaft and forms the capital of the Roundhouse. This parapet wall is slightly slanted back towards the roof surface. On the roof are three penthouses that house the mechanical equipment. The walls of these penthouses rise 20 feet. When viewing from above, in the middle of both the east and west circular wings is a circular penthouse, roughly 38 feet in diameter. These penthouses are approximately 43 feet

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<sup>1</sup> Jack Pyburn, "The Role of Architectural Precast Concrete Technology in the Internationalization of Postwar Modernism," in *Eighth International Docomomo Conference: Postwar Modernism in an Expanding World, 1945-75* (New York, 2004), 115.

<sup>2</sup> August E. Komendant, "Precasting Making New Strides," *Progressive Architecture* (October 1960): 189.

from the edge of the parapet wall. The third penthouse is more oval in shape and is in the middle of the central connecting form.

## **7. SIGNIFICANCE**

### **STATEMENT OF SIGNIFICANCE:**

The city of Philadelphia's Police Administration Building was designed in 1959 by the architecture firm Geddes, Brecher, Qualls, and Cunningham (GBQC). The building, most commonly known to Philadelphians as the Roundhouse, was constructed in 1962 on the south side of Race Street between 7th and 8th Streets. The design for the Roundhouse employs emblematic principles set forth by GBQC that both stress and celebrate the building's architectural significance. The iconic curvilinear skin that defines the building's form and mass contrasts with the grid plan of Philadelphia, but does so in a sweeping, poetic nature that can be defined as Expressionist rather than Brutalist. In addition to defining the building's envelope, the precast concrete panels also integrate the structural, mechanical, and electrical systems. These panels were manufactured using the Schokbeton process, an innovative method of precasting concrete that flourished during the mid-twentieth-century. This system was skillfully executed by August Komendant, the engineer who worked closely with GBQC as well as other prominent mid-century architects, most notably Louis Kahn. The Roundhouse is the second known building in the United States to have used the Schokbeton system.<sup>3</sup>

The cultural significance of the Roundhouse entails multiple layers creating a unique and telling narrative. Strong visual associations and public perceptions have been attached to the Roundhouse from its construction date through to today. The building has long been associated with the Philadelphia Police Department and some of the city's most significant figures—Mayor Richardson Dilworth, Frank Rizzo, and Edmund Bacon. The building has been used as a gathering place for public demonstration and is known for its physical resemblance to handcuffs. The building and its designers are emblematic of the architectural design movement known as the Philadelphia School. As part of the Philadelphia School, Robert Geddes and his firm played a major role in the development of mid-century American architecture. Most of GBQC's work is largely for civic institutions and is expressive of the progressive manner in which the firm engaged with the urban context.

Socially, the Roundhouse is reflective of the vast urban redevelopment projects that swept across the city during the 1960s. When constructed, Franklin Square and its surrounding neighborhood were then known as Skid Row, an area that was laden with crime and blight. Today, the building is located in between several prominent Philadelphia neighborhoods; Independence National Historical Park, Old City, and Society Hill to the east; and Chinatown and Penn Center to the west. This centrally located site was chosen not only to improve the immediate surrounding area but also to benefit the city's other police districts.

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<sup>3</sup> The first building to use the Schokbeton process for precasting concrete was Philip Johnson's Lake Pavilion (1962) in New Canaan, Connecticut.

The Roundhouse meets the following criteria for designation as set forth by the Philadelphia Historic Preservation Ordinance, Section 14-2007(5), of the Philadelphia Code:

- (a) Has significant character, interest or value as part of the development, heritage or cultural characteristics of the City, Commonwealth or Nation or is associated with the life of a person significant in the past;
- (c) Reflects the environment in an era characterized by a distinctive architectural style;
- (d) Embodies distinguishing characteristics of an architectural style or engineering specimen;
- (e) Is the work of a designer, architect, landscape architect or designer, or engineer whose work has significantly influenced the historical, architectural, economic, social, or cultural development of the City, Commonwealth, or Nation;
- (f) Contains elements of design, detail, materials or craftsmanship which represent a significant innovation;
- (h) Owing to its unique location or singular physical characteristic, represents an established and familiar visual feature of the neighborhood, community or City; and
- (j) Exemplifies the cultural, political, economic, social or historical heritage of the community.

*A: Has significant character, interest or value as part of the development, heritage or cultural characteristics of the City, Commonwealth or Nation or is associated with the life of a person significant in the past; and  
J: Exemplifies the cultural, political, economic, social or historical heritage of the community.*

The Roundhouse falls fittingly into Philadelphia's history of urban redevelopment during the mid-twentieth-century. The surrounding neighborhood, formerly referred to as Skid Row, was laden with crime and blight at the time of the building's construction. Subsequent years saw a gradual improvement in the surrounding area and, most notably, Franklin Square. In addition, from the late 1940s through to the early 1960s, Philadelphia experienced many legislative changes that would affect development. Often, the Roundhouse goes unmentioned in this part of Philadelphia's history when, in fact, it is integral and reflective of the city's governmental and policy changes in development.

For America, the years following World War II are often described as being economically prosperous, reinvigorating, and booming in population. Embracing its newfound position as the economic and political leader in the Western world, America began to shift its attention to the physical appearance of its great cities. New legislation, coupled with substantial funding, supported and encouraged emerging urban renewal initiatives across the country. New construction during these years hastily took the place of older existing buildings. In Philadelphia, this was no exception. The city pioneered in legislative reform for redevelopment. The resulting architecture has come to be known as the Modernist style. The Roundhouse is wholly exemplar of these national and local trends.

In 1945, Pennsylvania passed the Urban Redevelopment Law, one of the first urban redevelopment laws to be enacted in the United States. This established the state's redevelopment authority, an agency that was responsible for enacting projects with public monies and was given the ability to acquire properties and land via eminent domain. Shortly after in 1949, President Harry S. Truman passed the Federal Housing Act that granted the government the necessary authority to acquire land in city

centers, which would then be sold or leased to redevelopment agencies and private developers.<sup>4</sup> This legislation would be revised in 1954 under President Dwight D. Eisenhower resulting in new programs and financing options for renewal projects. The Federal government felt that redevelopment initiatives had a responsibility to relate to larger city plans and thus the law required a workable program to be established at the local level. These programs were to identify plans that encompassed total city development.

From the 1930s until the end of the Second World War, new construction was sparse in Philadelphia. George Howe and William Lescaze's Philadelphia Savings Fund Society tower (1929-1932) at 12<sup>th</sup> and Market Streets was one of few buildings that reinvigorated optimism for a struggling urban center. The Great Depression left architects and city planners facing new challenges that beckoned for reform. It was not until 1947 with the "Better Philadelphia" exhibit, held at Gimble's Department Store, that newly revived efforts in urban design began to surface and excite the city. This exhibit was meant to educate the public about the city's physical development as well as to demonstrate the benefits of urban renewal. Visitors were subjected to an array of projects that ultimately spoke to a larger vision for Philadelphia. This exhibit segued into one of the earliest citywide redevelopment programs in postwar America.<sup>5</sup>

Philadelphia's government underwent substantial restructuring during the 1950s. The Home Rule Charter of 1951 created a stronger mayoral executive branch than had previously existed. Additionally, the city's Planning Commission was allotted increased power allowing them to more effectively direct the physical planning activities of the city's government.<sup>6</sup> Philadelphia pioneered in redevelopment legislation that paralleled the Federal government's urban renewal programs during the 1950s and into the early 1960s.<sup>7</sup> With the election of Mayor Joseph Clark in 1952, the city's government shifted from Republican to Democratic that, in turn, shifted Philadelphia towards a more rigorous urban renewal agenda. This rigor continued as Mayor Richardson Dilworth came into office in 1956. The success and effectiveness of this reform hinged on the involvement of the city's government in housing and city planning affairs in addition to non-profit organizations that consisted of concerned citizens and businessmen. These organizations included the Old Philadelphia Corporation, the Greater Philadelphia Movement, the Philadelphia Housing Association, and the Citizens' Council on City Planning.

