TRACING THE TOWER for views of the city

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ABSTRACT

Whereas the Tower overlooks not nature but the city; and yet, by its very position of a visited outlook, the Tower makes the city into a kind of nature; it constitutes the swarming of men into a landscape, it adds to the frequently grim urban myth of a romantic dimension, a harmony, a mitigation; by it, starting from it, the city joins up with the great natural themes which are offered to the curiosity of men: the ocean, the storm, the mountains, the snow, the rivers. To visit the Tower, then, is to enter into contact not with a historical Sacred, as is the case for the majority of monuments, but rather with a new nature, that of human space: the Tower is not a trace, a souvenir, in short a culture; but rather an immediate consumption of a humanity made natural by that glance which transforms it into space.'
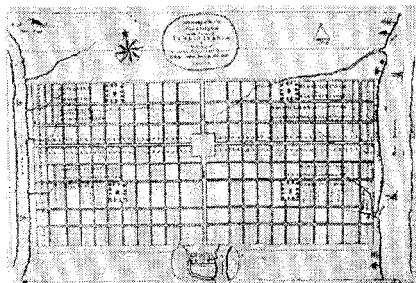
This paper examines the relationship of architecture as infrastructure and the ideal plan for Philadelphia. It suggests, through an analysis of the tower structures of the city, that a critical relationship exists between the original Penn/Holmes plan for the city and the development of its tall structures. Philadelphia's towers were historically prominent elements of its city building because of the command of space they allowed. In the modern city, the tower became reinvented as an element within clusters of high-rise structures but significantly, without the loss of the motivation to construct landmarks and places of viewing. The focus here is on the dialog between high-rise structures, viewing towers, and open spaces of the city plan as interrelated infrastructure.? Together they reinforce Philadelphia's ideal plan structure through figural public space of the city in a three dimensional "ground." The spatial displacement of public places both within the city grid and above it serves as a primary contributor to the image of city.
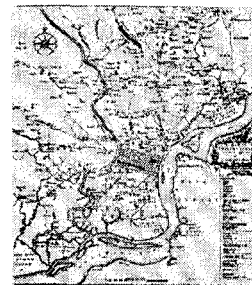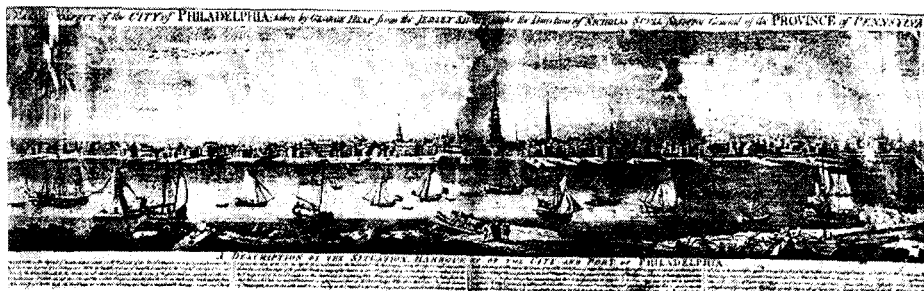
PHILADELPHIA CITY IMAGE

The vision of Philadelphia was first put to paper in the 1683 Penn/Holmes plan.' Penn's city was thought of as ideal, a place of tolerance and equality. The somewhat uniform one by two mile grid was laid out between two rivers. It had four squares of eight acres each, distributed in four quadrants. The quadrants were divided by two one-hundred foot wide streets that intersected at a central square of ten acres. The Penn vision of a Green Country Town called for equal emphasis on both rivers through equal distribution of population and prime real estate. The central square was envisioned as a place of public institutions and a meeting place for all. The attributes of this ideal plan were straightforward and powerful, demonstrating that the centrally organizing cross-axes were a complement rather than contradiction to the placing of the five-square regions. As the city grew, the overall structure of the first plan remained intact.

