

The current status related to the transportation in Ho Chi Minh city

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Abstract: In the early 20th century, the French had master planning of Saigon city with a scale of 500,000 people. Therefore, transport plans are only enough to meet the requirements for half a million people to live. However, over the period of history, Saigon's population has increased rapidly, including two periods of population growth, the period of Saigon as the capital of the Republic of Vietnam and the period after 1975. Although the investment has been continuously upgraded, currently, the traffic situation in Ho Chi Minh City is still weak, unable to meet the traffic needs of the people; Specific expression of the number of daily traffic jams at peak hours as well as the percentage of people using public transport. Ho Chi Minh City traffic is a combination of many types of traffic. Existing traffic serves the travel needs within the city and between Ho Chi Minh City and the surrounding and global areas. Being the largest urban and important transport hub of Vietnam, Ho Chi Minh City has a diversified and modern infrastructure system with many large inter-regional roads, two main highways connecting provinces. The West and the South East, along with many major national highways. The AH1 Trans-Asia route passes through the city territory and the North-South Railway starts and ends at Saigon Station. The city's only airport, Tan Son Nhat International Airport, is also the largest airport in the country. Currently, the City also owns and operates a public bus network throughout districts and is developing an urban railway network (metro) to meet the increasing needs of the people.

Keywords: public transportation, planning, personal vehicle, bus

1. Introduction

Besides the outstanding socio-economic advantages compared to other localities in the region and the whole country, Ho Chi Minh City has been and will continue to face many serious problems and risks to become obstacles in the process of developing the city, in which the main problem is the capacity and quality of the urban transport system. As of June 2014, the number of management vehicles in Ho Chi Minh City was 6.5 million vehicles, of which cars were 497,586 units and motorcycles were 6,090,198 units. The urban transport characteristics of Ho Chi Minh City mainly focus on roads and this is also the main method to address urban transport needs.

Roadway: The total length of roads in the City is 3,670 km with 3,800 routes (excluding rural roads), an increase of 19.5% compared to 2007, most roads are narrow, only About 14% of roads have a road width of more than 12m to facilitate transporting passengers by bus, 51% of roads have a road width of 7m - 12m, 35% of the remaining roads have roadways less than 7m wide.

Waterway: Network of river channels: With a total length of 975.5 km of rivers and canals of all types with 112 routes (2), although the waterway network is evenly distributed throughout the City, some main rivers and canals are occupied. , filling, is limited by the width of the bridges. In addition, the river route is affected by the tidal regime with a large fluctuation range, so water transport has not yet formed a continuous network and has not yet exploited the advantages of water transport. Currently, water transport accounts for only a small proportion, about 4% ÷ 6% of the city's transport demand.

Sea routes: Current sea transport links mainly to Ho Chi Minh City and Vung Tau and outside areas through 02 main channels: Long Tau and Soai Rap fairways, which are also important water transport channels of the whole. the southern area for foreign exchange.

Public passenger transport system: At present, although not yet playing a key role in the urban transport system, public passenger transport by bus is the main public transport of the City. . The volume of transportation on bus routes increased rapidly in the period of 2003-2005 due to the expanded route network, the number of routes increased rapidly, the means were newly invested through projects, the mechanism to support loan interest. and price subsidy policy is maintained in a stable manner. From 2006 until now, the volume of transportation on bus routes has slowed down due to the following main reasons: Increasing ticket prices reduces passenger volume (3); The number of personal vehicles has increased rapidly in the past time (4); Underground works are implemented simultaneously, traffic flow and bus services are not good and not convenient. In recent years, with the focus on investment and completion of putting into use some key projects according to planning such as: Saigon 2 Bridge; Tan Son Nhat - Binh Loi - Outer Ring Road; 04 overpass bridges at key intersections (Cong Hoa - Hoang Hoa Tham intersection, Hoang Van Thu - Truong Son - Cong

Hoa, 3/2 - Nguyen Tri Phuong - Ly Thai To roundabouts, Tree Type rotation) ; Le Van Sy, Cau Bong, Hau Giang, Kinh Thanh Da bridges have contributed to gradually reducing the number of major traffic jams (over 30 minutes) in the City, averaging over 5 years in the period of 2009- In 2013, the number of major traffic jams decreased by 51.8% / year (5) and since the beginning of 2014, there have been no major traffic jams..