The Roundhouse is seated amid a number of Philadelphia's most prominent neighborhoods. This includes Washington Square East, Market East, and Independence Mall. During the 1950s and 60s, these neighborhoods were prime targets, and ripe, for the city's planned urban renewal projects. The newly empowered Planning Commission, backed by recent Federal legislation, was quick to activate the project for Washington Square East beginning in 1957. Plans for the Society Hill Towers were submitted that same year. This area was to be developed strictly for residential use only and was possible with the help of a federal planning grant.<sup>8</sup> The Dock Street Market was to be razed as soon as

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<sup>4</sup> Mark Gelernter, *A History of American Architecture: Buildings in their Cultural and Technological Context* (Hanover, NH: University of New England Press, 1999), 265.

<sup>5</sup> Madeline Cohen, "Postwar City Planning in Philadelphia: Edmund Bacon and the Design of Washington Square East" (PhD diss., University of Pennsylvania, 1991), 2.

<sup>6</sup> *Ibid.*, 387.

<sup>7</sup> G. Holmes Perkins, "Part Four: Philadelphia Phoenix: Postwar Civic Renaissance and the Philadelphia School," in *Drawing Toward Building: Philadelphia Architectural Graphics 1732-1986*, ed. James F. O'Gorman et al. (Philadelphia, PA: Pennsylvania Academy of the Fine Arts, University of Pennsylvania, 1986), 204.

<sup>8</sup> Valerie Sue Halverson Pace, "Society Hill, Philadelphia: Historic Preservation and Urban Renewal in Washington Square East" (Master's Thesis, University of Minnesota, 1976), 113.

possible following the Redevelopment Authority's acquisition of the entire area via eminent domain by 1961.<sup>9</sup>

Plans to redevelop Market East were discussed in the 1960s but were not completed until after the construction of the Roundhouse. Between the years 1954 and 1963, the retail sales of the Central Business District of the metropolitan area declined from 30% to 26%. In response to the closing of two department stores along Market Street, the Market Street East plan was written in 1966. This plan aimed to reverse the declining conditions of the area as well as resolve ongoing problems with the city's transportation system.<sup>10</sup> Efforts for revitalizing this section of Market Street would continue. The Gallery Mall opened in 1977 and was followed by the opening of the Market East Station in 1984.

To the east of the Roundhouse is Independence National Historical Park. This is the closest neighborhood in proximity to the Roundhouse that underwent redevelopment and whose plans directly affected the surrounding area. Beginning in the 1930s and 40s, design proposals for a park began to emerge for Independence Mall.<sup>11</sup> The proposal for the northern portion of the Mall met little opposition and required the demolition of three full blocks containing mostly commercial buildings. Throughout the 1940s and 60s, this area was laden with blight and was often referred to as Skid Row. Abandoned and under-utilized buildings lined the streets at the foot of the Ben Franklin Bridge; it was clear that this area of the city lacked stability and any sense of community.<sup>12</sup>

Work on the Mall began in 1951. Edmund Bacon shared his visions for the area in a letter he wrote that same year. He described how spaces are to function differently than the residential areas just south of the park, and that he wanted commercial and industrial development to pervade the areas north of the Mall.<sup>13</sup> As work continued, a marketability study was conducted in 1959 that revealed a strong demand for offices surrounding this area of the city. By 1963, government buildings were being built that would subsequently define the character of the areas contiguous to the Mall. These buildings included Pietro Belluschi's Rohm & Haas (1964) building at 6<sup>th</sup> and Market Streets, the United States Courthouse and Federal Office Building (1963-1968) at 6<sup>th</sup> and Arch Streets, and the United States Mint (1965-1969) on 5<sup>th</sup> Street between Race and Arch Streets by Vincent Kling & Associates. Siting the Roundhouse just west of the Mall was in keeping with the trend of constructing government buildings in this section of Philadelphia.

When the idea surfaced to relocate the Philadelphia Police out of City Hall and into their own building, the site for the building was to be carefully, and thoughtfully, selected. A separate building was desperately needed as operations in the basement of City Hall had become cramped and consequently insufficient. At first, Albert Greenfield and Harry Batten of the Old Philadelphia Development Corporation (OPDC) suggested that the new Police Administration Building be located in the Dock Street Area.<sup>14</sup> However, John Robin, the executive vice president of the OPDC, rejected the idea arguing that this would be ruinous to Society Hill.<sup>15</sup> Mayor Richardson Dilworth would select the location for the Roundhouse in 1958. The new building was to be built just outside the heart of downtown, which

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<sup>9</sup> Cohen, "Postwar City Planning in Philadelphia," 521.

<sup>10</sup> Redevelopment Authority, *Market Street East General Neighborhood Renewal Plan* (October, 1966), 2.

<sup>11</sup> Cohen, "Postwar City Planning in Philadelphia," 332.

<sup>12</sup> *Ibid.*, 337.

<sup>13</sup> *Ibid.*, 422.

<sup>14</sup> *Ibid.*, 465.

<sup>15</sup> John Robin, interview by Walter Philips Sr., February 11, 1978, transcript, Philips Oral History Project, Temple University Urban Archives, Philadelphia, PA.



Mayor Dilworth felt was advantageous to both the police and the city.<sup>16</sup> Additionally, the construction of a new police building in this particular area was to be a catalyst for change and improve the conditions of the neighborhood.

Initially, the Independence Mall Redevelopment Area Plan in 1966 proposed a site plan for the Roundhouse's immediate surroundings—7<sup>th</sup> Street to 9<sup>th</sup> Street and Vine Street to Arch Street. This plan recounts the area as having “unsafe, unsanitary, inadequate or over-crowded conditions of certain buildings.”<sup>17</sup> As a result of this plan's initiative, many buildings were demolished whose lots remain vacant today, or have otherwise been converted into surface parking. The proposed site plan, as was set forth by the City Planning Commission, was loosely followed as efforts moved forward. The closing of Ridge Avenue was completed; this provided the necessary land for the Vine Street Expressway ramps that were to connect to Market East and the Metropolitan Hospital. However, the ramp to Market East was never built. Today, this area is a parking lot.

Directly north of the Roundhouse across Race Street is Franklin Square, one of William Penn's original five squares from his 1682 plan. During the nineteenth- and early-twentieth centuries, Franklin Square was once surrounded by a thriving neighborhood. The years during the 1920s saw a decline in the neighborhood as automobiles and the construction of the Ben Franklin Bridge (1922-1926) created substantial traffic congestion; access to the park became problematic for pedestrians. As stated earlier, this area of Philadelphia took on the name Skid Row. Jane Jacobs provides a telling description of this particular neighborhood in her book *The Death and Life of Great American Cities*:

“The second of Penn's little parks is Franklin Square, the city's Skid Row park where the homeless, the unemployed and the people of indigent leisure gather amid the adjacent flophouses, cheap hotels, missions, second hand clothing store, reading and writing lobbies, pawnshops, employment agencies, tattoo parlors, burlesque houses and eateries. This park and its users are both seedy, but it not a dangerous or crime park. Nevertheless, it has hardly work as an anchor to real estate values or to social stability.”<sup>18</sup>

Again, as urban revitalization efforts swept across the area during the 1950s and 60s, many of the buildings surrounding Franklin Square were demolished. The loss of this building fabric meant a loss of residential character, and was further perpetuated by Independence National Historical Park to the east. The Vine Street Expressway was constructed in the 1980s making access to Franklin Square increasingly more difficult, and consequently more inviting for crime and blight. Historic Philadelphia, Inc. renovated the park in 2006 reinvigorating its original purpose. Impetus for reinvesting in Franklin Square may have been spurred by the conversion of the former Metropolitan Hospital into luxury condominiums in 2002. According to architectural historian David Brownlee, the design of the Metropolitan Hospital was built “in sympathy” to the Roundhouse by mimicking its Expressionist form.

