

municipal government, the Shanghai Municipal Council has not a little to learn. The International Settlement must be served in principle not by an official machinery but by a business corporation. Every member on the Council must prove his personal worth on a competitive basis, or, to put it bluntly, every dollar of salary paid by the Council must be compatible to the nature of the work done and not to the dignity of the person who does it. If this simple principle can be enforced throughout the municipal administration, the Settlement will find adequate resources to develop itself so that it may remain a worthy half of the New Shanghai now fast taking shape.

Greater Shanghai—Greater Vision

BY DAYU DOON (董大酉)

THE Shanghai known to the world is composed of the International Settlement, the French Concession, and the Chinese controlled areas, namely, Nantao and Chapel. These areas have been allowed to grow by themselves without any preconceived scheme. As a result, Shanghai of today is unable to meet the demands of the times. The streets are narrow and crooked, parks and open spaces are scarce, factories and residences are built side by side. Physical improvements prove to be both difficult and costly. Although reputed to be the greatest port in the Orient, Shanghai fails to meet the requirements of a modern metropolis.

The rapid increase of population during recent years is phenomenal. The figure stood at 1,578,167 in 1920. Ten years later it climbed up to 2,927,858. During a period of ten years the population of Shanghai increased by 1,349,691 which is equivalent to 86 per cent. Today the population has passed the 3,500,000 mark. It becomes evident that mere physical improvements will not solve the problem. New areas must be developed to relieve the congestion. In other words, physical expansion must accompany physical improvements.

The principal factors which have been holding back the development of Shanghai may be summed up to be five: (1) the inadequacy of the existing streets to meet the present-day demand; (2) the inability of the existing areas to accommodate the rapid increase of population; (3) the obsolescence of the existing shipping facilities in view of the increase in shipping activities; (4) the lack of direct connection between water and rail transportation; (5) the existence of three independent municipal administrations and the consequent difficulty to form a unified policy and device a comprehensive plan.

The proposed city plan of Greater Shanghai, which creates a new area and at the same time embodies the existing areas as well as the neighboring town, attempts to solve the defects and limitations of Shanghai of today. It not only attempts to meet the demands of today but also provide requirements of tomorrow.

I. *The City Planning Commission.*—From a geographical point of view the expansion of Shanghai should be toward the mouth of the Whangpoo River. The idea of developing Woosung, the district situated at the mouth of the Whangpoo River as a future port, dates back over 30 years ago when Liu Qun-Yi was viceroy of Kiangsu Province during the Manchu dynasty. It was thought that the logical development of the port of Shanghai would be near the mouth of the Whangpoo, that the

river front would eventually move from Yangtzepoo towards the north, that factories and other plants would rise in the northern district near Woosung, and that business and residential development would follow.

In 1927, the city of Shanghai became a special district by order of the National Government at Nanking. The City Government of Greater Shanghai was then established and to Shanghai's first Mayor, Mr. Huang Fu, belongs the credit of reviving the idea which was first conceived over three decades ago. Mr. Huang's successor, Mayor Chang Tin-fan, continued to consider the idea, although it was not until the inauguration of the former Mayor Chang Chun, that definite steps were taken for carrying out the scheme. In 1932 Mayor Wu Tschchen succeeded Mayor Chang Chun and under him much has been done towards the realization of the project. Whereas it has been customary in recent years for successive administrations of the municipal government to replace important staff members when a new chief was appointed, the Municipal Government of Shanghai has been fortunate enough to do away with this vicious practice. Thus, most of the technical experts still remain and have been able to carry on the program of municipal development without interruption in spite of four changes of mayors in the past six years.

In 1929 the City Planning Commission of Greater Shanghai was created for the purpose of working out a plan which would represent in the broadest way all interests in the community and which would provide for future physical expansion. The commission is composed of eleven members, appointed by the mayor, representing the various administrative organs of the city government, with the Commissioner of Public Works, Dr. Shen Yi, a German-educated municipal engineer, as its chairman and Mr. Dayu Doon, an American-trained architect, as the advisor. The site for the new city was chosen by the City Council on July 5, 1929. The Street Plan, showing the layout of the street system in the new area, was adopted on July 7, 1930. Among the foreign experts who have examined the plan and given their criticisms are Dr. C. E. Grunsky, formerly president of the Society of American Civil Engineers, Mr. Asa E. Philips, well-known American city planner and Prof. Herman Jensen of Berlin University. The commission meets every fortnight when progressive plans and suggestions are presented and discussed, the deepest interest in the problems of the new project being taken by the members of the com-

mission upon whom rests the entire responsibility of the future development of Shanghai.