Ho Chi Minh City's road system is dense, with a total length of 4,044 km in the largest cities in Vietnam. In the central area (District 1, District 3, District 5) due to good planning during the French colonial period and due to the high road density, it still basically meets the traffic volume. In the districts around the central area and the suburbs of the inner city, the traffic situation is bad due to frequent congestion. The reason is that in these areas, urban areas develop spontaneously, without planning, roads are built after the population is available. Since 1996, the city has embellished, repaired, upgraded and newly built many key roads and traffic works. In the central area, the urban roads are connected to each other through a uniform route network, running east to west throughout from District 1, 3 (old Saigon) to District 5 (Old Cholon), like : Tran Hung Dao Street, Ly Tu Trong - Nguyen Trai, Xo Viet Nghe Tinh - Nguyen Thi Minh Khai - An Duong Vuong, Dien Bien Phu - Ngo Gia Tu, Vo Thi Sau - Three February. Running in the North-South direction, there are some main roads such as: Nam Ky Khoi Nghia - Nguyen Van Troi, Le Van Sy, Cach Mang Thang Tam - Truong Chinh, Ly Thuong Kiet and Au Co. From the gateway to the inner city, there are some major routes as follows: Hanoi - Dien Bien Phu (East), Nguyen Huu Canh (East), Nguyen Van Linh Boulevard (South), Kinh Duong Vuong - Hong Bang (in the West), Truong Chinh (in the North), Pham Van Dong (in the Northeast) and Highway 13 (in the Northeast). In which the Hanoi Highway, Nguyen Van Linh and Vo Van Kiet - Mai Chi Tho routes (belonging to the East-West Highway project) are significantly invested with physical infrastructure, large-scale lanes and intersections. modern. As a major traffic hub, the City is the starting point of many arterial highways, such as National Highway 13 (going to Binh Duong, Binh Phuoc), National Highway 22 (going to Tay Ninh and Moc Bai border gate), National Highway 50 (go to Long An). National Highway 1A passes through the city according to a northern ring road (between An Lac and Tram 2 crossroads) and then enters Hanoi Highway near Suoi Tien. The city is connected to the regions via two major highways - Ho Chi Minh City - Trung Luong Expressway (to My Tho, Tien Giang) and Ho Chi Minh City - Long Thanh - Dau Giay Expressway (go to Long Thanh, Dong Nai). Currently, the City is concentrating on completing belt roads 2 and investing in Ring Roads 3 and 4 and Ben Luc - Long Thanh Expressway and expressway to Moc Bai Border Gate. Saigon Bridge is the main gateway to the inner city from the central and northern provinces and is a frequent traffic jam at the hour of the highway on Hanoi Highway. The original bridge was built in 1958 and inaugurated in 1961 under the Republic of Vietnam. By 1998 and 2011, the bridge was upgraded to load, widened the road surface and reinforced the technical system. A new bridge parallel to the existing Saigon Bridge, Saigon 2 Bridge, was completed and put into use in 2013. Since then, the traffic jam has been basically solved.

In the southeastern lane is Phu My Bridge, connecting District 2 with Phu My Hung Urban Area, District 7. This is a modern cable-stayed bridge and a symbol of the City. The bridge was inaugurated in 2009 to create a belt road to reduce the load of vehicles passing through the inner city, especially trucks and overloaded vehicles. Thu Thiem Tunnel (official name: Saigon River Tunnel) is the first river crossing tunnel in Vietnam. The tunnel was inaugurated in 2011 and is part of the East-West Highway project, connecting District 1 with the Thu Thiem peninsula, District 2. The tunnel has six lanes of cars, submerged under the Saigon River (yes underground river bottom). The investment capital from the Official Development Assistance (ODA) of the Japanese government has reciprocal capital from the Government of Vietnam. The traffic in Ho Chi Minh City is the sum of the many types of transport available for travel within the city and between Ho Chi Minh City and surrounding areas. Being the largest urban center and an important traffic hub of Vietnam, Ho Chi Minh City has a modern and diversified infrastructure system with many major inter-regional roads, two major highways connecting the provinces from Western and Eastern South, and many major national highways (such as National Highway 1, Highway 13, National Highway 22). The Trans-Asia Highway AH1 crosses the city's boundary and the North-South Railway begins and ends at Sai Gon Railway Station. The only airport in the city, Tan Son Nhat International Airport, is also the largest airport in the country. Today, the city also owns and operates a network of public buses throughout the district and is developing a metro network to meet the growing needs of its residents. Besides the advantages of socio-economic superiority to other localities in the region and the whole country, HCMC has been and will continue to face many serious problems and risk becoming obstacles. In the development of the city, the emerging problem is the capacity and quality of the urban transport system. Up to June 2014, the number of means of transport managed in HCM City is 6.5 million vehicles, of which 497,586 cars and 6.090,198 motorbikes. HCMC's urban transport features are primarily land-based, and this is also the dominant mode of addressing urban transportation needs.