As for criteria J, the cultural and political heritages are germane to the Roundhouse and do well to provide a general description of the complicated legacy that begun at the building's inception and

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<sup>16</sup> “The Changing City,” *The Evening Bulletin*, February 27, 1958.

<sup>17</sup> Philadelphia City Planning Commission, “Amendment Unit Four” in *Independence Mall: Center City Redevelopment Area* (Philadelphia: City Planning Commission, 1966).

<sup>18</sup> Jane Jacobs, *The Death and Life of Great American Cities* (New York: Vintage Books, 1992), 95.

continue through to today. The various associations that the Roundhouse evokes are reflective of the social heritage of Philadelphia.

When the Roundhouse was dedicated on April 1, 1963, the building was celebrated as a technological and symbolic tour de force. GBQC was awarded the American Institute of Architects' Gold Medal Award for the best Philadelphia architecture of the year. The Roundhouse brought renewed hope and momentum to a blighted neighborhood. The pamphlet that accompanied the dedication ceremony praised it as the new "architectural focal point of the northern end of Independence Mall and an important contribution to the city's downtown renewal."<sup>19</sup> In attendance for the ceremony were about 600 people, notably Mayor James Tate, Albert Brown (the Police Commissioner), GBQC, William H. Parker (Los Angeles Chief of Police), G. Holmes Perkins (Chairman of the City Planning Commission).

When Mayor Richardson Dilworth announced plans for this new police building, the public was sure to keep a close eye on its progress. The Philadelphia Police wanted their new headquarters to promote a positive public image. This paralleled the city's social revitalization efforts as well as the large number of new construction projects. The big-boned, sculptural building emulated civic pride and safety. Furthermore, the city's investment in this type of design highlighted the progressive and innovative vision of the city's governmental decision makers.

The Roundhouse was not without its critics. Philip Klein, the former Public Property Commissioner, disapproved of the design, stating in 1963, "Architects build this type of building for other architects to discuss and admire, certainly not for the utilitarian use needed in a police headquarters."<sup>20</sup> Other criticism surfaced as wary employees complained of dizziness from the curvilinear circulation pattern, and questioned the round elevators where "passengers feel like a can of people."<sup>21</sup> The form and mass of the Roundhouse was unlike any other public building. The effort by GBQC to create a transparency between the public and the Philadelphia Police through the large amount of windows seemed to backfire; public perceptions viewed these 432 windows as being the eyes of the police, they are everywhere, inescapable.<sup>22</sup>

Modern architecture during the mid-twentieth century was transitioning from the glass box into a more sculpturally expressive style. Additionally, the Roundhouse is reflective of the city's architectural soul-searching for a national heritage.<sup>23</sup> By the 1960s, the Philadelphia Chapter of the American Institute of Architects was considered to be one of the most energized chapters in the United States.<sup>24</sup> Over the years, admiration for the Roundhouse became overshadowed by its skepticism. Frank Rizzo, former Police Commissioner (1967-1971) and Mayor of Philadelphia (1972-1980), was largely responsible for generating the condemnation that persists to this day. Today, the Roundhouse often serves as the backdrop for local news reports and as a gathering place for groups. The building has subconsciously become embedded into Philadelphia's culture.

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<sup>19</sup> City of Philadelphia, "Dedication of Police Headquarters," Monday, April 1, 1963, pamphlet from Temple University, Urban Archives, Philadelphia, PA.

<sup>20</sup> Maurice M. Lewis, "Klein Views New Police Building: 'Ugly, Cost too High, Overcrowded,'" *The Evening Bulletin*, March 31, 1963.

<sup>21</sup> James Smart, "In Our Town," *The Evening Bulletin*, July 13, 1963.

<sup>22</sup> Michelle Osborn, "A Building That Invites Inspection," *The Evening Bulletin*, December 10, 1965.

<sup>23</sup> Perkins, "Part Four: Philadelphia Phoenix," 204.

<sup>24</sup> Malcolm Clendenin with Introduction by Emily T. Cooperman, "Thematic Context Statement: Modernism: 1945-1980," (2009). Available: Preserve Philadelphia, [www.preservephiladelphia.org/wp-content/uploads/HCSModernism.pdf](http://www.preservephiladelphia.org/wp-content/uploads/HCSModernism.pdf).

C: Reflects the environment in an era characterized by a distinctive architectural style.

The Roundhouse reflects a particular time within both the city of Philadelphia and the nation's history. The years of the mid-twentieth-century witnessed the local government's increased involvement in the city's physical development and growth, which resulted from reform and legislation from the Federal government. During this time, the city took an increased interest in architectural trends as can be found in the progressive design of the Roundhouse. Furthermore, this environment includes buildings and design theories as put forth by the Philadelphia School; a group of architects and engineers who felt that modern urban cities needed to be returned to a human-scaled context.

### *The Roundhouse in the Context of Post-War America*

Post-war America is best described as a country burgeoning in the economic realm, political realm, and in technological advancements. As it recovered from the Great Depression, the nation was faced with new challenges that sparked a plethora of reforms in both government and architecture. With the population and economy booming, there was a pressing need, or desire, to bulldoze the old to make way for the new.<sup>25</sup> Modern architecture used this opportunity as a catalyst to pervade the landscape of the United States. The American people latched on to a newfound emphasis on family fueling the demand for new houses, home-based consumer goods, and schools.<sup>26</sup> Paralleling this was the nation's enthusiasm for investing in new technologies in the face of both the Cold War and Vietnam War. Mass production proliferated and, as a result, so did building materials. As architecture took advantage of this, new construction began to take on styles that, today, capture the zeitgeist of this invigorating field.

Philadelphia, much like many other major cities, went through a series of political reform that consequently affected development and the city's architecture. Restructuring of the city's government is said to have begun with the elections of Mayor Joseph Clark in 1951 and Mayor Richardson Dilworth in 1955.<sup>27</sup> As a result, local government became increasingly more involved with housing and city planning in addition to a newly empowered City Planning Commission. Commercial and institutional buildings were being revived and urban renewal was bursting at the seams.<sup>28</sup> Philadelphia's architecture, and its architectural education, would emerge as leaders in the field as propagated by the Philadelphia School. G. Holmes Perkins describes it best: "A city that for nearly a quarter-century had been in the doldrums awoke with the energy to transform its center and assume a national architectural leadership through its urban renewal."<sup>29</sup> The Roundhouse has become a vessel for both these national and local trends that occurred during the mid-twentieth-century.