Prints depicting Philadelphia's skyline, buildings, and monuments were prevalent throughout the early years of the city. The earliest formal depiction of Philadelphia by Peter

Figs. 1-2. Penn/Holmes 1683 plan and Peter Cooper, East Prospect of Philadelphia, 1720.
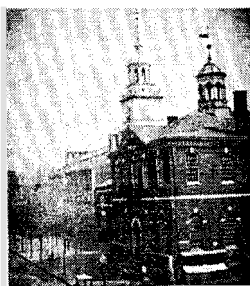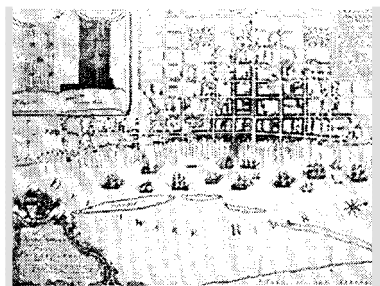
Figs. 3-4. *Nicholas Skull and George Heap's"East Prospect of the City of Philadelphia," 1754. Skull and Heap's " Map of Philadelphia and Parts Adjacent," 1753.*

Cooper, c. 1720[4] was an east prospect with a view of the city from the Delaware River, at that time the city's center of activity and major point of entry. In the painting, ships carrying British flags crowd the foreground. The city is on the edge of the river and is no more than four blocks deep or four stories high. There is a barely detectable cluster of three towers in the town's center, one a private house, one the Quaker Meeting House, and the third the Court House. The major landmarks included houses, wharves, and only a few public buildings. The parochial nature of the city is apparent in the print. A 1744 criticism of the city echoes this character by citing Philadelphia's "lack of turrets and steeples to catch the eye from a distance."' The 1720 painting, thought to be the base for a promotional engraving commissioned by the Penn family, is at odds with the 1682 Penn/Holmes plan, for want of population and industry to fill it.[6]

Thirty two years after the Cooper painting, Philadelphia was known through the earliest accurate perspective view of the city. Drawn in 1752, and printed in two subsequent versions, Skull and Heap's "East Prospect of the City," again depicts the Delaware River view.' The view contains more city than the Cooper view and the center of the city reaches deeper into the drawing. The city's center is detectable because of a cluster of towers, six of which occupy the middle of this image. The 'center' is again the Court House and the Quaker Meeting house, now dwarfed by development during the thirty year period since the first view. To the right are towers of other institutions – Christ Church is the tallest, the Academy has a spire one third of the height, the Presbyterian Church and the German Reformed Church with a lessened height meet the top level of the city. To the left of the center is the freestanding tower of the State House. The mid-century

city vision showed extensive growth even though the Penn/Holmes ideal plan was yet to be fully occupied. The towers parallel the river in the dense grid portraying an image of the city reflective of its numerous institutions. The complementary plan by Skull and Heap shows the city within the province. It repeats in part the image of the Penn/Holmes plan, showing the city as an ideal grid with a center between two rivers to the east and west and open land to the north and south. The city's image was at the same time represented by a linear arrangement parallel to the river in the perspective view – a "real" vision, and the and as-yet-empty plan grid – the "ideal" vision.

Growth of Philadelphia occurred in part through the filling in of the plan in the westward direction during the eighteenth and nineteenth centuries. The new State House, built for the provincial government between 1732-48, was a sign of this growth. Its location, on the southwest edge of the dense part of town was adjacent to one of Penn's eight-acre squares. It was a modest domestic-scale building, but the tower, built in a second phase in 1750 to commemorate fifty years of William Penn's Charter, is massive in footprint and tall enough to command the interest of the entire city. The tower was built with a symbolic purpose for the city and marked a symbolically important place for the new nation. The adjacent open space to the south of the State House was a public garden and the open space was at times used as a center for political rallies and debates. While the State House tower took on the traditional role as a singular symbol for the city and marker of an important space, the collective grouping of towers gave Philadelphia its prominent civic image. The traditional purpose of the spire appropriately reflects the coming of age of Philadelphia as the center of the new nation

