

Creation of Attractive Station Space Connecting to Local Area



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1. Introduction

Kaminoge station in the Tokyu Oimachi line is a station of about 21,000 passengers per day located in Setagaya ward, Tokyo. In accordance with the express operation commencement in the Oimachi line in March 2008 and the installation of a express passage line, the rebuilding of the station and the works for barrier-free environment improvement have been carried out. After express operation commencement, the station improvement plan has been advanced based on "the memorable station for local people" from a viewpoint of local contribution. In this article, we introduce the plan outline of Kaminoge station, which has a building concept of "station design for a regional contribution" through design and functional aspects.

2. Plan outline

The new station buildings are built on the artificial ground which is formed at both side of Kaminoge Street, crossing over the track of the

Oimachi line in canal style. Moreover bus stops and a station plaza newly place facing toward the road, and the new station buildings and platforms are covered by the single large roof of about 120m length. Thus it creates spetial connection to the two station buildings divided by the road and platforms, and brings a feeling of togetherness as "Kaminoge station."

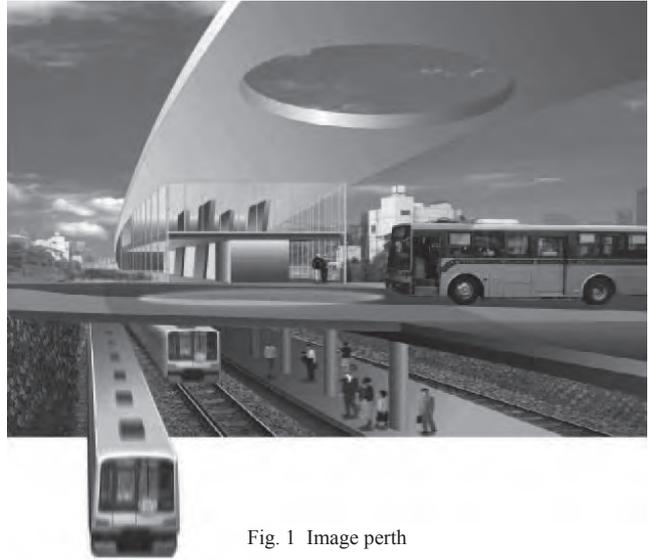


Fig. 1 Image perth

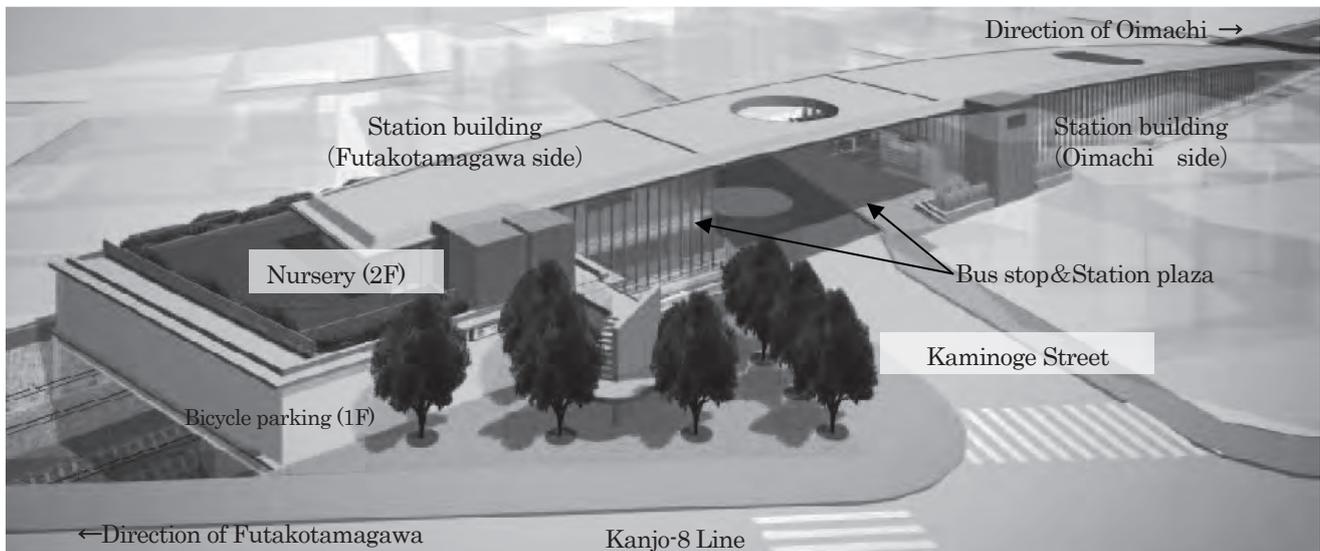


Fig. 2 Kaminoge station bird-eye view image perth

3. Local contribution design

We have been kept in mind the design which contributes to the area so that the reborn "station" by this improvement work becomes reliable existence and something familiar to local people.