Architectural reform across the United States resulted largely in the Modernist style. The beginning of this style is not easy to pinpoint, but many agree that Modernism hit the shores of the United States when Philip Johnson and Henry-Russell Hitchcock wrote *The International Style* in 1932. Architects began to abandon historical styles and move towards ahistorical, austere forms.<sup>30</sup> Le Corbusier and Ludwig Mies van der Rohe perpetuated and influenced these shifts in architectural design. Under the

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<sup>25</sup> Gelernter, *A History of American Architecture*, 261.

<sup>26</sup> *Ibid.*, 262.

<sup>27</sup> Perkins, "Part Four: Philadelphia Phoenix," 204.

<sup>28</sup> *Ibid.*

<sup>29</sup> *Ibid.*

<sup>30</sup> Gelernter, *A History of American Architecture*, 260.

umbrella of Modernist architecture are four (but not limited to) different sects—the International Style, Brutalism, Formalism, and Expressionism—the Roundhouse falling under the Expressionist style. These allowed architects to explore and invent a new vocabulary that would simultaneously meet the needs of America.

The years following the Second World War were a new age for America and its major cities. Modernism was found to be the most appropriate expression for the burgeoning country.<sup>31</sup> Appealing to the public, this new style appeared to be rational, efficient, and practical for solving problems.<sup>32</sup> Additionally, architects took this as a much-needed opportunity to be inventive, explorative, and to aesthetically create new forms and shapes.<sup>33</sup>

Modernism in Philadelphia can be marked by two national trends. One being the spread of the International Style and the subsequent modernist styles that followed, and the other being regional modernism, which actually preceded Modernism.<sup>34</sup> Architecture in the city and the surrounding area was on the pulse of larger trends as both the national and local government encouraged and supported substantial redevelopment. Two important factors that set the stage for design and development for Philadelphia after the Second World War was first, a series of planning initiatives that set the direction for areas pinpointed for redevelopment and growth, and second, the arrival of a group of significant designers—known as the Philadelphia School—at the University of Pennsylvania in the early 1950s.<sup>35</sup> The architects and engineers of the Philadelphia School were responsible for revamping architectural education and consequently the city.<sup>36</sup> With G. Holmes Perkins leading the way for Penn and the Philadelphia School, city planning and urban design became intertwined and more intimately involved with the city's architecture.<sup>37</sup>

The Roundhouse is reflective of the city's architectural soul-searching for a national heritage.<sup>38</sup> The Expressionist style employed for the design created a sculptural, iconic building that has been prominently keyed into the city. GBQC hastily celebrated technological innovation as is represented by the Schokbeton panels of the building. Investing in such a high grade of precast concrete, it is no secret that the City Planning Commission supported emerging high architectural ideals; Philadelphia was investing in good design. By the 1960s, the Philadelphia Chapter of the American Institute of Architects was considered to be one of the most energized chapters in the United States.<sup>39</sup> GBQC was awarded the American Institute of Architects' Gold Medal Award for best Philadelphia architecture in 1963 for their design of the Roundhouse.<sup>40</sup>

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<sup>31</sup> Gelernter, *A History of American Architecture*, 263.

<sup>32</sup> *Ibid.*

<sup>33</sup> *Ibid.*

<sup>34</sup> Clendenin, "Thematic Context Statement."

<sup>35</sup> *Ibid.*

<sup>36</sup> *Ibid.*

<sup>37</sup> Perkins, "Part Four: Philadelphia Phoenix," 204.

<sup>38</sup> *Ibid.*, 206.

<sup>39</sup> Clendenin, "Thematic Context Statement."

<sup>40</sup> "Police Building Wins Awards of Architects," *The Evening Bulletin*, April 1, 1963.

## *The Philadelphia School*

The Philadelphia School is a group of architects and engineers who are loosely defined by their work and subsequent design beliefs. This concept of the Philadelphia School was first introduced in a 1961 *Progressive Architecture* article by Jan Rowan entitled, "Wanting to Be: The Philadelphia School." The group includes architects Louis I. Kahn, Robert Venturi, Romaldo Giurgola, Robert Geddes, and two engineers, Robert Le Ricolais and August Komendant. Kahn was pinpointed as the group's "spiritual leader" since his design principles were the driving force for most others.<sup>41</sup> Rowan proclaimed that this School was to do for Philadelphia what the Chicago School did for their city during the late nineteenth-century.<sup>42</sup> Some of the architects singled out by the *Progressive Architecture* article, including Robert Geddes, were hesitant about being classified into one style or group.<sup>43</sup> Yet, the association did provide the men with exposure that won them numerous commissions, even if these were mostly for work located outside of Philadelphia.

The Philadelphia School is also said to be a byproduct of the efforts of G. Holmes Perkins. Perkins worked diligently to redefine architectural education within both the University of Pennsylvania's School of Fine Arts and the city of Philadelphia. Each individual of this group taught at Penn and influenced students in their own unique way. However, these architects and engineers are each profound in their own right outside of the Philadelphia School. Largely, the Philadelphia School promoted a greater focus on context and developed their modern style by looking critically at history.<sup>44</sup> These architects and engineers understood that there was an inherent need for Philadelphia to return to being a human-scaled city. Their goal was for the public to be engaged in conversation with the architecture via associations that buildings could bring forth.<sup>45</sup>

GBQC's design for the Roundhouse embodies some of the design theories championed by the Philadelphia School. The rectilinear concrete panels that define the majority of the building's boundaries were meant to relate to Philadelphia's grid plan. The plaza on the north side of the building deliberately faces Franklin Square and acts as a welcoming civic entrance. The inclusion and design of this plaza was to afford the Roundhouse a grand, public presence along Race Street. Robert Geddes praises the plaza as serving as both the functional and symbolic center of a community, which speaks to the ideas shared by the Philadelphia School.<sup>46</sup> Shortly after the Roundhouse was completed, users of the building began entering on the south side for the sake of convenience, as the parking lot is on this side. This forced the main entrance to close and never be used again. GBQC were deliberate in designing a structure that was to read as an inviting public entity.<sup>47</sup> The appearance was not meant to elicit the sense of jail, detainment, or an oppressive police force. However, over time the nature of the building's function prevailed.

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<sup>41</sup> Jan C. Rowan, "Wanting to Be: The Philadelphia School," *Progressive Architecture* 42 (April 1961): 131.

<sup>42</sup> *Ibid.*, 163.

<sup>43</sup> *Ibid.*, 157.

<sup>44</sup> Clendenin, "Thematic Context Statement."

<sup>45</sup> Robert Coombs, "Philadelphia's Phantom School," *Progressive Architecture* (April 1976): 58.

<sup>46</sup> Robert Geddes, "Possibilities in Architecture," *Architectural Record* 108 (November 1977): 107.

<sup>47</sup> "Circling in the Square," *Architectural Forum* 118 (1963): 120.



D: Embodies distinguishing characteristics of an architectural style or engineering specimen.

### *The Roundhouse & Modernism*

Geddes, Brecher, Qualls, and Cunningham (GBQC) designed the Roundhouse in the Expressionist style, a style that falls under the umbrella of architectural Modernism. Modernist styles, like Expressionism, were used in conjunction with many other buildings that were constructed in the midst of urban revitalization efforts; these can be found in Philadelphia and other cities throughout the United States. Furthermore, it is the second building in the United States to use the Schokkabeton system to manufacture the precast concrete panels. These panels integrate the mechanical, electrical, and structural systems.