Figs. 5-7 (l to r). Plan of Philadelphia, 1762; State House, c.1855; and Independence Square, 1868.
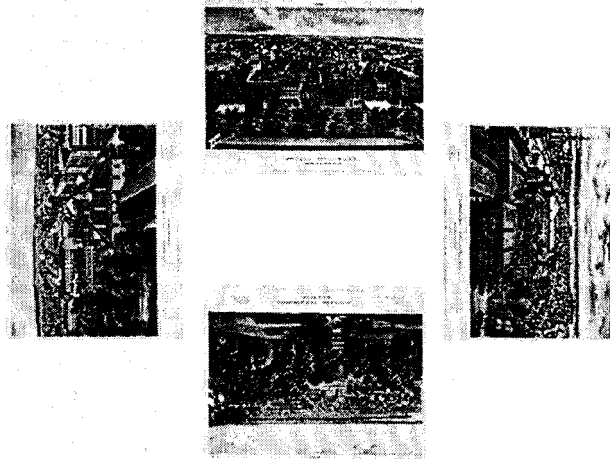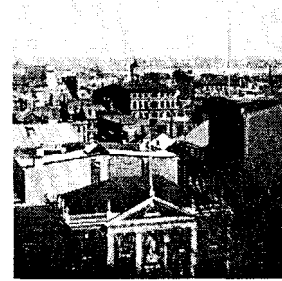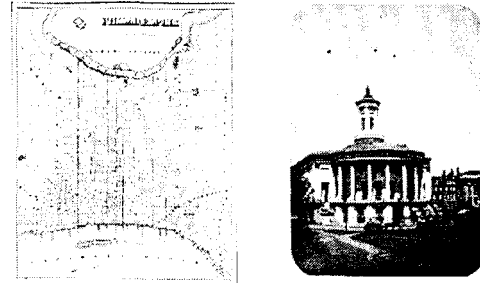
Fig. 8. John Caspar Wild, "Panorama of Philadelphia from the State House Steeple," 1838.

at the turn of the nineteenth century.

VIEWING TOWERS IN THE NINETEENTH-CENTURY GRID

The first steeple of the State House was demolished in 1781 and reconstructed by William Strickland in 1828 in the context of a growing industrial city. In 1838, the Philadelphia State House was the site for the first set of panoramic views of an American city drawn from the air.[8] This set of four views presents the whole city from the tower towards the cardinal points. They constitute a 360" representation of the city from its symbolic center. A set such as this, uncommon in America at the time, was representative of a new consciousness which paralleled growth and expansion in what was then the country's pre-eminent city.[9] The public viewing tower offered a new prospect of the city, and satisfied the desire to emerge from the congested street through a newfound ability to get above the level datum of the city's top story. For the first time in Philadelphia, views *of* and *from* the centric tower reveal the controlled grid order of the plan together the freedom of the view. The State House as a "center" represented a new – landed – vision in the city, rivaling the river. The symbolic status of the tower and spire, logically embedded in the grid, is supported by the activity of the climb in a time when "Americans ...had a positive mania for climbing monuments, towers, and cupolas..."[10] The emerging interest in an architectural verticality of the city anticipated the advent of the prototype skyscraper at mid-century.[11]

Rapid growth and extensive change in the city during the first half of the nineteenth century brought with it new institutions and new infrastructure. Shortly after the repair of the State House tower, the Merchant's Exchange was built as the city's new center for commerce.[12] Intended to accommodate activities which had formerly taken place in a public tavern, the new building now portrayed an image more closely associated with banks and public institutions. The elements of architecture which helped create the 'institution'
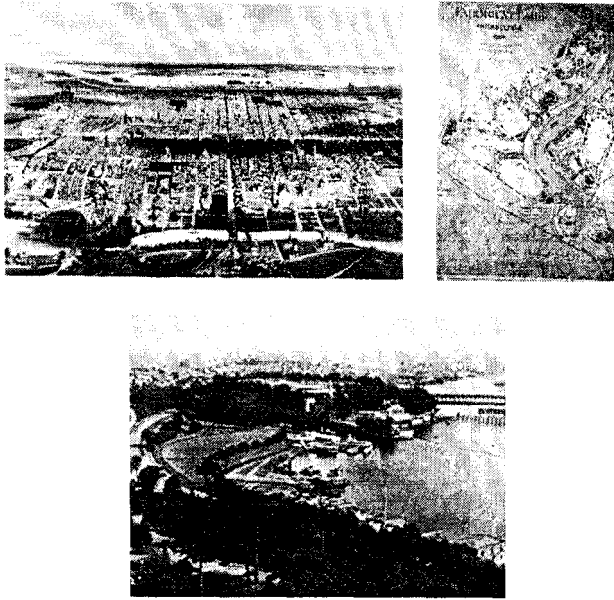

