



Airport Compatibility

Airport operation status

Since 2001 Grand Opening , traffic and Passenger volume have increased over 7.5% per year respectively.

305,445 flights and 49 million passengers in 2015

Daily traffic exceeded 1,000 flights for the first time in this summer
85 airlines fly over 193 cities



Aerodrome facilities

3 runways & 6 taxiways

3 passenger, 2 cargo and 1 maintenance aprons

74 aircraft stands with boarding bridge

21 de-icing pads

CAT-III b operation, landing and T/O minima RVR 75m



Aerodrome facility – Runway and Taxiway

Runway

- ✓ Length : 3,750m (RWY 1, 2), 4,000m (RWY 3)
- ✓ Width : 60m
- ✓ Shoulder : 12m (each side)

Taxiway

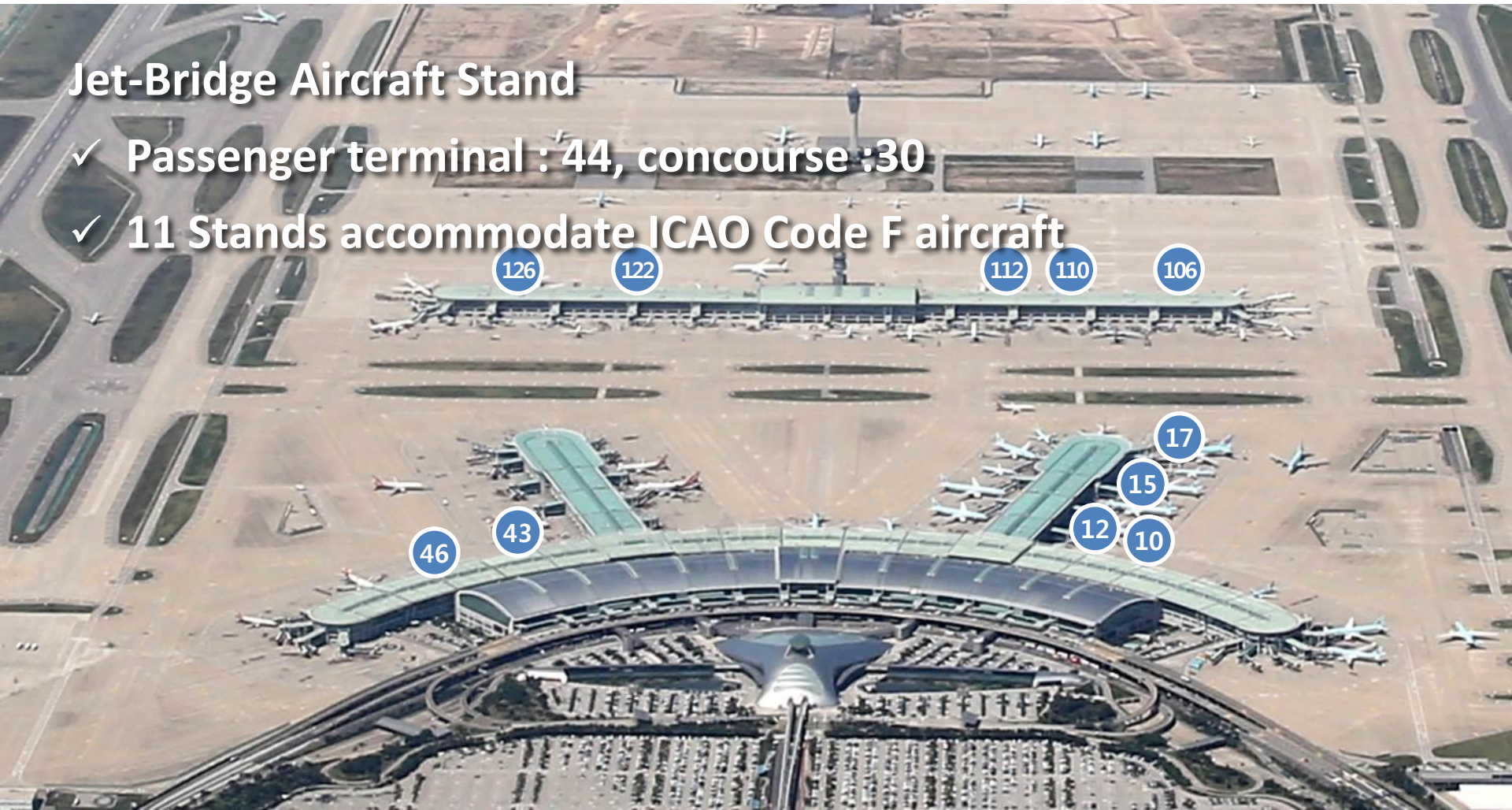
- ✓ Width : 30m
- ✓ Shoulder : 15m (each side)