As Modernism pervaded all aspects of society, architecture did well to visually translate what the United States was thinking during the 1950s and 60s. Transcending the bounds of traditional, historic styles, architects began to explore new materials, technologies, and forms for which to build with.<sup>48</sup> Le Corbusier and Ludwig Mies van der Rohe continue to be considered two of the most influential architects during this time, influencing the appearance of new construction across the states. Being the most appropriate expression of a new age for the nation following World War II, Modernism was found to be rational, efficient, confident in expressing power and wealth; and was additionally expressive of the individual.<sup>49</sup> This was achieved primarily through these styles: the International Style, Brutalism, Formalism, and Expressionism.

The International Style was first introduced with Philip Johnson and Henry-Russell Hitchcock's publication, *The International Style*. This was written in 1932 to accompany an exhibit at the Museum of Modern Art. For the work of Mies van der Rohe, his buildings did not focus on social aspects and, instead, focused on the technical and visual problems he believed needed to be solved in architecture.<sup>50</sup> His famous "Less is more" motto stripped architecture to its fundamental essence; buildings are to be simple, rational, based on a geometric grid, and austere.<sup>51</sup> Architecture across the United States took note of these ideals and emulated them in a number of building types including shopping centers, schools, office parks, corporate headquarters, apartment buildings, and government buildings.<sup>52</sup> Mies van der Rohe provided a form of building that consisted of a rational structural frame with nothing more than a thin curtain wall cladding.

Le Corbusier helped to propagate the style of Brutalism that is today both praised and hated. The word originates from the French phrase *béton brut*, which translates into "raw concrete." Buildings of this style celebrate the rough concrete due to the texture and aesthetics it creates from its casting process. By the untrained eye, the Roundhouse is often quick to be termed as a Brutalist building. Taking a closer look at other Brutalist buildings, one will learn that the Roundhouse is actually Expressionist. Examples of Brutalism include Paul Rudolph's School of Art and Architecture Building (1959-1963) at Yale University and, most famously, Boston City Hall (1963-1968) by Kallman, McKinnell, and Knowles. In Philadelphia, the United States Mint (1965-1969) on 5<sup>th</sup> Street between Race and Arch Streets by Vincent Kling & Associates and even Mitchell/Giurgola's William Penn High School (1967-

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<sup>48</sup> Gelernter, *A History of American Architecture*, 260.

<sup>49</sup> *Ibid.*, 263.

<sup>50</sup> *Ibid.*, 266.

<sup>51</sup> *Ibid.*

<sup>52</sup> *Ibid.*

1975) at 15<sup>th</sup> and Mount Vernon Streets are more representative of the Brutalist style than the Roundhouse is claimed to be.

A third style under the umbrella of Modernism is the Formalist style. Architects designing in this style opposed austere designs, such as those found on Mies van der Rohe's buildings, but shared the rational construction system.<sup>53</sup> Formalism took the basic frame and box and paralleled it with traditional Classical ideals, and explored how the building could be decorated or elaborated on with intentions of creating a more elegant and commanding presence.<sup>54</sup> It is worth mentioning this style within the discourse of the Roundhouse since this form of architecture embraced new Modernist vocabulary and materials via technological innovations. Philip Johnson's Sheldon Memorial Art Gallery (1963) in Lincoln, Nebraska is a great example of Formalist architecture with its hint of a Roman arcade synthesized with Modernist design elements. Other examples can be found throughout the United States, but this particular style did not proliferate as much as either the International Style or Brutalist style did.

Expressionist architecture, in some ways, allows for the most flexible variations and explorations of form. This style is typical of sweeping, curved wall surfaces and rooflines, minimal use of symmetrical or geometric forms, a combination of concave and convex surfaces, and arched or vaulted spaces.<sup>55</sup> The gentle, sweeping concave and convex surfaces of the Roundhouse define its mass and form. No other buildings by GBQC were done in the Expressionist style. Eero Saarinen's TWA Terminal (1956-1962) at the Kennedy Airport in New York City utilizes this style to revive the French idea of *architecture parlante*, where a building is expected to metaphorically express its function and character.<sup>56</sup> Similarly, Skidmore, Owings and Merrill's Chapel at the United States Air Force Academy (1956-1962) in Colorado Springs utilizes the Expressionist style and *architecture parlante*. A similar government building to the Roundhouse that has sweeping, curving wall surfaces is Marcel Breuer's U.S. Department of Housing and Urban Development Headquarters (1963-1968) in Washington, D. C.

The Roundhouse, much like the aforementioned examples, exploited burgeoning technology and materials in its design. Modernist architecture created forms that were a logical by-product of both dramatic structures and constructions.<sup>57</sup> Architect and critic J. M. Richards summarized best the changing trends in architecture in his 1940 book, *An Introduction to Modern Architecture*, when he said:

"The principal reason why a new architecture is coming into existence is that the needs of this age are in nearly every case totally different from the needs of previous ages, and so cannot be satisfied by methods of building that belong to any age but the present. We can satisfy them in the practical sense, by utilizing modern building techniques and modern scientific inventions to the full; and we can satisfy them in the aesthetic sense, both by being honest craftsmen in our own materials and by taking special advantage of the opportunities these materials offer of creating effects and qualities in tune with our own times."<sup>58</sup>

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<sup>53</sup> Ibid., 269.

<sup>54</sup> Ibid.

<sup>55</sup> Robinson & Associates, Inc., Judith H. Robinson and Stephanie S. Foell, United States General Services Administration, *Growth, Efficiency, and Modernism: GSA Buildings of the 1950s, 60s, and 70s* (Center for Historic Buildings, U.S. General Services Administration, March 2006), 15.

<sup>56</sup> Gelernter, *A History of American Architecture*, 274.

<sup>57</sup> Ibid., 283.

<sup>58</sup> J. M. Richards, *An Introduction to Modern Architecture* (Baltimore: Penguin Books, 1940 and 1962), 28.

In many ways, this quote can be directly applied to the Roundhouse. Post-war Philadelphia restructured its government and as a result the city commissioned a vast number of building campaigns in the name of urban revitalization. The Roundhouse was one of many nodes among these efforts as it bulldozed its way into a blighted neighborhood. The precast concrete panels of the Roundhouse were manufactured using the Schokbeton system. Furthermore, these panels are the structure of the building that also provide its mass and form; this speaks to Richards's call for being honest craftsmen. As an architectural firm, GBQC often took advantage of innovative technologies and building techniques during the 1960s. The architects wanted to fully exploit the capabilities that Schokbeton allowed. This paralleled the nation's enthusiasm for mass production and drive for continuous technological advancement.

### *Structural System*

The structural system for the Roundhouse embodies distinguishing characteristics of both an architectural style and an engineering specimen. Several engineers were brought on for the construction of the Roundhouse. David Bloom was the principal engineer while August Komendant was responsible for the precast concrete panels. The precast concrete panels create a fully integrated building system housing the structural, mechanical, and electrical systems. These panels were manufactured using the Schokbeton process for precasting concrete. This process allowed for the concave and convex forms that give the Roundhouse the curvilinear character associated with the Expressionist style. Furthermore, these panels are a product of Komendant's innovative structural engineering expertise.

Ninety percent of the Roundhouse consists of concrete that is both cast-in-place and precast. Cast-in-place concrete is limited to the footings, foundations, corridor floors, and the four elevator-stair cores. This creates the structural formwork and acts as an anchor for the precast concrete panels.<sup>59</sup> The cast-in-place concrete of the elevator-stair cores contain special bearing pockets to allow for the cast-in-place floor slabs and the precast panels to key into.<sup>60</sup>

Overseeing their production and installation, Komendant post-tensioned the concrete—a technique of pre-stressing—so as to utilize the absolute potential of the concrete for the Roundhouse. Concrete performs best in compression and has little tensile strength whereas steel performs best in tension. Both concrete and steel share the same coefficient of expansion ( $6.5 \times 10^{-5}$ ), which is why steel reinforcing bars are used with concrete. Pre-tensioning and post-tensioning are two techniques used to pre-stress concrete to ensure that the structural concrete is in the necessary amount of compression so as to counteract any tensile strength imposed on the building during its service life.