In October, 1929, an open competition for a design for the Civic Centre of Greater Shanghai with prizes amounting to \$7,000 was announced by the commission. The program required the Civic Centre to be placed on or near the intersection of two cross axes: the east-and-west axis being a 60-meter wide boulevard running eastwards from the new railway station to the Whangpoo River, and the north-and-south axis, also a 60-meter wide boulevard, running north and south to form the principal approach from the present International Settlement to the south; a group of Chinese style buildings, nine in number, with modern conveniences; the site to be embellished with gardens, fountains, pools, bridges and monuments. At the conclusion of the competition Mr. Dayu Doon was appointed chief architect to study and prepare plans for the new Civic Centre.

II. *The City Plan*:—1. *Site for new City*:—The site chosen for the proposed new area is the Kiangwan District, conveniently located between Woosung and the International Settlement. It reaches the Whangpoo River to the east and the Shanghai-Woosung Railway line to the west, Woosung village to the north and the International Settlement to the South, comprising a great plain with possibilities of unlimited future expansion. Its greatest asset is the nearness to the mouth of the Yangtze River. The choice for the new site is based upon the following principal qualifications:—

a. From the geographical point of view, the site lies in the true centre of Shanghai and its environs. To the north-west is the Paoshan District; to the west are Tachang and Chenju, to the south are Chapei and the International Settlement and to the east is the great chain of small towns comprising the so-called Pootung District.

b. The new site conveniently lies between the future harbor and Shanghai. Since Woosung is destined to become the future harbor, the site will serve as an important central area between the former and the latter in the course of development and the whole district will eventually resolve into one big city.

c. The development of the new site does not involve demolition of existing property, comprising as it does thousands of *mow* of flat field with a few scattered farm houses. There will be practically no physical limitations in the course of development.

d. The new site is favorably located with reference to land and water communications. It is capable of development even without the completion of the new harbor and the modification of existing railroads.

Shanghai has as yet no definite law to regulate the height and character of its buildings. One could, for instance, erect a garage in the heart of a residential area. It is imperative to regulate property use in all parts of the city. The major streets may naturally be expected to become business centers; areas near the railroads, industrial districts. Residential districts should be supplied with recreation facilities and be protected

against commercial or industrial intrusions. Although it is impossible to predict with absolute accuracy what the future development will be, the new plan provided as far as possible for future requirements. It begins with the Civic Centre, surrounded by business and residential areas. Parks and open spaces are well provided for along the Whangpoo River and several waterways. To the north is the harbor district and to the north-west is the industrial district with the north-western wind carrying the smoke and dust away from the main city.

2. *Flood Prevention*:—The land of the new area is flat and uniform in elevation. Its surface is about five feet lower than the highest recorded flow of the Whangpoo and Yangtze Rivers. When this area has become a developed city its protection against inundation will be of the utmost importance. There must be, therefore, broad embankments of adequate height along the banks of the Whangpoo River and also the bank of the Yangtze. The existing Military Road, formerly a dike, about five feet above the elevation, was built for this very purpose. It is intended that this road be continued toward the north of Woosung along the south bank of the Yangtze River and be constructed as is the bank of the Hudson River on Manhattan Island, known as the Riverside Drive of New York City. It will serve the double purpose of providing a parkway and a dike. All roads are raised about three feet above the old elevation so as to prevent possible flooding.

3. *Harbor Facilities*:—When one comes to consider the importance of communication by water in Shanghai, one is inclined to give the Whangpoo River first consideration. Although known as the greatest port in the Orient, Shanghai needs much improvement in the way of docks and wharves, warehouses and shore communications. The Woosung district offers an ideal site for port development. With its extending waterfront over thirty feet in depth, vessels of all sizes and tonnage will have no difficulty in finding accommodation. An area of some 10,000 *mow* has been allocated for this purpose.

The layout of the harbor will probably be of the "basin type" with access from the river to a succession of basins, on both sides of which will be piers slightly inclining toward the river. The piers will have transit sheds along one side and godowns on the other side. The space between piers will be wide enough to accommodate vessels at both sides and lighters alongside and navigation space between the lighters.

The details of the wharves will be planned with a view not only to allowing comfortable transfer of freight from rail to ship and *vice-versa*, but also to provide ample means for the loading and unloading of small coastal and river boats. Railway transportation will be linked directly to the wharves so that unnecessary delay and expense may be avoided.