Aerodrome facility - Apron

Jet-Bridge Aircraft Stand

- ✓ Passenger terminal : 44, concourse :30
- ✓ 11 Stands accommodate ICAO Code F aircraft



New Large Aircraft....A380, B747-8 and...

Is the airport able to accommodate a new large aircraft?

A380 / Incheon Airport Compatibility Meeting : '04 – '09

✓ 6 Aeronautical studies

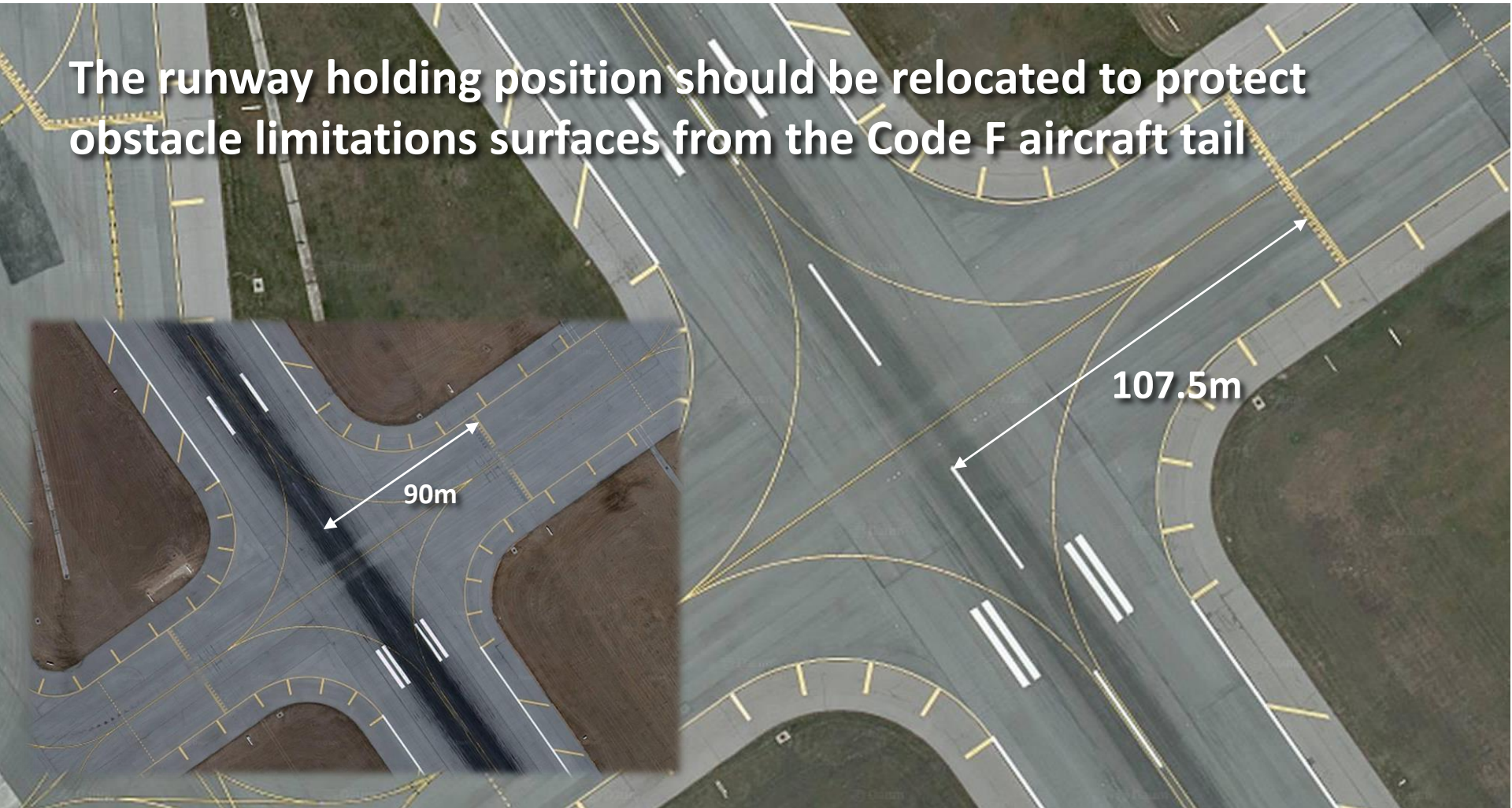
Route proving flight by Airbus : '06

Route proving flight by Korean Air : '07



Challenge : Runway holding point

The runway holding position should be relocated to protect obstacle limitations surfaces from the Code F aircraft tail



Challenge : Ground movement on passenger apron

The distance between taxilane and obstacle shall not be less than 50.5m for code F aircraft movement