Post-tensioning concrete requires that hollow steel tubes be cast into the concrete panels that allow for wire tendons to be threaded through. Once cured to the necessary strength, the panels are brought to the construction site where the wire tendons are then threaded through the steel tubes. These wire tendons are then connected to portable jacks on either end of the panel that administer more tensile strength than would typically be applied in the opposite direction. This technique requires permanent anchors to be embedded to either end of the concrete unit that transmit the necessary load. Once the

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<sup>59</sup> Komendant, "Precasting Makes New Strides," 189.

<sup>60</sup> "Pioneering," *Engineering News Record*, October 13, 1960, 60.

post-tensioning process has been completed, the steel tubes are grouted to ensure that the wire tendons remain in place and are protected from corrosion.

In the Roundhouse, the first floor framing was subjected to this process with high-strength reinforcing bars that have an ultimate strength of 150,000 psi. In the top of the ribs, eight tendons were placed and carried through to the interior span of the floor panels. Threaded through the innermost third of the span are six tendons to resist the moment of the cantilever over the exterior columns; the floor panels cantilever a total of 12 feet. This form of pre-stressing, at the behest of Komendant, is responsible for the Roundhouse's excellent, continued structural performance.

*E: Is the work of a designer, architect, landscape architect or designer, or engineer whose work has significantly influenced the historical, architectural, economic, social, or cultural development of the City, Commonwealth, or Nation.*

This section will consist of two parts, one devoted to Geddes, Brecher, Qualls, and Cunningham (GBQC) and their design for the Police Administration Building (the Roundhouse). The second section will be devoted to August Komendant.

#### *Geddes, Brecher, Qualls and Cunningham*

Formed in 1960, the celebrated architectural firm Geddes, Brecher, Qualls, and Cunningham (GBQC) designed many civic institutions in Philadelphia and the surrounding area, as well as internationally. GBQC was awarded the American Institute of Architects' Gold Medal Award for Best Philadelphia Architecture in 1963 for their design of the Philadelphia Police Headquarters.<sup>61</sup> During the early 1970s, the firm won first prize for both the Birmingham-Jefferson Civic Center Design Competition and the Vienna South International Town Planning Competition.<sup>62</sup> In 1979, the American Institute of Architects honored the firm with the highest professional honor awarding them the Architectural Firm Award.<sup>63</sup> This is only a small representation of the actual number of competitions the firm engaged in and the awards the firm received. Despite the fact that none of the founding architects are actively working there, GBQC Architects is still an active firm continuing the legacy of its founding principals with an office located in downtown Philadelphia.

Robert Geddes and Melvin Brecher met as classmates at Harvard University's Graduate School of Design where the two earned Master of Architecture degrees in 1950. Three years later, Geddes and Brecher formed a practice that was soon succeeded by Geddes, Brecher, and Qualls in 1956. Prior to the creation of this firm, Geddes and Brecher were the runners-up for the Sydney Opera House competition in 1955. Warren Cunningham joined the group in 1958 specifically to collaborate with the firm on the Moore School Pender Laboratory for the University of Pennsylvania.<sup>64</sup> GBQC officially formed when Mayor Richardson Dilworth commissioned the architects to design a building for the

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<sup>61</sup> "Police Building Wins Awards of Architects."

<sup>62</sup> "Geddes Brecher Qualls Cunningham," Architectural Archives of the University of Pennsylvania, accessed October 21, 2012, <http://www.design.upenn.edu/archives/majorcollections/gbqc.html>.

<sup>63</sup> "Robert Geddes, FAIA," Faculty, Princeton University School of Architecture, accessed October 21, 2012, [http://soa.princeton.edu/02fac/fac\\_frame.html?geddes.html](http://soa.princeton.edu/02fac/fac_frame.html?geddes.html).

<sup>64</sup> Robert Geddes, "Principles and Precedents: Geddes Brecher Qualls Cunningham," *Process Architecture* 62 (October 1985): 5.

Philadelphia Police in 1959, the firm's first public building.<sup>65</sup> At the time, the police department was housed in a cramped space in City Hall, which prevented the department from functioning efficiently. Headquartered in Philadelphia, GBQC was at the frontline of a changing city undergoing vast redevelopment projects. Philadelphia was vigorously restructuring the way it interacted with the public and soon became a hotbed of innovative architecture during the mid-twentieth-century.

In an effort to rebuild architectural education in Philadelphia, G. Holmes Perkins, the new dean of the University of Pennsylvania's School of Fine Arts beginning in 1951, restructured the faculty through the inclusion of prominent architects and planners, including both Geddes and Qualls. Perkins laid the foundations for what would come to known as the Philadelphia School, a group of architects and engineers whose beliefs centered on a style that worked to serve the needs of older, pedestrian-scaled cities. Geddes would remain at Penn until 1965, when he would go on to become the new dean of Princeton University's School of Design through to 1982.<sup>66</sup> Qualls stayed with the University of Pennsylvania into the 1990s.<sup>67</sup>

GBQC, alongside Louis I. Kahn, Vincent Kling, Romaldo Giurgola, and others, worked to reshape the city of Philadelphia at the behest of Mayor Dilworth and Edmund Bacon. The architecture that resulted is a representation of the city's desires to expand and adapt to an urban environment that is often largely defined by brick. Mid-century architecture was employed by Philadelphia to erase blight, as well as to implement a series of planning initiatives that set the direction for redevelopment and growth.<sup>68</sup> The Roundhouse is one of the many structures built as part of this effort.

Following the construction of the Roundhouse, GBQC embarked on an ambitious career designing for both civic and educational institutions. The firm embraced large-scale projects that would serve a significant number of people. In 1965, GBQC was commissioned to design the United States Embassy in Islamabad, Pakistan. Here, the building acquiesced to the landscape and respected the site and commanding scale of the surrounding terrain.<sup>69</sup> The complex was completed in 1979.

The same year the firm began the Embassy, they began to design a new dormitory for the University of Delaware. The Rodney Complex was completed in 1967 and accommodated both the private and communal needs of students in a campus setting.<sup>70</sup> Following the Pender Laboratory and aforementioned dormitory project, GBQC would go on to design for many other colleges and universities. This includes an academic building at Beaver College Science in Glenside, Pennsylvania (1971), the Institute for Advanced Study in Princeton, New Jersey (1971), and Stockton State College in Pomona, New Jersey (1968-1983). These projects embody spaces organized and oriented towards specific functions customized to each given program. The material of choice was concrete, often accented by other materials, and was used in various ways to facilitate a sense of human-scale in their buildings.

As for civic entities, GBQC's projects incorporated widespread planning in addition to architectural design. The commission for the Birmingham Jefferson Civic Center in Alabama was the result of a

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<sup>65</sup> Ibid.

<sup>66</sup> Emily T. Cooperman, "Geddes, Robert Louis (b. 1923)," Philadelphia Architects and Buildings, accessed October 4, 2012, [http://www.philadelphiabuildings.org/pab/app/ar\\_display.cfm/23846](http://www.philadelphiabuildings.org/pab/app/ar_display.cfm/23846).