Figs. 9-11 (l to r). Thomas G. Bradford, plan of Philadelphia, 1838; Merchant's Exchange Building, c. 1859; and View southeast from the State House (Merchant's Exchange Tower in the center), 1867.

included a projecting bay, a flat dome, and a cupola. The public viewing tower of the exchange, listed in a city guidebook from that time,[13] overlooked the rooftops of warehouses to the east, in the direction of the river. The Merchant's Exchange viewing tower gives a geographic complement to the State House tower. Now the collective group of towers in the eastern half of the city contains a pair of viewing towers which together present through the respective views the center and edge conditions of the ever-expanding city. It is perhaps culturally significant that government and commercial centers are symbolically joined because of these two public places at the top of the city at a time when trade and mercantile exchange are positive contributors to the growth of the city and region.[14]

CITY/COUNTRY AS AN URBAN VISION

Westward expansion in and beyond Philadelphia's grid continued in the nineteenth century. The northwest quadrant, the last to be developed, was a center of industry. Beyond this quadrant, the development of what was to become the country's largest urban park was begun by first incorporating tracts of land around the city's waterworks and the Schuylkill River. The mapping and planning begun in 1868, provided a contrast to the city grid in an era where "naturally landscaped public parks" were planned and built in most major American cities. It was created in part to protect the city's water supply, but also to add places of recreation and leisure within the newly consolidated city limits.[15]

The 1876 Centennial Exhibition was sited on the western bank of the Schuylkill River in Fairmount Park.[16] There were many interrelated projects for the new park, including restau-

Figs. 12-14 (l to r). View of Philadelphia. 1855; Plan of Fairmount Park, 1868; and View south from Lemon Hill Observatory, 1876.