Solutions_A380

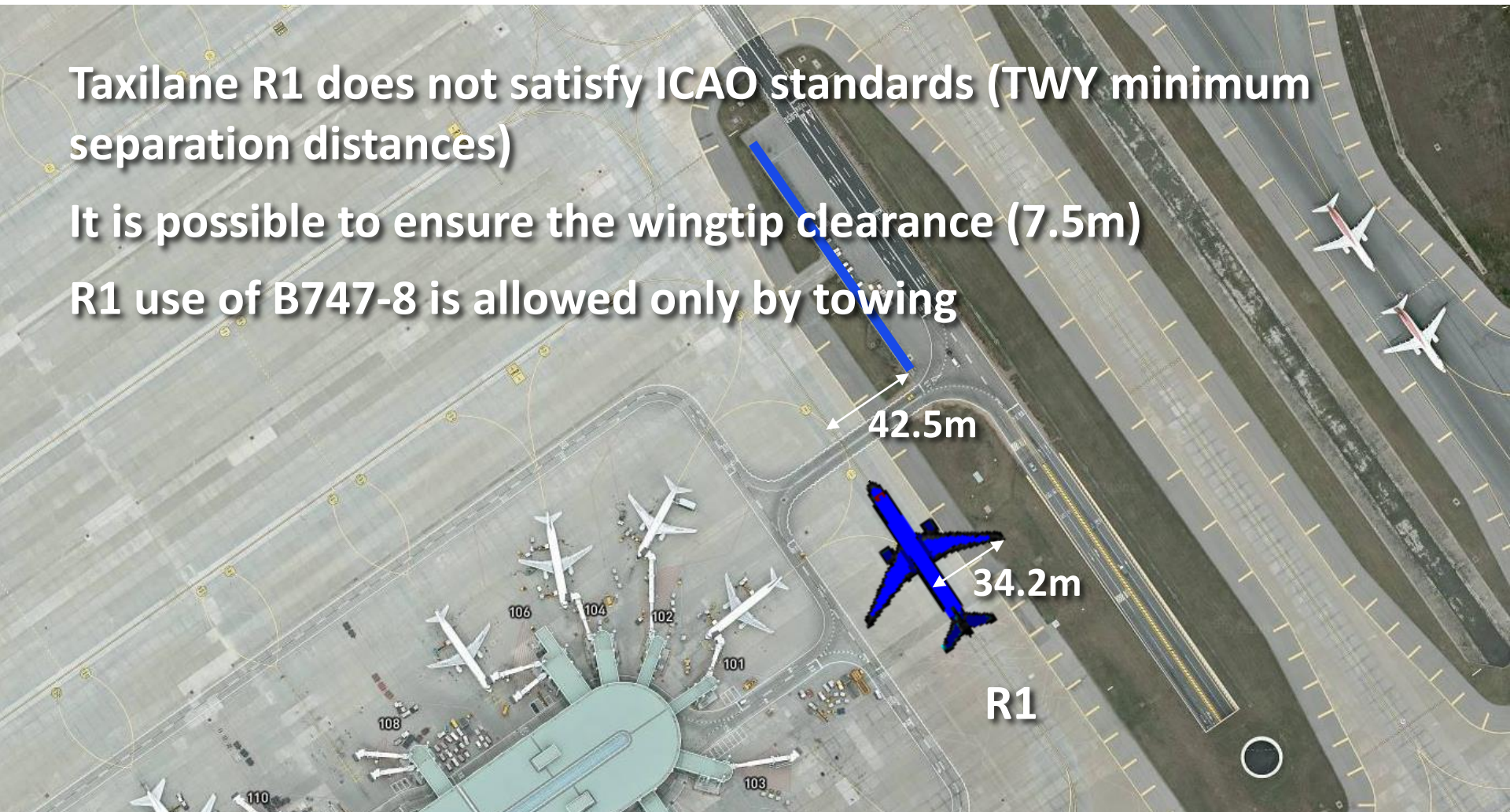


Solutions_B747-8

Taxilane R1 does not satisfy ICAO standards (TWY