<sup>67</sup> Emily T. Cooperman, "Qualls, George Wyckoff (1923-2001)," Philadelphia Architects and Buildings, accessed October 4, 2012, [http://www.philadelphiabuildings.org/pab/app/ar\\_display.cfm/23412](http://www.philadelphiabuildings.org/pab/app/ar_display.cfm/23412).

<sup>68</sup> Clendenin, "Thematic Context Statement."

<sup>69</sup> Geddes, "Principles and Precedents," *Process Architecture*, 21.

<sup>70</sup> Ibid., 24.



national design competition held in 1966. The plan is composed of four entertainment and cultural facilities around a civic plaza.<sup>71</sup> In the wake of an expanding downtown development, this civic center created a new focal point for the community.<sup>72</sup> Following the completion of this complex in 1976, GBQC began the design for Liberty State Park in Jersey City, New Jersey. This project commenced in 1979 and was the state's first urban state park and a catalyst for renewing the Hudson River waterfront.<sup>73</sup> One of the larger designs the firm pursued was the Vienna South International Town Planning Competition in 1971. This design was for a new community of 70,000 people along a 2,500-acre area of land extending four miles south of the city's historic core.<sup>74</sup> GBQC won first prize "on the basis of the jury's assessment of its rational distribution of movement and activity systems and flexibility for change and growth, its balanced monumental and human-scaled landscapes, and its varied buildings and open spaces."<sup>75</sup>

Other notable buildings by GBQC include the Architects Housing Company in Trenton, New Jersey (1979), the Mobil Environmental and Health Science Laboratory in Hopewell, New Jersey (1983), and the south wing addition to the J. B. Speed Art Museum in Louisville, Kentucky (1983). Each of these three accommodates and responds to different programmatic needs.

### *The Design of Philadelphia's Police Administration Building*

The design for the Roundhouse utilizes emblematic principles set forth by GBQC that both stress and celebrate the building's architectural significance. Philadelphia's post-war years ushered in a newly reformed government and police administration that paralleled innovative architectural explorations in materials and technology. The form and mass of the Roundhouse was employed not only for its expressive ability, as achieved by the precast concrete panels, but also for the idea that its circular shape fostered efficiency in the building's program. When constructed in 1962, the building became a civic symbol that was meant to appear as inviting as possible in an attempt to avoid negative connotations commonly associated with police or governmental entities.

There is a total of 125,000 square feet in the Roundhouse accommodating four floors. The basement contains detention cells and prisoner processing facilities, purposefully placed underground by GBQC to hide it from public view. The ground floor, originally accessed by the plaza on the north side of the building, contains an information desk for controlling traffic and visitors, as well as the Real Time Crime Center, auditorium, cafeteria, and other office space. Shortly after the police began operations in their new building, the main entrance was closed and the entrance found on the south side, facing the parking lot became the primary entrance. As a result, the plaza sits vacant and unused. The design and inclusion of this space was to promote and welcome public engagement while being in conversation with Franklin Square. In addition to the plaza, tall concrete, rectangular panels delineate the majority of the building's perimeter as it meets the sidewalk; GBQC included these as a way to relate the rounded masses to the rectangular character of Philadelphia.<sup>76</sup>

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<sup>71</sup> Ibid., 48.

<sup>72</sup> Ibid., 48.

<sup>73</sup> Ibid., 59.

<sup>74</sup> Ibid., 134.

<sup>75</sup> Ibid., 134.

<sup>76</sup> "Circling in the Square," 122.

The upper three floors, each comprised of 24,000 square feet, contain offices that house the various departments of the Philadelphia Police Department. The precast panels that frame the main shaft of the building cantilever outward a total of 12 feet from the ground floor. The precast panels vary only slightly in size but are typically 5 feet wide by 32 feet in height. They are richly molded and contain a white quartz aggregate finish with a silicone treatment.<sup>77</sup> On the interior, structural elements are treated with a smooth gray finish that was to be painted.<sup>78</sup> The windows that puncture the panels are deep-set and bronzed-tinted, sloping outward to provide space for the necessary mechanical functions.

The circulation throughout the building follows the curvilinear movement created by the overall form. This geometry eliminates the excessive visual length and monotony created by corridors of typical, rectangular office buildings.<sup>79</sup> In addition, the width of the corridors was tailored to the flow of traffic and affords a sense of location within the building.<sup>80</sup> Despite the efforts in maximizing the use of space, employees working in the Roundhouse complained of dizziness only a few days after the building was occupied.<sup>81</sup>

On the roof, circular, cast-in-place concrete penthouses enclose the mechanical systems. The use of cast-in-place concrete is limited to the foundations, the lobby floor, corridor framing, and the cylindrical shafts that enclose the stairs and elevators.<sup>82</sup> These cylindrical cores act as restraining anchors for the precast concrete panels that comprise the building's structure.<sup>83</sup>

### *August Komendant*

August Komendant was hired by GBQC to oversee the design, production, and installation of the precast concrete panels used for the Roundhouse. His expertise in structural engineering was highly influential in the emerging field of precast concrete engineering during the mid-twentieth-century. Komendant was brazen in his efforts to make feasible the designs set forth by the architects he collaborated with. He did this by using innovative techniques and materials that Jack Pyburn, the Harrison Associates Visiting Scholar in Historic Preservation at the Georgia Institute of Technology, calls him a "structural engineering cowboy" for doing so.<sup>84</sup> Komendant, along with another engineer, Robert Le Ricolais, was included in the Philadelphia School.

Born in Estonia on October 2, 1906, Komendant later moved to Germany where he would earn a doctorate from the Technical University in Dresden.<sup>85</sup> Interned by the United States Army during World War II, Komendant's engineering expertise was uncovered by General George Patten who employed his skills in determining the stability of bridges prior to allowing troops to cross.<sup>86</sup> This led to Komendant's recruiting to assist the United States Army in rebuilding war-damaged bridges across Europe. By 1950, he immigrated to the United States where he would form a consulting practice in

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<sup>77</sup> Komendant, "Precasting Makes New Strides," 191.

<sup>78</sup> Ibid.

<sup>79</sup> "Circling in the Square," 122.

<sup>80</sup> Komendant, "Precasting Makes New Strides," 186.

<sup>81</sup> Smart, "In Our Town."

<sup>82</sup> "Pioneering in Precast Concrete," 59.

<sup>83</sup> Komendant, "Precasting Makes New Strides," 189.

<sup>84</sup> August E. Komendant, *18 years with architect Louis I. Kahn*, (Englewood, NJ: Aloray, 1975), 1.

<sup>85</sup> "A. E. Komendant, 85, A Structural Engineer," *New York Times*, September 18, 1992, accessed October 8, 2012, ProQuest Historical Newspapers.

<sup>86</sup> Carter Wiseman, *Louis I. Kahn: Beyond Time and Style* (New York: Norton, 2007), 96.

Montclair, New Jersey.<sup>87</sup> Based on Komendant's experience with concrete material while rebuilding war-damaged bridges, he published *Prestressed Concrete Structures* in 1952.<sup>88</sup> *Contemporary Concrete Structures* was published in 1972.