In order to develop the land area, HCM City needs to develop road traffic in the northeast, southeast and southern directions with belt roads. Ho Chi Minh City also needs to build urban railways such as metro, monorail and high-rise railways, to build railways linking the national network in Loc Ninh, central and Ba Ria-

Vung Tau. According to the transport development orientation, HCMC needs to build an area of transportation infrastructure that accounts for 15-25% of urban land. At present, the land area of the city is only 6% (12.579 ha) of urban land, of which more than 2% (2.300 ha) of land for the airport.



Figure 1. Overpass bridge to reduce the traffic jam

Ho Chi Minh City is one of the most dynamic and economic cities in Vietnam. However, the process of urbanization is strong, immigrant population is rising, the infrastructure system is not synchronous, the orientation of urban planning is not really right, the weak management of the management agency Poor awareness of traffic participants ... made Ho Chi Minh City traffic worse. Traffic jams, noise, dust pollution caused by traffic vehicles have become a dread of those who have come to this city. Urban transport is like the blood vessels of the human body, blood clots mean that the body dies. Traffic jam affects the economic development, time-consuming waste of people involved in traffic, etc. How to solve the traffic situation of Ho Chi Minh City is a difficult problem of the whole society. Urban transport is not new, but why in Vietnam is the situation worse. This article only summarizes and sets out policies for reference.

2. Traffic jam causes

The percentage of people using buses is very low, most of them use motorcycles. The number of vehicles operating in the city is always high: as of April 2016, the City manages nearly 7.6 million vehicles (including nearly 580,000 cars and approximately 7 million motorbikes). Besides, every day, millions of cars bring number plates of other provinces into the city to work and study. Vehicles used for traffic are mainly motorcycles and motorbikes, accounting for over 90%; the rest are other vehicles such as cars and buses. [4] So traffic jams are a constant problem in the city, especially at peak hours. Light overpasses are considered as one of the solutions to reduce urban congestion. Since 2012, the City has constructed and put into use 5 overpasses at many major intersections. The process of urbanization and industrialization has positive and negative impacts at both national and city levels. In addition to promoting economic growth, increasing incomes, improving access to services, creating more employment opportunities, it also has many consequences that one of the consequences is easy to see, which is the traffic jams. Traffic congestion has been the "specialty" that large cities in developing countries create but do not want to receive.

The pace of urban development in Ho Chi Minh City has increased year by year, while infrastructure has not kept up, leading to frequent traffic jams. With a huge amount of traffic of nearly 10 million motorbikes and cars, plus the explosion of buildings in the central districts, the problem of traffic congestion in the city has become increasingly serious, and it seems. Until now, there have been many solutions. For many years, from the suburban districts to the city center, traffic jams are always recurring. In the east hundreds of cars stuck on Saigon Bridge. Traffic jam stretches to Dien Bien Phu street. Ambulances carrying patients are also caught in the middle of the vehicle. Direction of traffic from District 2 to Binh Thanh District, when just slope Saigon Bridge, road users will immediately encounter barriers to build metro No. 1, the lane is narrowed. At the beginning of the morning work or afternoon work, in this area there is always a traffic jam.

The vehicles have found their way to escape by running through Ung Van Khiem street, D2, small alleys of Xo Viet Nghe Tinh street ... causing traffic disturbance. Also in the East, the recent days of motorbikes from District 2, District 9 follow Mai Chi Tho Street through the Saigon River Tunnel, causing 2 stalls. West of the city, Truong Chinh and Cong Hoa roads are arterial roads connecting Highway 22 from Tay Ninh province, Cu Chi, Hoc Mon and district 12 districts to the city center, each day bearing a huge amount of cars ”Leads to severe overload. At the intersection of Lang Cha Ca roundabout, even if there are steel overpasses, traffic jams often occur. With a large density of vehicles heading from Tan Son Nhat International Airport along Truong Son - Tran Quoc Hoan Street to the Lang Cha Ca roundabout to the city center, many roads around this roundabout are severely congested.