minimum separation distances)

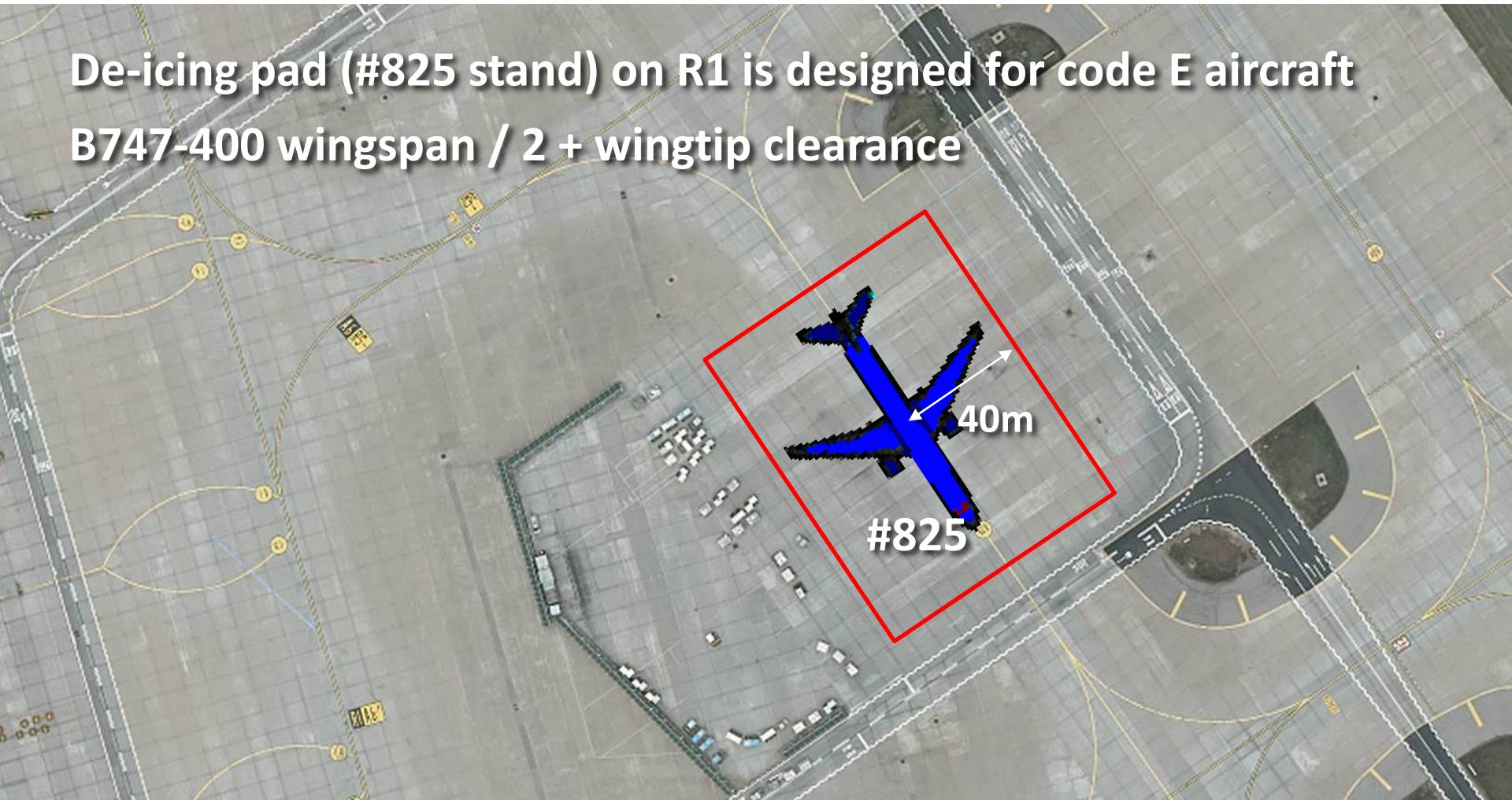
It is possible to ensure the wingtip clearance (7.5m)