(1) Enhancement of a traffic nodal point function

The bus stops are newly placed at the entrance of both the station buildings in Kaminoge Street, and the indoor bicycle parking lot is made in the first floor of the Futakotamagawa side station building. Thereby, it is capable that passengers can move mutually among the platforms, bus stops and bicycle parking lot without getting wet by the single large roof which covers the whole station buildings and strides over the road.

Thus the convenience as the traffic nodal point has been improved.

A brief stop space for the bus is created by the setback of the old station building and widening of Kaminoge Street. Hereby, cars can pass without stopping while buses stop, and it contributes to reduce the traffic jam on Kaminoge Street which had been a local matter until now.

(2) Improvement of accessibility

By placing the station ticket gates at both sides of Kaminoge Street, the pedestrians waiting for the signal at a crossing decreased. And it also contributes to improving the safety of the Kaminoge station vicinities which sidewalk is not so large and which have many passages by bicycle.



Fig. 3 Circular opening of large roof looked up from the station plaza

(3) Regional landmark

While the large roof with circular top light 8m diameter unifies various transportation modes, such as on foot, by train, by bus, and by bicycle, it provides the station plaza with space of dynamic light and shadow, and creates the individual scenery in front of the station as the regional landmark.

(4) Nursery attached to the station

The nursery, which has the adjacent rooftop garden with a greening roof and where trains are overlooked, is built on the second floor of the Futakotamagawa side station building. Since the bicycle parking lot is at the first floor, this nursery is convenient for parents who commute by train.



Fig. 4 Nursery garden and railway lines

(5) Flowerbed offered to the region

At Kaminoge station, a part of green belt at the Oimachi side station building was offered to Setagaya ward and local residents. It is expected that their emotional attachment to Kaminoge station will increase through planting and taking care of it by resident participation.

(6) Second-story buildings considered to circumference

environment

In consideration of unifying the buildings nearby and the rest of the urban space around the station, the height of the buildings is held down to a second-story level (8m).

4. Ecology design

Kaminoge station has taken in the ecology design which used natural power sources effectively. In recent years by the increase of people's interest for environment, it is one of the elements for being loved in the region that the familiar use station would be an Eco station.



Fig. 5 Planted by local people

(1) Natural light usage

Positive usages of natural light reduce lighting energy by the following: the concourse outer wall is used with glass curtain wall, and the platforms have the open well created by the single large roof and the outer wall of the glass curtain which continues from platforms to the roof.

(2) Tree planting and rain water usage

Tree planting is introduced into the artificial ground and building rooftop. This activity adopts a system which stores and sprinkles rain water without using electricity.

(3) Solar power system

The sunlight panel is installed in a part of the roof. The generated electric power is utilized for the power supply for lighting or the automatic flush of public restrooms, etc.

(4) Adoption of LED lighting

LED, adopted as the lighting of the platforms or public restrooms, or the outdoor light and lighting of the station plaza, has energy saving.

5. Conclusion

Kaminoge station, where there are the station plaza covered with the roof with the opening big hole and flowerbed planted by resident participation, and the nursery in which children who will lead the next generation grow up, is introduced as the station design for "regional contribution". Thus, through designing station space

not only for passenger but also for local people's life, we think that stations become locally-based stations which remain in resident heart and attractive stations loved for a long time.

Moreover, we hope that the charm of Kaminoge station unites with

various charms which exists in the region, and improves the charms of an overall community and also of the whole area along the railway line.



Fig. 6 Oimachi side station building seen from the station plaza

FACTS & ANALYSIS

Change of double track and electrification rate

FY \ Item	Double track kilometer	Double track rate	Electrification kilometer	Electrification rate
1993	9,011	35.8	15,180	60.0
1994	8,911	35.1	15,238	59.9
1995	9,096	35.9	15,414	60.9
1996	9,187	36.2	15,621	61.3
1997	9,219	36.2	15,330	60.2
1998	9,241	36.2	15,350	60.1
1999	9,255	36.3	15,381	60.3
2000	9,352	36.5	15,388	60.4
2001	9,364	36.7	15,440	60.6
2002	9,391	36.8	15,463	60.9
2003	9,398	36.9	15,541	61.2
2004	9,461	37.1	15,634	61.5
2005	9,520	37.6	15,672	61.8
2006	9,538	37.1	15,665	62.1
2007	9,580	38.0	15,688	62.4
2008	9,620	38.2	15,696	62.6
2009	9,612	38.3	15,689	62.5

Note: Shinkansen is not included in this data.

Reference: "Railway facts and figures 2011" Institute for Transport Policy Studies