

December 2009

**Tokyo International Airport (HANEDA Airport)
HANEDA Airport Construction Office
<http://www.pa.ktr.mlit.go.jp/haneda>**

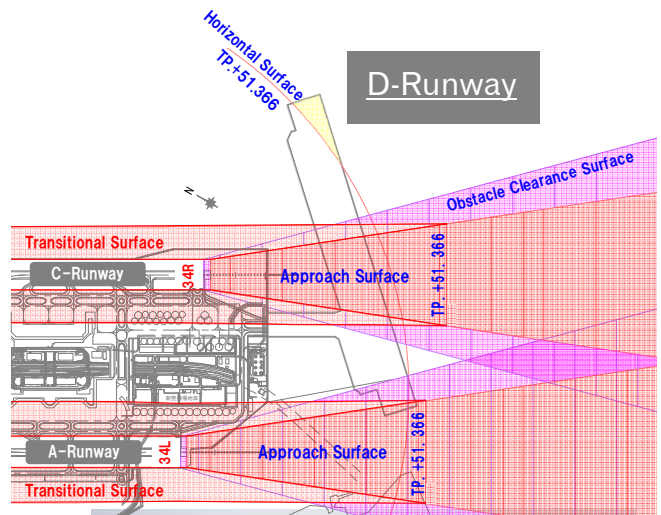
HEIGHT LIMIT OF THE AIRPORT

D-runway has to be constructed just under airways to and from existing two runways of A-runway and C-runway in 24-hour operations. Due to severe height limits by the approach surface and the obstacle clearance surface etc., which are ranging from about 20m to 50m high above sea level at the construction site, following points must be considered on conducting this project.

First of all, large and tall working vessels, which are, for example, around 60m tall of sand-compaction-pile vessels and around 130m tall of floating-crane vessels, must be used everyday for construction work. Therefore, height limit of the airport must be lightened in the height restriction area. At the same time, existing runways must be in operations everyday in safe.

As a result, the following special operational restriction and prohibition are enforced at the Tokyo INTL airport during the project as a maximum alleviation of height restrictions.

1. Landing and taking off are restricted to and from RWY 16L (C-runway from the north) from 20:45 to 07:45 (11 hours) daily in Japan local time.
2. Landing is prohibited to RWY 34R (C-runway from the south) from 20:45 to 07:45 (11 hours) daily.
3. In the case of construction work under the airway of A-runway, all landing and taking off are restricted to and from RWY 16R and RWY 34L of A-runway from 23:30 to 07:00 (7.5 hours), instead of restrictions of C-runway.
4. Height of the horizontal surface is changed higher from 51.366m to 130m above sea level at the construction area.



Under these alleviated conditions, which may be still severe in terms of construction period, the JV started construction work in March 30, 2007 and got into 24-hour continuous work until August 2009 (41 months).

What is interesting is that these severe conditions make construction methods very unique, which are, for example, (a) remodeling of a large size floating crane and (b) harmonized daily movement of a large group of tall working vessels such as S.C.P. vessels between inside and outside of the restriction area that is starting after 20:45 and finishing before 07:45.

REMODELING OF A FLOATING CRANE

A large size floating crane, "YOSHIDA No.28" of 2,800 metric tons loading capacity with 83m boom, was remodeled for this project to be utilized in day time as well as night time in order not to be affected by height restrictions. The height was lowered to 49.4m by remodeling. Although loading capacity of the crane was lowered to 2,400 metric tons, the "new YOSHIDA No.28" functioned very well on installation of steel jackets from March 3, 2008 and has already completed its work in October 12, 2009 by installing 154 steel jackets in total.



She is now going to be re-remodeled to former shape and waiting for a next job. (to be continued)