R1 use of B747-8 is allowed only by towing



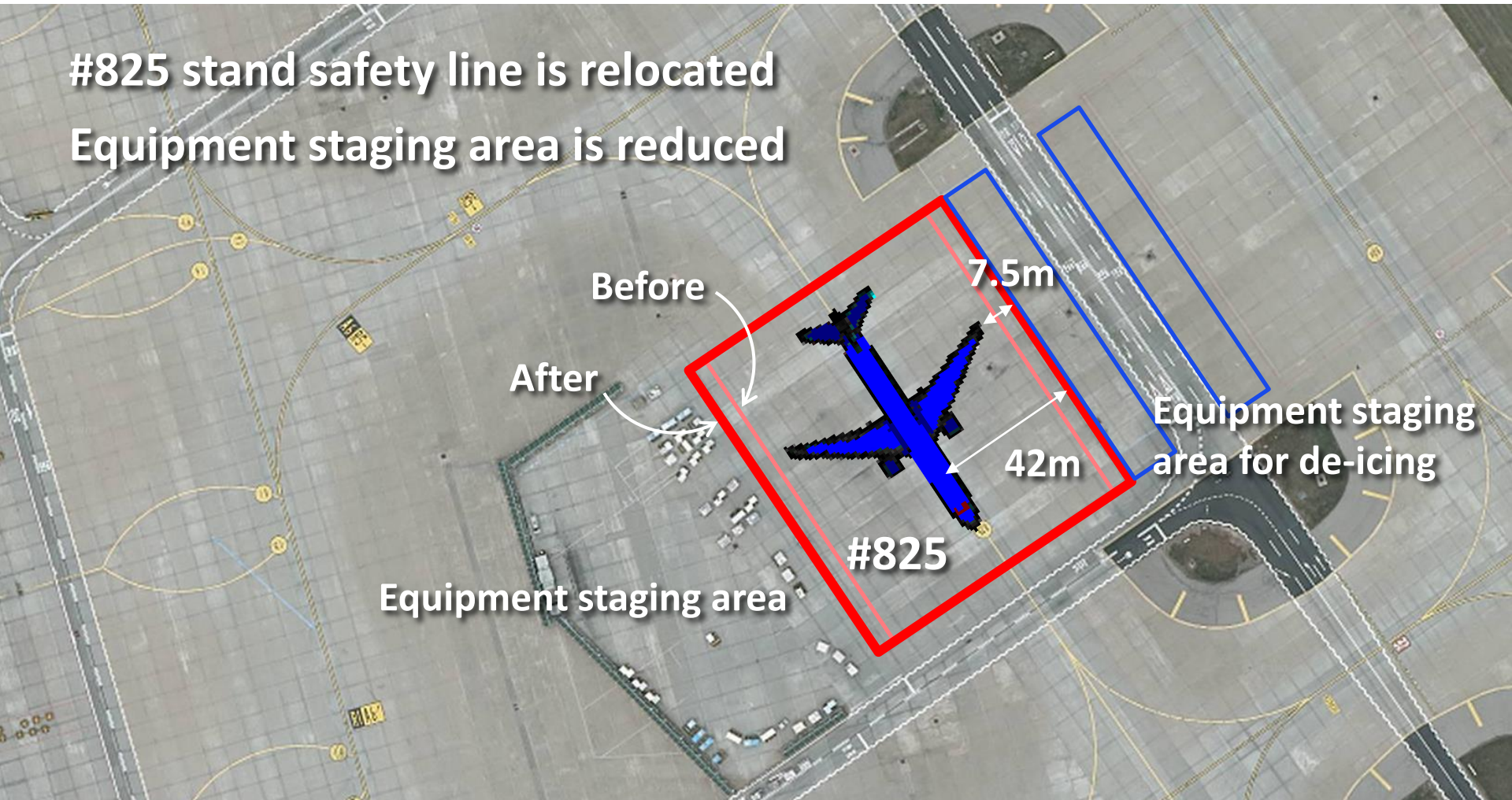
Challenge : Ground movement on de-icing pad