From 1959 to 1974, Komendant was a professor of architecture and taught courses in structural engineering at the University of Pennsylvania. During his time there, he established a relationship with Louis I. Kahn. The two men met in 1956 and revealed in the fact that they were both born in Estonia. Kahn admired Komendant for pursuing designs that other structural engineers were too cowardly to consider. Komendant was commissioned by Kahn for Richards Medical Laboratories (1960) where post-tensioning was used for the building's concrete beams. The two men remained friends until Kahn's death in 1974.<sup>89</sup>

*F: Contains elements of design, detail, materials or craftsmanship which represent a significant innovation.*

The precast concrete panels that define the structure, form, and mass of the Roundhouse were manufactured using a process called Schokbeton. These panels integrate the structural, mechanical, and electrical systems creating a fully integrated system. The Schokbeton process was first created in Holland and subsequently patented by 1932. When translated from Dutch it means "shocked concrete." The idea for this particular process is said to have begun from observations of a worker moving a wheelbarrow full of concrete over a rough road. This worker took notice of the effects the rough road had on the concrete.<sup>90</sup> After years of research and testing, the Schokbeton process resulted in the optimal water-to-cement ratios, the creative construction of molds, and calibrated shocking (vibration) of the cement during placement.<sup>91</sup> Also important to note is that glass-making equipment was used instead of typical concrete making equipment. This resulted in a more precise and higher quality product.

The first product to be made using this process was for the windows of a barn being built in the Netherlands during the 1930s. This barn was assembled using all pre-cast concrete. The structure was in a honeycomb form that allowed for the precast units to be easily, and quickly, inserted. Building in this manner led the Dutch to experiment with housing considering assembly was proving to be an efficient process. Subsequently, seeing the potential of the Schokbeton process, the Dutch were quick to export this precasting system internationally resulting in a vast number of structures utilizing this form of concrete.

Unique to this precasting method that differentiates it from others is the use of zero-slump concrete. The concrete mixture uses only enough water to activate the chemical process of the cement.<sup>92</sup> Using such a small amount of water allows for the concrete to dry quickly, develop its strength early, and be removed from the mold so that other panels can be made.<sup>93</sup> Additionally, the Schokbeton process creates a concrete with high strength and a uniform finish due to the mix and use of vibration. Using

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<sup>87</sup> "Komendant, 85."

<sup>88</sup> August E. Komendant, *Prestressed Concrete Structures* (New York: McGraw-Hill, 1952).

<sup>89</sup> Komendant, *18 years*, 1.

<sup>90</sup> Bernard P. Spring and Donald Canty, "Concrete: The material that can do almost anything," *Architectural Forum* (1962), 92.

<sup>91</sup> Pyburn, "The Role of Architectural Precast Concrete," 115.

<sup>92</sup> Komendant, "Precasting," 189.

<sup>93</sup> G. Husken, H. J. H. Brouwers, "On the early-age behavior of zero-slump concrete," *Cement and Concrete Research* 42 (2012): 501, accessed November 12, 2012, <http://josbrouwers.bwk.tue.nl/publications/Journal80.pdf>.

the maximum amount of stone in combination with zero-slump concrete resulted in a desirable optimum finish and strength. Other advantages of the Schokbeton process include the resulting water-resistant surface due to the required aggregate, sand, and cement ratio in addition to the compacting process.<sup>94</sup>

In order to properly consolidate the concrete and avoid the inclusion of voids when using the Schokbeton process, a force other than gravity is required. This is due to the low workability that zero-slump concrete creates. To achieve this, a shocking table was invented that was precisely calibrated. Following the mixing inside upright drums with counter-rotating paddles, the concrete is poured into custom-designed molds that rest on the steel-framed shocking table—these upright drums are an example of some of the equipment used in making glass. For the Roundhouse, the molds for the panels measured 32.8 feet by 8.2 feet. Once the concrete has been poured into the apparatus, the table raises and lowers the mold about a quarter of an inch in the air about 250 times per minute.<sup>95</sup> Using the Schokbeton process, panels can be cast as large as 12 feet by 40 feet and have the ability to retain its strength. Inversely, panels could be cast as thin as two inches and still perform just as well as its larger counterparts. Compared to other precasting techniques available during the mid-twentieth-century, Schokbeton was considered to be one of the more expensive processes. This was largely due to the cost of the necessary equipment, such as the shocking table. However, this process affords both great flexibility in design and the customization of color.

Emerson Cohen, Don Rothenhaus, and George Santry were responsible for introducing Schokbeton to the United States.<sup>96</sup> Cohen was responsible for marketing, Rothenhaus was the first licensee for the product, and Santry was the owner of rights to Schokbeton in the United States. In 1960, Rothenhaus, Cohen, and other colleagues, established Eastern Schokbeton in New Jersey.<sup>97</sup> The company's first commission was for Philip Johnson's Lake Pavilion on his personal property in New Canaan, Connecticut. The commission for the Roundhouse followed shortly after this and was the company's first large project. When GBQC decided that they were to use precast concrete panels for this building, they hired August Komendant to help design the panels and their necessary molds.<sup>98</sup>

The use of Schokbeton for the Roundhouse's concrete panels is exemplar of the marriage of craft and technology inherent in this process. GBQC wanted a white exterior for the building via the panels. This required the use of white cement, white sand from Maryland, and white quartz from Georgia. The coffered floor slabs were also manufactured using the Schokbeton process, but are gray in color to differentiate from the structure's exterior design and appearance. There are a total of 144 of the exterior precast concrete wall panels. These measure 5 feet by 35 feet in height and contain web flanges that are 2-¼ inches thick and 21 inches in depth. Again, these panels are the structural system for the Roundhouse and house the mechanical and electrical equipment eliminating the need for a suspended ceiling.<sup>99</sup>

Creating the space for the piping, heating units, air conditioning ducts, diffusers, and lighting fixtures required the design of several different joint details. For instance, "ears" were molded into the panels;

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<sup>94</sup> Spring and Canty, 92.

<sup>95</sup> Pyburn, "The Role of Architectural Precast Concrete," 115.

<sup>96</sup> *Ibid.*, 116.

<sup>97</sup> *Ibid.*, 116.

<sup>98</sup> *Ibid.*, 117-118.

<sup>99</sup> "Pioneering in Precast Concrete," 50.

these extend from the plane of the windows and act as points of connection. There are narrow “ears” that house the heating pipes and wider “ears” that house high-velocity air risers.<sup>100</sup> Komendant and GBQC took great consideration in designing how light would hit the panels in addition to how these panels would control both water runoff and the collection of dirt.<sup>101</sup>

*H: Owing to its unique location or singular physical characteristic, represents an established and familiar visual feature of the neighborhood, community or City.*

For those entering and leaving Philadelphia using the Vine Street Expressway, the Roundhouse is the first and last building people see. The building’s form and mass create a sharp contrast with the surrounding gridded nature of Philadelphia. Seated in between some of the city’s prominent neighborhoods, the Roundhouse is positioned in an integral location that is advantageous to both the Philadelphia Police and the general safety of the public. In addition, it is important to understand the city’s initial site selections and their justifications for choosing the current site of the Roundhouse.

The bold, curvaceous form of the Roundhouse has established this building as an iconic, sculptural element keyed into both the surrounding neighborhood and Philadelphia. Local news reports and general public gatherings are known to use the Roundhouse as a meeting place. The building is often sited when celebrating the hard work and unmatched commitment by the Philadelphia Police Department creating strong visual associations.

Many people often forget the reasons behind placing the Roundhouse in its present neighborhood. This building’s role in Philadelphia’s history is often dismissed too quickly. Furthermore, the participation the Roundhouse has amid the nation’s architectural conquests during the mid-twentieth-century is not widely acknowledged. The Expressionist style was used to celebrate innovation and technology. Philadelphia took great consideration when investing in such a high quality of design. Because of this, the Roundhouse has become permanently embedded in the city’s fabric contributing to Philadelphia’s impressive collection of architecture.

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<sup>100</sup> Ibid.

<sup>101</sup> Komendant, “Precasting,” 189.



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