HISTORIC ARCHITECTURE
PHILADELPHIA
LOS ANGELES

WITH SOME NOTES ON ENGINEERING SERVICES

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MAP OF PHILADELPHIA 1750
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LOS ANGELES AND HOLLYWOOD CALIFORNIA

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BMR, Budleigh Salterton, 2021.
The building has been both admired and denounced. Poet Walt Whitman called it "silent, weird, beautiful." Others called it an appalling "marble elephant" and pressed for it to be demolished. With 651 rooms and 250 sculptures, it is said to be the world's largest masonry building.

It is crowned with a 37 ft high statue of William Penn, founder of Pennsylvania, the largest statue on a building in the world. The statue's base can be reached by a tiny four-person elevator.
The original Bowl was designed in 1927 by Lloyd (son of Frank Lloyd Wright).

INTRODUCTION

The Heritage Group has had neither face-to-face meetings nor visits to view historical building or engineering services since the start of the virus lockdowns. However, with the collective information of the Group Archive, Website and experience of the members of the Group, built up since 1973, the opportunity has been taken to record and further research historical information on buildings and their engineering services. This has enabled the production and printing of a small number of private copies of a series of A4 size (44 page) booklets. This booklet covers just two cities in the United States.

Philadelphia was founded by William Penn in 1682 in the then English Crown Province of Pennsylvania. After the American Revolution, the city was chosen as the temporary capital of the United States before the federal and state governments moved to Washington D.C. The city suffered a decline in the 1950s, both in population and social conditions. This has considerably improved in the last thirty years or so. Philadelphia now ranks by population as the 6th largest in the United States and has a wealth of historic buildings, a few once having early significant engineering services (Wanamaker's department store and the PSFS building).

Los Angeles (The Town of the City of Angels) was founded in 1781 under a Spanish Governor, becoming part of Mexico in 1821, then part of the United States in 1850, a few months before California. Once a frontier town, it now has a larger population than Chicago, making it the 2nd largest in the United States. The city's first skyscraper was the United California Bank (now Bank of America) of 1974 with dual-duct and VAV air conditioning. The district of Hollywood became part of the city of Los Angeles in 1910 and soon thereafter having the world's most famous film industry and many famous movie theatres with early examples of air conditioning (including the 1923, now demolished, Grauman's Metropolitan Theatre).
PHILADELPHIA 1859-1939
Did the woman who sewed the first American flag (known as "Old Glory") live here? Although the house is named after her, some historians argue that she lived in a nearby house, shown in an 1851 photograph, and long torn down.
Until 1984, the railway terminal brought passengers into the heart of downtown.
The store closed in 1977. The present multi-use building is said to be only complete block of commercial Victorian architecture preserved in Philadelphia.
PHILADELPHIA HOSPITAL 1756

This 534-bed hospital contains what is possibly the world's first operating theatre

FRANKLIN INSTITUTE BUILT 1833

The photograph is of the Franklin Institute & Museum built in 1933 and housing the 101-feet-long Baldwin Steam Locomotive 600000, the largest ever made.
"Popular exposition of the Principles of Warming and Ventilation" by Lewis W. Leeds.
John Wanamaker went into business in 1875. His store was said to be the first in Philadelphia to have the electric light. In 1902 he built his new store on the same site.
Plan of mechanical engineering services with ventilation system, blowers (fans), engines & motors, ammonia refrigeration; brine, hot water & fire pumps, plumbing and hydraulic passenger elevators & pumps (from *Engineering Record* 1902).
Philadelphia's first commodities exchange modelled after the great Bourse in Hamburg.
America's oldest congressional building, serving as the meeting place for Congress from 1790 to 1800 before it moved to Washington D.C.
PHILADELPHIA CARPENTERS HALL 1774

The guildhall for the Worshipful Carpenter's Company of Philadelphia, founded in 1724.

PHILADELPHIA LOGAN CIRCLE FOUNTAIN

The fountain dates from 1924 with City Hall (see p.4) in centre background.
PHILADELPHIA CITY HALL STATUE 1901

The 37-ft high, 14-piece Penn statue assembled in the sculptor's studio.
PHILADELPHIA LAND TITLE BUILDING 1898

Sixteen-floor early office skyscraper by architect Daniel Burnham.
Twenty-two floor tower built for the Atlantic Refining Company.
Built for the Philadelphia Saving Fund Society, 491 ft, 46 floors. Said to be the second skyscraper to have air conditioning (by Carrier). Unusual at time for having not only plant rooms in basement and on roof, but intermediate plant room on the 21st floor allowing air ducts to be smaller than usual, releasing useful floor area.
PHILADELPHIA BELLVUE STRATFORD
In 1976, the air conditioning was said to be the cause of the first outbreak of Legionnaires Disease and responsible for the death of 35 people.
PHILADELPHIA CHESTNUT STREET
Daily Traffic on Broadway, Los Angeles, Cal.
LOS ANGELES ST PAUL

HOTEL ST. PAUL
1021 WEST SIXTH ST.,
LOS ANGELES, CALIF.
FROM $2.00 DAILY WITH BATH
Sometime residents include Clark Gable, Carole Lombard and Humphrey Bogart.
LOS ANGELES ROOSEVELT HOTEL 1926

Financed by Mary Pickford, Douglas Fairbanks and Louis B. Meyer. Hosted the first Oscar ceremony in 1929.
Paramount was established in 1912.
The Company was established in 1912.
MOUNT LOWE RAILWAY 1893

LOS ANGELES RAILWAY 1886
COURT FLIGHT RAILWAY 1905

ANGELS FLIGHT RAILWAY 1901
Famous for its extraordinary sky lit atrium and scene of many classic Hollywood movies including *Double Indemnity* and *Blade Runner*. 
The Bradbury is equipped with ancient open-cage hydraulic elevators.
LOS ANGELES CITY HALL 1929

454 ft, 32 floors.
LOS ANGELES CHINESE THEATRE 1927

"Iconographic temple to the motion picture,"

LOS ANGELES PANTAGES THEATRE 1930

2703 seats.
2422 seats. Air conditioned by the Wittenmeier Machine Company of Chicago, with CO2 refrigeration plant.
906 seats. Air conditioned by Carrier with centrifugal chiller refrigeration.
LOS ANGELES FOX THEATRE 1930

2500 seats.
Drawing of Logan Lewis Patent (for Carrier) of his "upside down" auditorium ventilation using overhead ceiling supply with under-seat low level extract overcoming the problems of patrons experiencing cold feet with the floor supply terminals then in common use.
Originally provided with a spray-washer type of cooling and ventilation (no refrigeration).
Originally 1250 seats. Has nine decorative panels in "Aquarium Deco" style.
The nearby intersection features the famous Hollywood Walk of Fame.
Where natural tar bubbles to surface; also, location George C. Page fossils Museum.

REFERENCES AND FURTHER READING

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2021 Historic Movie Theatres: Hollywood & Los Angeles, Brian Roberts, CIBSE Heritage Group, Privately Published.
2021 20th Century Air Conditioning, David Arnold, ASHRAE, 180 Technology Parkway, Peachtree Corners, Georgia.

Illustrations & information has also been taken from Heritage Group Archive & Website and the Internet.