De-icing pad (#825 stand) on R1 is designed for code E aircraft
B747-400 wingspan / 2 + wingtip clearance



Solutions

#825 stand safety line is relocated
Equipment staging area is reduced



Challenge : ground movement on cargo apron

The distance between D2 and D3 is just 80m for code E
It is not sufficient for movement of A380, B747-8

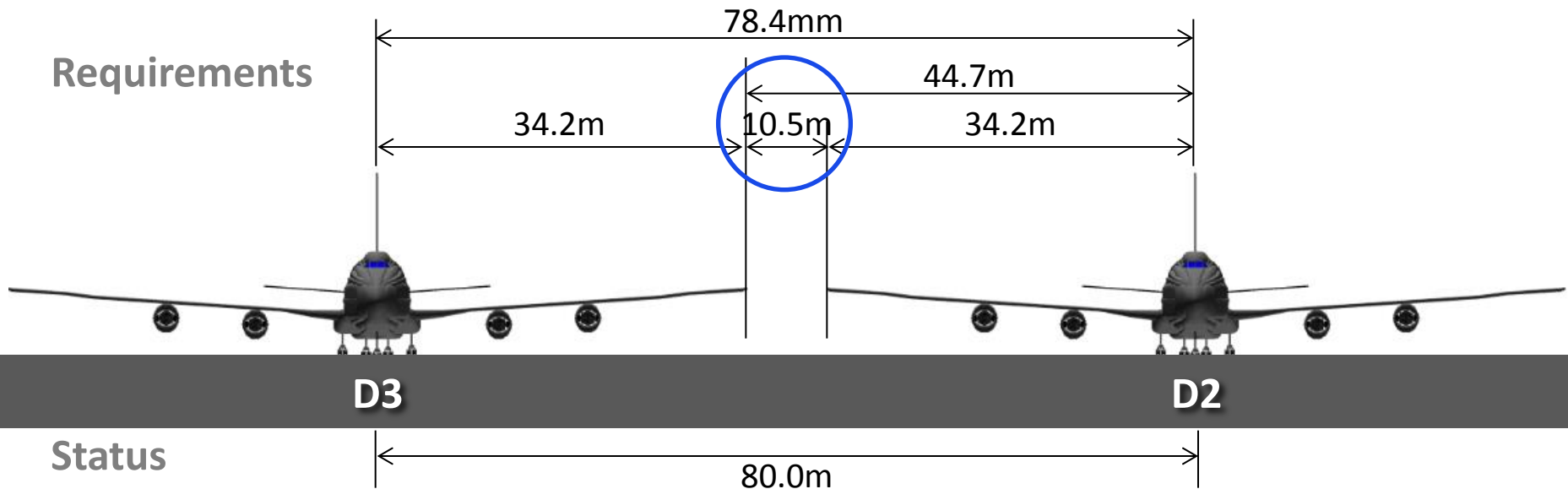


Solutions

ATC does not allow moving or push-back of code F aircraft when another is using cargo apron taxilane