Figure 2. Traffic jam in Ho Chi Minh City

The southern suburbs of the city include districts 7 and 8, the districts of Binh Chanh, Nha Be and the center are separated by Tau Hu - Ben Nghe, Doi and Ke canal. Over the years, many bridges to connect to the center have been built to help people shorten their travel distance. However, with the organization of traffic, there are many shortcomings, plus the rapid development of the residential areas in the south, causing the bridges across the Tau Hu - Ben Nghe and Te Canal to be overloaded. At the Northeast gate, traffic jam is complicated. It is the traffic axis connecting Ho Chi Minh City with Thuan An town and Thu Dau Mot city (Binh Duong province), but National highway 13 is always overloaded. Every day this route receives hundreds of thousands of motorbikes and passenger cars from Highway 1, Binh Duong ... towards the Eastern Bus Station. The situation is more serious because there are 16 bus routes passing through, and this is the route that the city people go to the Eastern Bus Station to go to the East, Central - Highlands and Northern provinces.



Figure 2. Transport Planning in Ho Chi Minh City

The process of economic development, industrialization and modernization is the premise for urbanization. The demand for transportation (traffic demand) always increases according to the process of socio-economic development. Demand for passenger transport mainly depends on the development of population, demand for transportation of goods depends on the economic development.

Under current conditions, the demand for travel in urban Vietnam is solved mainly through road, so the process of expanding urban space is indispensable. The process of urbanization has attracted people from other provinces in large cities to work because of improved and diversified employment, study and living opportunities. Many functional economic zones, urban functional areas and The new urban areas are being built, which leads to the demand for transportation, the distance to travel, the demand for using high-quality means of transport, and the expansion of urban space. Invisible urban space, however, is partially limited by the travel time criterion. Right from the middle of the nineteenth century, the German urban researcher C.Ritte mentioned the measurement of space to calculate the cost of time travel. British statistician F. Ganton has introduced contingencies to determine central access over time and thus speed is one of the key conditions for urban development. In the Soviet Union, the end of the nineteenth century travel time was accepted at 25-30 minutes, until the end of the twentieth century this number was accepted at 35-40 minutes, however distance traveled (length of onion up to about 2 times. In 2005, the average travel time to work in Hanoi and Ho Chi Minh City was 18 - 20 minutes (according to the HAIDEP report) corresponding to the average distance of about 6-8km, so far the average travel time to work has reached the threshold of 30-40 minutes corresponding to the average distance 8-10km, approaching the threshold of the major urban areas such as Malina and Jarkata is from 40 to 50 minutes, Tokyo and Osaka are from 30-40 minutes but the travel distance is not commensurate (due to current we are too dependent on individual means of transport) also means that the urban size is not adequate.

3. Solutions and Plans

Actual traffic in the City shows that the market economy brings great changes, the flow of people from rural areas to urban areas to find more and more jobs, the lifestyle and behavior of urban people change under the dynamics of industrialization, urbanization and the trend of globalization. In the past time, the City faced many difficulties in planning, managing planning as well as implementing the planning, including urban transport planning of the City.