A belt railway stretches from the harbor site, westerly and southerly around the major portion of Shanghai and thence across the river and down to the bank of the Whangpoo as well as throughout the full length of Pootung to the mouth of the river. Although

the district lies in the extreme north of the new site, it is at the same time easily accessible by several trunk highways from the central district. The above-described scheme, however, involves an expenditure of tens of millions of dollars. Its realization will probably take years. For the purpose of relieving the present congestion, plans are being completed for the building of new wharves along the east bank of the Whangpoo River at the terminal of the new east-and-west main thoroughfare, namely, Wu Chuan Road. These wharves will be accessible via the Shanghai-Nanking railway.

4. *Railways*:—The railways have been influential in the development of Shanghai. The city is favored with two important railways, the Shanghai-Nanking and the Shanghai-Hangchow-Ningpo Railways. They are important as a distributing and receiving points for shipments from the interior. It is high time for both the railways and the city to combine their efforts to formulate a logical and systematic program for development that will provide for both immediate and future requirements. Pending approval by the Ministry of Railways certain modifications of the existing lines will be effected. It is proposed that Chenju, a small town located north-east of the International Settlement, will be made a railway junction. From Chenju four lines will branch out: to the east all passenger trains will be brought into the new Grand Terminal located at the west end of the east-and-west axis of the city; to the west will be the Shanghai-Nanking line; to the north will be the Shanghai-Woosung line; and to the south will be the Lunghwa Station and the Shanghai-Hangchow line. From Lunghwa a line will be built to cross the Whangpoo and extend northwards to a point opposite Woosung. With such a net-work of railway lines the future development of Shanghai may be assured.

5. *River Crossing*:—It is evident that the growth of Pootung, the wide tract of land on the opposite side of the Whangpoo, will naturally follow and the need for better means of crossing the river than by ferries or sampans will become increasingly pressing. While the time is not ripe for planning crossing by either bridges or tunnels, nevertheless the locations should be selected where such crossings would be most desirable. The future problem of providing these crossings will thereby be greatly simplified. Two points are selected—one at the terminal of the new east-and-west main thoroughfare and the other at the Nantao bund.

6. *Street System*:—One of the primary responsibilities of any city that expects to grow and prosper is to make adequate provisions for better circulation. Traffic is increasing in volume and speed every day. The street system must be planned not only to meet the present requirements but also to give opportunities for future development. A net-work of main arterials is carefully laid out, providing for the relief of overloaded routes and a free movement of traffic between the various centers so that the business of the districts may be carried on without handicap of inadequate means of communications. The general flow of traffic in future will be north and south. There are five principal roads

running north and south to take care of future traffic in this direction. A belt highway system is planned to link all the neighboring towns and villages on both sides of the Whangpoo River. The streets are so planned that they intersect mostly at right angles. A standard is suggested for the width of the streets: boulevards 60 meters, and minor arterials 30 meters. Ordinary streets 25 meters, and minor streets 20 meters. This scale of width may be somewhat over-generous and may involve greater cost, although the land value at present is comparatively low. The commission is impressed with the handicap and great expense under which most growing cities are suffering by reason of inadequate width of the streets. The orientation of the street blocks has also been considered. With the exception of the limitations, of the existing roads, the blocks will run east-and-west so that the buildings will mostly face either south or north. In this way the intensive summer heat may be mitigated. The dimensions of the average block is determined by reasonable economical size. In the residential districts circumferential or ring streets will be introduced. They will not only give a picturesque effect to the city but will also reduce the through traffic which is a great nuisance to residents. Open public spaces are provided at the intersection of principal streets for the double purpose of relieving traffic and adding beauty to an otherwise monotonous long thoroughfares.

7. *Transit*:—The transit system is the life flow of a city. Most transit systems are the result of private or public business enterprises with little consideration for the development of a city as a whole. Their systems are usually inadequate and costly. The lack of a well-planned street system providing direct thoroughfares of adequate width is also responsible for poor lines. The new plan provides for streets of adequate width for transit system. Until such time when tramcars become necessary, and more economical, bus lines will be established for the benefit of the public.

8. *Parks and Open Space*:—"No city will be greatly populous or truly great without proper provision for the pleasureable and the aesthetic. Pleasure grounds and places of amusement are as much of a necessity to the health and happiness of a people as pavements and sewers." Many so-called modern cities lack parks and open spaces because the system of creating such is quite a recent development in city planning. Some cities acquire land at great expense to provide for such areas. Fortunately for Shanghai, the parks and open spaces planned thus far will be areas of little real estate value. The several waterways averaging 40 feet in width are, in their present condition, unsightly and unsanitary. It is planned to improve the water courses and convert the banks into beautiful parks comparable to those of many other big cities in the world.