rants, gazebos, bandstands, etc. Three towers were built on the park's highest ground – Lemon Hill Observatory to the east in the oldest part of the park, George's Hill Observatory at the western edge of the city, and Sawyer's Improved Observatory on the Belmont Plateau to the north. The towers projected an architectural imagery in stark contrast to the rustic and romantic appearance of other park structures. These towers were future-looking functional constructions built for the demonstration of vertical mechanical travel and for aerial viewing. The exhibition layout and contents, including the towers, were elements of any world's fair of the period, and this can perhaps be said for the siting of and panoramic views from the rowers as well.[17] They were sited on plateaus and focused inward on the park according to the layout of the exhibition. This created a setting which provided conditions for distant views from the park to the city and beyond. The views emphasized the contrast of city and countryside and highlighted the need for a connection between the city and its newly planned open spaces.
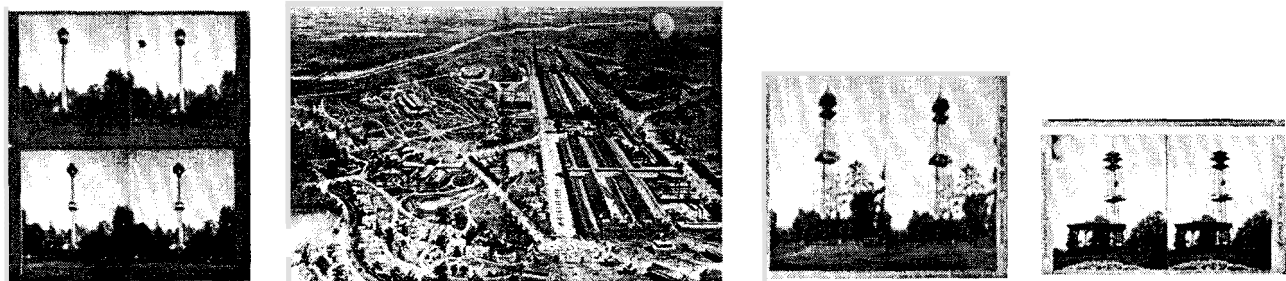
At the time of the Centennial Exhibition, a new City Hall was under construction in the geographic and symbolic center of the Penn/Holmes plan, the ten-acre Center Square. The inversion of Center Square from open space to building resulted in a plan that contained an open court permitting the crossing of the widest streets of the city within the building itself. The tower was attached to its northern front facing the newest area of city expansion on North Broad Street.
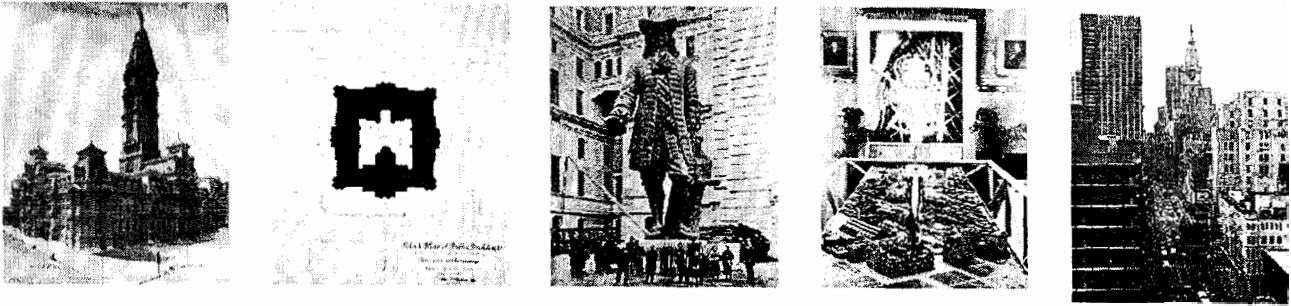
In 1917 a final parkway scheme was implemented connecting the city center to the park. It used prominent features of the northwest quadrant as axial markers for a diagonal cut through the city grid from the massive City Hall tower towards the Centennial Exhibition's Memorial Hall dome. A traffic circle was superimposed on the original eight-acre square of the Penn/Holmes plan. The parkway ended just beyond the northwest corner of the ideal plan, terminated by the naturally occurring outcrop, Fairmount,[18] on the site of center city's first reservoir. Fairmount Park's road system continued around the hill providing a link between the city streets and the countryside. A connection of city and park with a City Beautiful "vision" was in a sense a re-connection to Penn's original vision of a "Green Country Town." The use of modern city elements, ideal plan spaces, and natural features, was essential to the cohesive nature of this massive planning project, providing the city with open spaces befitting a prominent city in the beginning of the twentieth century. The centric City Hall tower was both link and anchor between the grid and the landscape of the city.

IDEAL CENTER - LOCATION AND ICON

In 1894, a new statue of William Penn was erected.on top of the City Hall tower as an iconic symbol of the city's government. The view of the tower was extensive, and the center of the city was easy to locate from any point.[19] A view from the City Hall tower in any direction was a view of an expanding twentieth-century city. Yet another result of the locational shift of city government was the shift of businesses and institutions within the city. Philadelphia grew to a high-rise city in the late nineteenth century and early twentieth century. The modern high-rise building type was best accommodated at the intersection of the wide streets, Broad and Market and the new Parkway at the center of the city. The City Hall tower

Figs. 15-18 (l to r). Sawyer's improved observatory, c. 1880.; 1876 Centennial Exposition from George's Hill, looking east; Lemon Hill Observatory, c. 1880; and George's Hill Observatory, c. 1880.

Figs. 19-23 (l tor). City Hall, 1899; City Hall plan; William Penn statue for City Hall tower, 1892; Parkway model and plan, looking northwest, 1911; and Market Street towards City Hall and PSFS, looking west, 1976.

became the center and focus of adistinctly tall cluster of office buildings.

