

The present situation and future development of shenzhen railway transportation hub construction

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Shenzhen railway and the railway hub started very late, but the development speed and construction of shenzhen railway is very fast. With opening of Guangzhou-Shenzhen-HongKong dedicated passenger railway line in 2011 and Xiamen-Shenzhen railway in 2013, the shenzhen double cross layout of railway line has been basically formed.

Guangzhou-Shenzhen-HongKong dedicated passenger railway line is 116 km, with 48 km in Shenzhen and a total investment of 29.4 billion yuan. The shenzhen north station was built in 2011, and futian station was built in 2015.

Xiamen-Shenzhen railway is 357 km, with 49 km in Shenzhen. The total investment of Guangdong section is 37 billion yuan, opened in 2013.

The total length of Guangzhou-Shenzhen railway is 147 km opened in the early 80s, which is 24 km in Shenzhen. Pingan railway is 42 km from pinghu to shekouchiwan. This is a passenger and freight both ways.

Yanping railway is from pinghu to yantian, 23 km. This five lines form a double cross.

Passenger transport hubs are two main hubs and three auxiliary hubs, two main stations are north Shenzhen station and Shenzhen station, three auxiliary stations are futian station, ping shan station, east Shenzhen station.

Luohu port and luohu railway station area has carried on the comprehensive transportation hub planning and construction, to form the three underground layers, two floor, a total of five layers structure. The total construction area is 40000 square meters, the luohu station traffic modes will be classified management, improve the efficiency of transportation service.

North Shenzhen station hub is located in the central area of shenzhen longhua area, 9.3 km from the center of shenzhen futian. It's an important railway traffic hub in Shenzhen of Guangzhou-Shenzhen-Hong Kong dedicated passenger railway and

Xiamen-Shenzhen railway. The hub was completed in 2011. It is an integrated transport hub station which is a concentration of high speed rail station, subway line 4 and line 5 and line 6, long-distance bus, public bus, taxi, social vehicles. All kinds of commercial facilities are complete. The total area is 73 hectares. The project total investment is 6.5 billion yuan. The overall building layout is divided into five layers, two layers of underground.

Futian transport hub is bustling downtown in Shenzhen at this stage. It is a comprehensive transportation hub bringing together Guangzhou-Shenzhen-Hong Kong dedicated passenger railway, Shenzhen Metro 1, 2, 3, 4, 11, line, and ground transportation system. It is the largest underground transportation hub with the total construction area is 220000 m². The total project investment is 7 billion yuan. Futian integrated transport hub achieves the fast traffic accessibility, emphasizes the central area of the Pearl River Delta and Hong Kong contact and radiation, will further build Futian central district into a modernization and internationalization of the city.

Integrated transport hub operation and maintenance cost is very high, at present North Shenzhen station subsidies will need about 50 million a year, the business is still in the early breeding stage. Predicting three to five years later, the income and expenses is basically can be balanced.

According to the latest approved for medium and long-term railway network planning under the State Council, China's high-speed rail network officially upgraded to eight longitudinal and eight transverse. Ganzhen railway and Shenmao railway in Shenzhen new plan now. Ganzhen line way to Ganzhou, Heyuan, Huizhou, total length of 432 km, 25 km line length is in Shenzhen. It is expected to start at the end of this year. The Shengguang railway goes by Dongguan, Guangzhou, Jiangmen, Maoming. In construction of railway hub, Shenzhen planning on the basis of the existing terminal to add Shenzhen Airport station and Xili station and renovate Pinghu station.

Several suggestions are as follows:

1. Railway planning should have advanced forward-looking. Shenzhen as China's economic development vigor strong city is an important center city of South China. Considering the special status of Shenzhen when planning, improve the function of

the railway and the railway station facilities configuration.

2. Urban structure and development needs to be taken into consideration when make station planning. The high-speed rail hub construction is an opportunity to build a center area of the multi-function and vice center in the heart of the city. Such as futian central district and administration, culture, and the characteristics of the business, and other functions into an organic whole, in the futian central district set a inter-city railway station, will greatly improve the efficiency of the business travel, the futian central district to the surrounding radiation also play an important role.

3. Station planning considerate to link to the urban rail transit as far as possible. The subway network planning line in the region will be introduced into the hub.

4. When do the hub engineering design , lines, city subway, city road, form a complete set of operations in the transportation construction projects, the first thing to overall consideration of related engineering design cohesion, efforts to achieve connection between the various means of transport, shortening the distance between the transfer as far as possible.

5. Transport hubs open integration with the surrounding land. For the construction and operation cost is huge, to make the transportation hub to sustainable operation, financial sustainability is very important. We consider that may have to development comprehensive land around the transport hub. At the same time, in the present cities strengthen shops, advertising and other business resources development