9. *Civic Centre*:—The most dominant feature of the new city is the Civic Centre, which will be the center of government and culture, all buildings in this area being in the so-called "Chinese Renaissance" style, a com-

bination of the traditional Chinese style with modern comforts. Taking the shape of a cross, the Civic Centre of Greater Shanghai is located at the intersection of two cross-axes: the east-and-west axis is represented by a two-hundred feet wide, three-tracked boulevard known as "San Min Road" (meaning "Three Principles") to the west of the Civic Centre and the "Wu Chuan Road" (meaning "Five Rights") to the east. It begins at the future railroad passenger station to the east and terminates at the Whangpoo River to the West. The north-and-south axis is represented by another two-hundred feet boulevard known as "Sze Chieh Road" (meaning "World") to the north and the "Ta Tung Road" (meaning "Universal") to the south of the Civic Centre. They form the principal approaches from Woosung to the north and from the International Settlement to the south. The center of the axes, known henceforth as the Centre of Shanghai, is marked by a lofty pagoda which can be seen from all directions and from which a complete view of the new city may be obtained.

Where a city occupies level ground, monumental buildings can only be seen to advantage if they are approached by streets of adequate width and length affording a view of them from a distance. Therefore about 1,000 *mow* (approximately 170 acres) of ground are reserved for this purpose. Approximately 120 *mow* are

devoted to a plaza where public meetings and reviews may be held. A huge reflecting pool, about 2,000 feet long with impressive boulevards on both sides marks the southern approach to the Civic Centre; two smaller pools are located similarly to mark the eastern and western approaches. Immediately behind the Mayor's Building rises the great roof of the Municipal Auditorium which has a capacity of accommodating 3,000 persons. Clustered around the cross are the Library, Museum, Art Gallery, Court Houses, and other public or semi-public buildings. An existing waterway approximately 65 feet wide supplies water to the pools; its banks are improved and converted into parks. Several bridges add to the aesthetic appearance of the waterway. A five-arched Chinese bridge spans the large pool. At the southern end of the long pool is a five-arched memorial Pai-Lou forming the gateway to the Civic Centre. The existing main thoroughfare, Hsiang Ying Road, crosses diagonally at the extreme south of the Civic Centre. The ground is embellished with gardens, monuments, pools, fountains, bridges, etc., to form, with the future buildings, a monumental and beautiful ensemble. The advantage of grouping the public building is not only to permit the concentration of public business and facilitate the conduct of inter-bureau affairs but also to add dignity to the city and impress visitors. The enclosed area, comprising approximately 2,000 *mow*, is owned by the city government.

New Shanghai in the Making

(Contributed)

THE laying of the foundation-stone for the Mayor's Building in the proposed Civic Centre on July 7, 1931, marked the beginning of an extensive building program mapped out by the City Planning Commission of Greater Shanghai. The following is a brief description of major works which are either completed or under construction.

The Mayor's Building:—The Mayor's Building, one of the nine proposed buildings to house the city government offices, was completed in 1933. The dedication ceremony on October 10 will remain an important event in the history of the city government. The plan of the building is rectangular in shape with the central portion slightly larger. It measures 310 feet long and 100 feet wide in the middle. It has four floors, the top floor being the space under the sweeping pitched roof. The total floor area is over 90,000 square feet. The exterior is an adaptation of the traditional Peking palace style with a balastraded base, vermilion columns, highly decorated beams and eaves, and the whole covered by a glazed tile roof in green. The ridges and decorations are of yellow tile. The ridge at the central portion is higher than at the two wings; the highest point measures 100 feet from the ground. The exterior wall is of artificial granite with parts delicately carved. While the salient features of the old style are being followed faithfully, certain modifications are made to meet the requirements of modern planning and construction.

The interiors of the principal halls remind one of the Peking palaces. The massive cylindrical pillars and the highly decorated beams and ceilings give an impression of dignity and elegance. The building is properly heated and ventilated and is equipped with two elevators. One important feature is the grand stairway which leads from the ground to the massive bronze doors of the auditorium on the second floor. The distinction of the structure is achieved not by sheer size or the use of expensive materials but by the creation of a new style which not only retains the best features of Chinese architecture but also is in accordance with the principles of modern architectural design.

Temporary Buildings for the Bureaux:—Flanking the rear of the Mayor's Building are two less pretentious structures to house the Bureaux of Public Works, Land, Education, Health, and Social Affairs. They are two-storied structures each built around a large court yard in the middle. Each bureau has its independent entrance. These temporary buildings, which were completed in 1933, will be occupied by the various bureaux until the completion of the City Government Group.

The Municipal Staff's Dormitories:—A group of five buildings with sweeping Chinese roofs and decorated eaves is located at the south bank of the Jukong Creek to the south-east of the Mayor's Building. They provide lodging for several hundred members of the Municipal staff. There are single-room, double-room, and room-with-kitchen