In 1930, the Philadelphia Saving Fund Society, the city's oldest savings bank, moved its headquarters to a new location three blocks from the City Hall. Howe and Lescaze's design became not only a technological and architectural landmark but was unique because of its location. Most of the high-rise buildings were located to the north or south of City Hall and provided a neutral three dimensional grid,[20] whereas the PSFS was positioned away from the center to the east. The architectural result of this decision was a free-standing, uniquely visible, modern icon. The pristine detailing and soaring verticality of the tower could not be ignored. It was awe inspiring to commuters and city dwellers alike. The neon sign and radio tower atop the building were seen from a distance in all directions. Philadelphia's "modern building" stood in juxtaposition to the City Hall tower. The thirty-two foot high letters – PSFS – and the thirty-six foot high statue of the city's founding father were permanently joined by adjacency within the primary space of the city plan.
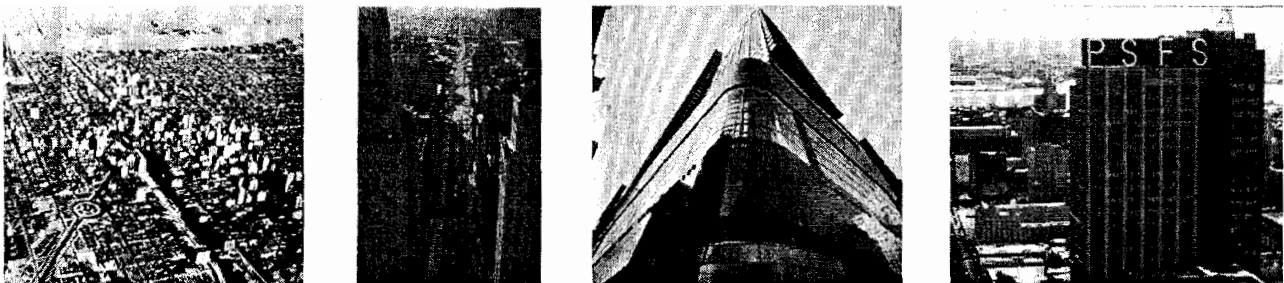
From the public space on the roof of the PSFS, the City Hall tower guided the northwest view to the parkway and beyond to the natural environment of the park. Although the view from the City Hall tower provided the best position in the city because of its central location and height within the grid, the PSFS provided the best view of the city from within the grid, as it included the City Hall tower and statue, the parkway, the park. The most poignant contrasts of the city – tradition and modernity, congestion and freedom, man-made and natural, mythic and everyday, were brought together in this composition.
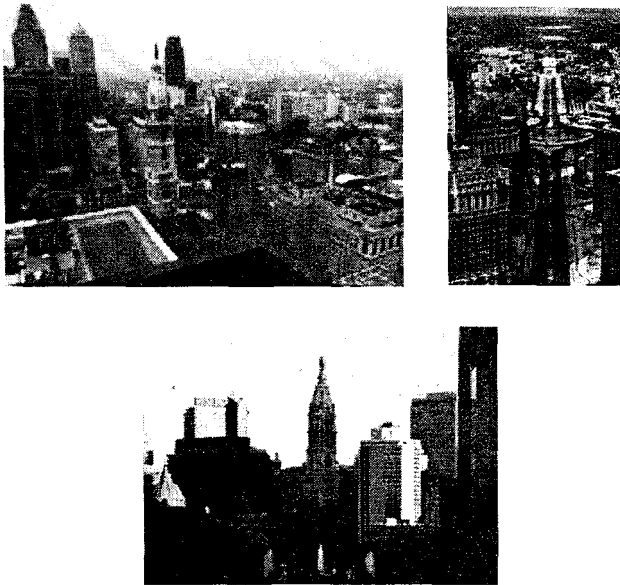
TOWER - REINFORCING HERITAGE

The heritage and maintenance of the original Penn/Holmes plan became a focus for the architects and planners of the twentieth century in Philadelphia." New infrastructure for transportation, housing, and open space were envisioned alongside reworked infrastructure and infill. The most recent high-rise with a public viewing tower to be built in Philadelphia was the 1975 Penn Mutual tower by Mitchell/Giurgola Associates. The new structure, an addition to a nineteenth century building, is located on a site constrained by the tight scale of the eighteenth and early nineteenth century city. The tower type is apparent in the overall massing of the architecture. Its architectural development makes the most of the logic of the Philadelphia plan and the then-current changes impressed on the city grid. The tower location, just south of the State House lawn is noticeably connected with what is now the historic center of city. Using the advantage of its unique site, the Penn Mutual tower also highlights the difference between the adjacent traditional tower and itself. The view from the tower to the north looks over the adjacent square towards the State House tower. The State House tower is framed by the open space beyond it to the north.?' The view from the Penn Mutual building reflects the tower's infill condition of the mid-twentieth century city, and consequently focuses its vista within the city grid.