As planned, from now to 2025, HCMC's development orientation will be multi-minded: The main center of the City includes an existing center including districts 1, 3, 4, 5 and a part of Binh Thanh and the center. newly expanded to Thu Thiem area (737 ha area). Regional centers in four directions include: In the East, it is located in Long Truong Ward, District 9 adjacent to Ho Chi Minh City - Long Thanh - Dau Giay Expressway with an area of about 280 ha; in the North of the New West - North Urban Area (about 300 ha); in the west of the area bordering highway 1 in Tan Kien commune, Binh Chanh district (an area of about 200 ha); in the South belongs to the A new urban area in the South of the city (area of 98 ha). Create motivation for all four comprehensive development directions: East Gate Corridor (along Ho Chi Minh City - Long Thanh - Dau Giay Expressway) connecting with urban areas of Nhon Trach, Long Thanh and Bien Hoa (Dong Nai)); the south corridor along Nguyen Huu Tho road to connect urban areas along the route and Hiep Phuoc port urban area; West-North corridor (along Highway 22) linked with Duc Hoa (Long An), Trang Bang (Tay Ninh), Thu Dau Mot (Binh Duong) and West and West corridors - Southern axis Nguyen Van Linh street connecting the southern urban areas of the city, Tan Kien urban area and the center of Binh Chanh district. With the goal of building Ho Chi Minh City's development, sustainable, civilized, modern and at the forefront of industrialization and modernization, it has gradually become a major center of economy, finance, trade and science. learning - technology of the country and Southeast Asia, the City must prioritize basic construction and complete road, rail, waterway and air transport network. In particular, it must achieve the following objectives: To vigorously develop the external traffic network to gradually dissolve outbound traffic with inner-city traffic such as building complete belt roads, radial and radial axes. ; moving sea ports to the south; improve the national railway to avoid intersection with roads; to build urban railways ... and at the same time strengthen the development of urban public transport systems and organizations with various modes, closely linking satellite urban centers, concentrated industrial parks and ports. sea, airport and provinces in the region to support each other to develop and best exploit the socio-economic strengths of the whole region; to ensure that the rate of traffic land on urban land will reach about 8.2% by 2015 and about 12.2% by 2020 and about 20-20% by 2025; The average road density on natural area in 2015 reached 1.9 km / km², in 2020 reached 2.2 km / km² and in 2025 reached about 4.5-5 km / km².It should be clear, transparent and fair when licensing and issuing the rules of use, in the relationship between management agencies and enterprises. In order to increase the quality and quantity of passenger transportation, in the inner city, it is necessary to carry out free trial bicycle recall and change the type of means when collecting tax on cars into the inner city. At that point, the car will collect funds in the form of advertising. Reclaimed bicycles are popular in many European countries, and can be borrowed

and paid for in short distances. Street order should be rearranged, combined with the LRT model. With the same space, but in HCM City, the encroachment of the trade streets is unproductive and confusing, causing the loss of urban landscapes.

In the coming time, HCM City will coordinate with localities in the region with related ministries and agencies to apply mechanisms, policies and forms of capital mobilization in any form such as: Local capital sources, construction - exploitation - transfer (BOT), public-private partnership (PPP), transfer of business rights to exploit and exploit land fund and related services, the State budget (including ODA) and issuing Government bonds for investment in transport infrastructure development.

Strengthening coordination between Ho Chi Minh City and relevant localities, creating a breakthrough in transport infrastructure investment to 2020, creating a link between Ho Chi Minh City and localities as well as among modes transport, reduce urban traffic congestion.

Prioritize the allocation of a reasonable land fund for the development of transport infrastructure in the period of 2013-2020 as well as after 2020, paying special attention to the land fund for static traffic, combining spending deployment. Details of traffic planning.

Construction and upgrading of traffic works must comply with specialized planning and regional planning. For projects implemented in the City, the minimum construction height should comply with the Prime Minister's Decision No. 24 / QĐ-TTg dated January 6, 2010, approving the adjustment of the City construction general planning. Ho Chi Minh City to 2025, for construction projects outside the City, depending on the level of construction, the scale of the project to consider and select in accordance with the scenario of sea level rise announced by the Ministry of Natural Resources and Environment.

Studying and applying revenue sources from reasonable charges and fees for people and urban transport means such as urban road use fees, road use fees and pavements for purposes other than traffic and charges. peak road use.

Training, research and application of technology in the operation and exploitation of urban transport systems in order to regulate traffic, evaluate the effectiveness, correct and timely adjustment, and at the same time Organize specific human resource training programs with high applicability, directly support actual working traffic management workers to ensure consistency in planning management. Urban transport City.

4. Conclusion

The reality of urban development in recent years has shown that Ho Chi Minh City is facing many challenges both old and new in the process of urban development. Besides topical issues such as rapid population growth, urban flooding, traffic jams, environmental pollution. Ho Chi Minh City also faces new problems such as urban subsidence, energy demand for new manufacturing sectors, and infrastructure for digital industries. From the practical issues mentioned above, urban planning is paid special attention by city leaders. The biggest limitation of Ho Chi Minh City is still planning, in which all three phases are planning, managing planning, and organizing the implementation of the planning are still limited. Currently, the quality of planning work in HCMC is not high. Accordingly, the infrastructure should be developed in advance and parallel to the planning work.

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