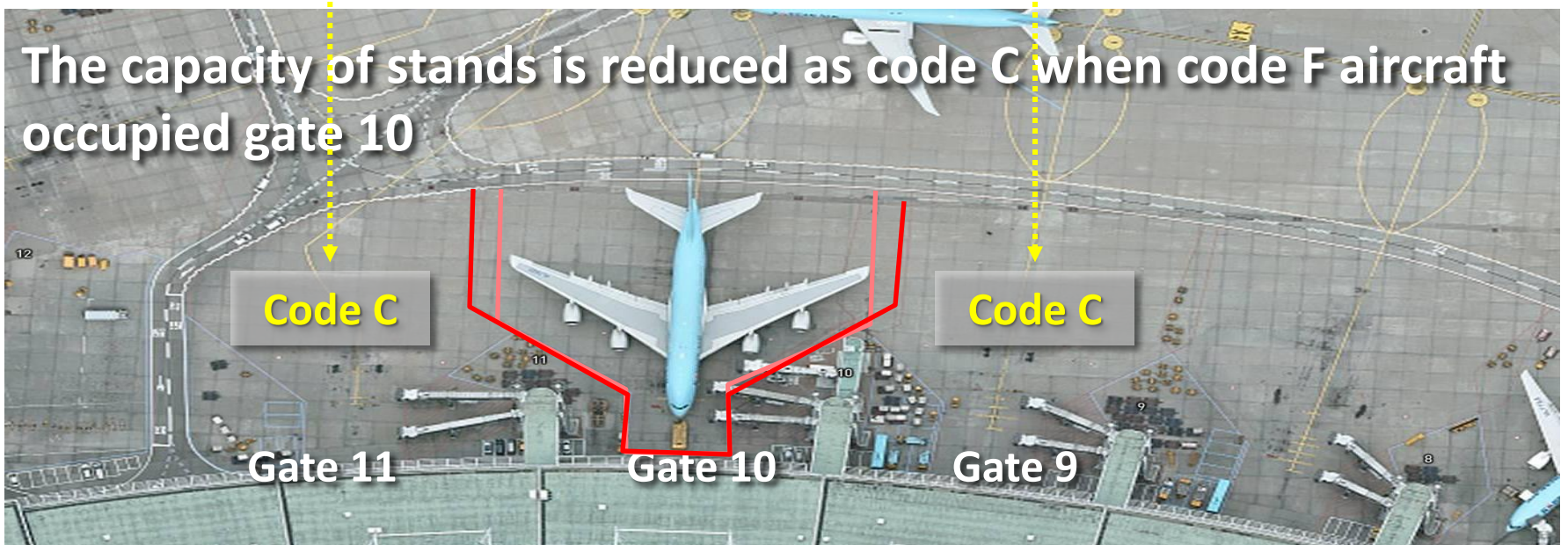
Solutions



Separation distance between taxilane and taxilane

- ✓ Distance(78.4) = wingspan(68.4) + deviation(3) + increment(7.5)
- ✓ ICAO Doc9157 (Aerodrome Design manual) part 2

Aircraft stand capacity



Upcoming changes

Annex 14

- ✓ Taxiway minimum separation distances will be reduced

PANS Aerodrome

- ✓ Aerodrome certifications
- ✓ SMS
- ✓ New procedure - compatibility study for new aircraft type

New aircraft type : B777-X

Questionnaire

- ✓ **National standards, organization and procedures for compatibility study**
- ✓ **Self inspection programme**
- ✓ **ILS sensitive area protection**
- ✓ **The relationship between airport operator and airlines, ground handlers in implementation of A-CDM**



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Thank You