CONCLUSION

...if this city were treated as a radical artifice with its materiality kept constantly in mind, then it might reveal

Figs. 24-27 (l tor). Aerial view, looking east, 1930; View from City Hall tower, looking north, 1994; PSFS, from 12th and Market Streets, 1933; and PSFS, from City Hall tower, looking east, 1994.

Figs. 28-30 (l tor). View from PSFS roof. looking northwest, ca. 1994; View from City Hall tower, looking northwest. 1994: and View of Parkway, PSFS tower. City Hall tower, looking southeast, 1996.

the rules of its own construction, allowing the spectator to experience 'what' is being re-presented in its visual tableaux and architectural scenes.....[23]
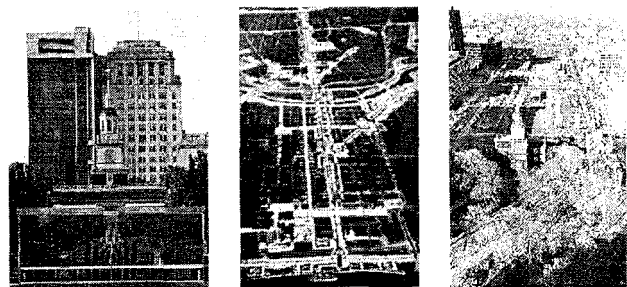
The term "infrastructure" is generally used to describe the physical fabric of cities, their transportation systems, architecture, engineering, energy systems. etc. To single out a city's architecture of towers as a primary contributor to and condition of this infrastructure is to recognize Philadelphia's particular architectural identity with its founding plan. The original ideal, geographically constrained and seemingly fixed by Penn's prescription for its land use, proved to be one of the most dynamic of the modern age cities. Not only did the five-square plan create a center with two sets of equally balanced districts, it described the center as a single variation within the unit of the five squares. The axial bisection of the unified system was a logical next step in the plan's development because it set up a condition in which the bounded plan was simultaneously a figure of infinite extension. Each condition dialectically implies the other. Within this context, the architecture of the viewing tower creates the potential for active and varied relationships within the city. Viewing towers in Philadelphia's public buildings – the State House tower and the City Hall Tower – became icons within the city and anchors for changes in the plan. Privately owned viewing towers – the Fairmount park towers, the Merchant's Exchange, the PSFS, and the Penn Mutual towers – supported and enhanced the plan/tower/topography relationships already in existence. The chronological look at the viewing towers as a part of the development of the tall structures in Philadelphia reflects forward looking architectural achievement and is also primarily the manifestation of the cultural development of the city.

The architecture of the viewing tower in Philadelphia can be seen. not only as a primary indicator of the three-dimensional space of the developing ideal plan but also as a building type that identified the character of the plan. The provision of public space at the top of the city adds a reflective and therefore critical dimension to the city. Whether the viewing towers support the growing city of the past or the subtractive city of the present, they present us with the potential to identify the structure of the whole. While all but one of the towers are no longer for public use, the memory or 'trace' of the viewing towers is essential to the physical and cultural understanding of the city and its ideal plan. As a group, they present a reflection of the city's particular order, for they mark prominent sites of mythical, institutional, and cultural importance. To envision space at the top of the city is to create the potential for viewing and re-viewing the city and thereby continually uncover the inherent logic of the city's plan. Most importantly, the viewing towers that fringe the primary open spaces of the city plan can be said to construct the locational topography of Philadelphia. These are the spaces of the imagination – the plan, the tower. city space and panorama – as the constructed image of the city..

> ...the bird's-eye view, which each visitor to the Tower can assume in an instant for his own, gives us the world to **read** and not only to perceive....[24]

NOTES

1 Roland Barthes, "The Eiffel Tower," *The Eiffel Tower and Other Mythologies.* (Berkeley. University of California Press, 1979), p. 8.
2 The towers discussed here span one-and-a-half centuries and include the State House tower (now Independence Hall, spire rebuilt 1828, William Strickland), the Merchant's Exchange cupola (1832-33, William Strickland), the City Hall tower (1871-1901, John McArthur Jr.), viewing towers in Fairmount Park (mid-nineteenth century, park designed by F.L. Olmsted), the PSFS tower (1930-32, Howe and Lescaze), and the Penn Mutual tower (Mitchell/Giurgola Associates, 1975).
3 A.E.J Morris, *History of Urban Form.* (New York: Wiley, 1979), p. 265.
4 R. Weigley, ed., *Philadelphia: A 300-Year History.* (New York: W.W. Norton, 1982), pp. 34-35. has a representation of the painting.
5 ibid., p. 33, quote of Dr. Alexander Hamilton.
6 ibid., p. 16.

Figs. 31-33 (l tor). "Vision" of the city plan, 1964; View of Liberty Bell Pavilion, State House, and Penn Mutual tower, ca. 1980's; and View of State House and open spaces, looking north, 1976.

[7] A full-size copy of the seven-foot-long print is located at the Historical Society of Pennsylvania. Ibid., pp. 70-73 has a four page reproduction of the print. Also, Lane, C. and D. Cresswell, *Prints of Philadelphia*. (Sharon Hill: Archway Press, 1990): pp. 13-16 gives an accounting of the many versions of the print.

[8] Christopher W. Lane, and Donald H. Cresswell, *Prints of Philadelphia*. (Sharon Hill: Archway Press, 1990), p. 71.

[9] Ibid., p. 71. The author of the prints produced similar depictions of Venice.

[10] A.A. Gilchrist, "The Philadelphia Exchange," *Transactions of the American Philosophical Society*. (Philadelphia, March 1953), p. 93 and fn. 47.

[11] Richard Webster , *Philadelphia Preserved*. (Philadelphia: Temple University Press, 1976), pp. 44-45, and 80-81.

[12] The Merchant's Exchange was designed by William Strickland, also the architect for the new State House tower.

[13] A.A. Gilchrist, op. cit., p. 93.

[14] Stuart Blumin, "Mobility and Change in Ante-Bellum Philadelphia." *Nineteenth-Century Cities,* Stephan Thernstrom and Richard Sennett, editors. (New Haven: Yale University Press, 1969), pp. 165-208.

[15] Jane Mork Gibson, "The Fairmount Waterworks," *Bulletin: The Philadelphia Museum of Art.* (Vol. 84, Nos. 360,361, Summer, 1988), p. 31.

[16] The first planning stages for the 1876 Exhibition are on official maps in 1872.

[17] M. Christine Boyer, *The City of Collective Memory.* (Cambridge: MIT Press, 1994), pp. 244-269.

[18] "Fairmount" was the proposed site of a house for William Penn.

[19] The City Hall tower remained the tallest structure in Philadelphia, unimpeded until the mid-1980's when Philadelphia's "ceiling" was broken by construction of taller buildings to the west.

[20] The neutral elements are essential to the reading and understanding of prominent or nodal structures in Philadelphia's three-dimensional grid. Where the negative connotation of the neutral high-rise is frequently discussed in relation to the modern city (see, for example, Richard Sennett, *The Conscience of the Eye.* (New York: Alfred A. Knopf, 1990), pp. 2-68, the combination of the high-rise and the open spaces of the plan can provide or support the character of the city.

[21] See for example, Canty, Donald, "Philadelphia in the Years Since Its Local Renaissance," *AIA Journal.* (March 1976), pp. 31 - 47.

[22] Ibid., p. 41. The open space conceived in the 1930's, was created by demolition in 1940's as part of the efforts towards modern city planning in Philadelphia.

[23] Christine Boyer, *The City of Collective Memory.* (Cambridge: MIT Press, 1994), p. 491.

[24] Roland Barthes, "The Eiffel Tower," *The Eiffel Tower and Other Mythologies.* (Berkeley: University of California Press, 1979), p. 9.

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Figs. 13, 15, 17, 18: Fairmount Park Archives, Philadelphia.

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Figs. 25, 27, 29, 30: Dennis G. Playdon or Kate Wingert-Playdon.

Fig. 26: *The Architectural Review.* (Vol. LXXIII, no. 436, March 1933).

Fig. 28: John James Pron.