

# **Air Traffic Control(ATC) considerations and ATC solutions**

**–Taking a Collaborative Approach–**

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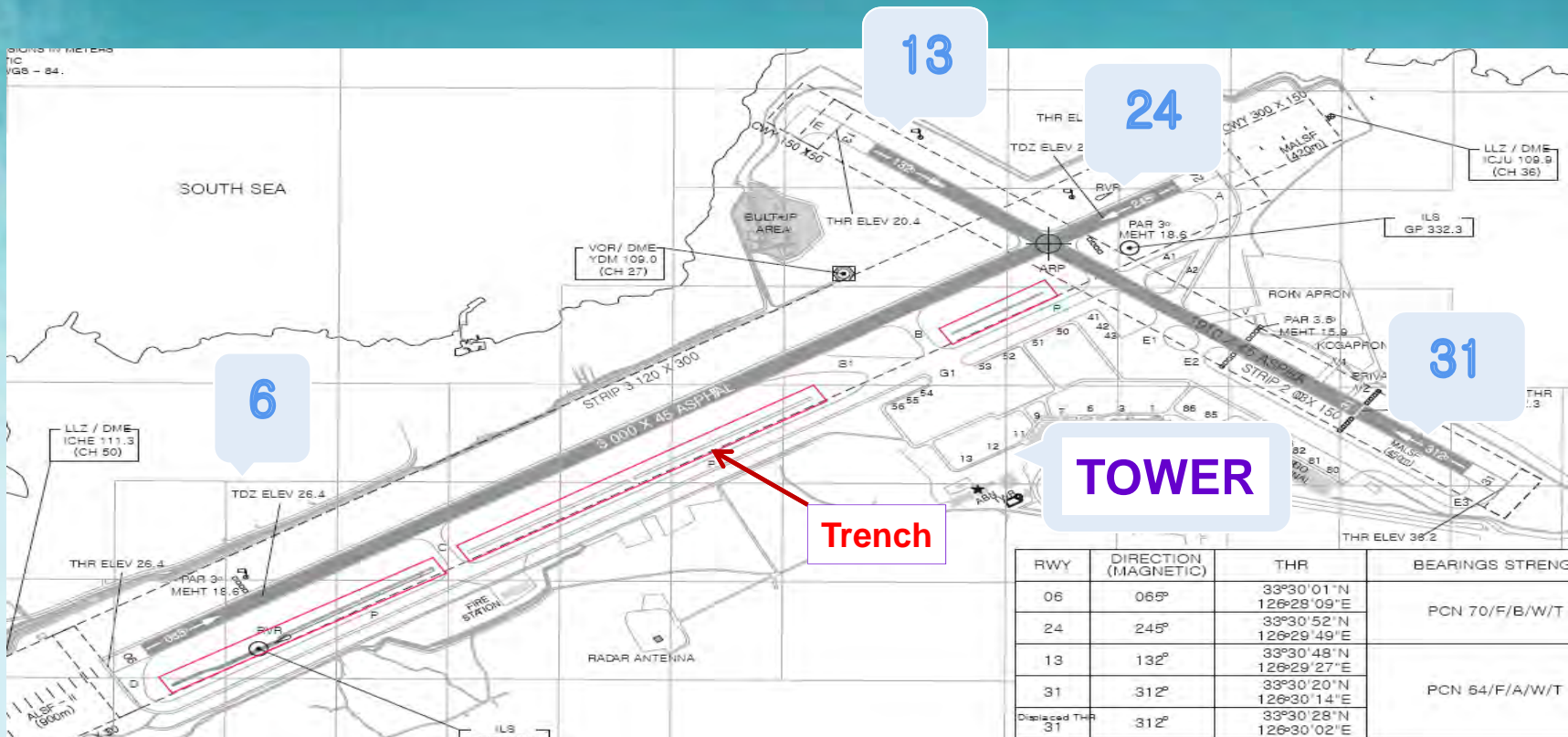
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# Scenario

## Construction Plan

- A trench was dug across one of the runways





## Scenario (Cont'd)

- **Construction Plan**

- To recovery work schedule

- From 21st March 2012 until 31th March

- During between 1300 UTC and 2100 UTC daily

- Except for aircraft with prior notice 30 minutes



## Scenario (Cont'd)

- Review Runway

- Cross Runway

- Runway 6/24 (3,180 x 45)

- Runway 13/31 (1,910 x 45)

- ✓ Both runways are activated

- ✓ But, Use Runway 6/24 **primarily**

- Traffic Management

- 5 ATCs work in tower

- ❖ Handle approximately over 350 traffics/day

- ✓ Max. 34 aircrafts / hour



## Scenario (Cont'd)

- **Normal Procedure**

- Stop take off and land
  - ✓ Holding traffics
- Check the happening
- Decide close the runway or not
  - ✓ To notice if the runway is closed
- Change ATIS
- Manage traffics



# *Considerations*

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# Considerations

- Tower Staffing Plan
  - Additional ATCs
- Taxi and Ground Movement Plan
  - Need a single point of access/exit
- Need for up-to-date information
  - Develop “Briefing Package” for ATC





# *Solutions*

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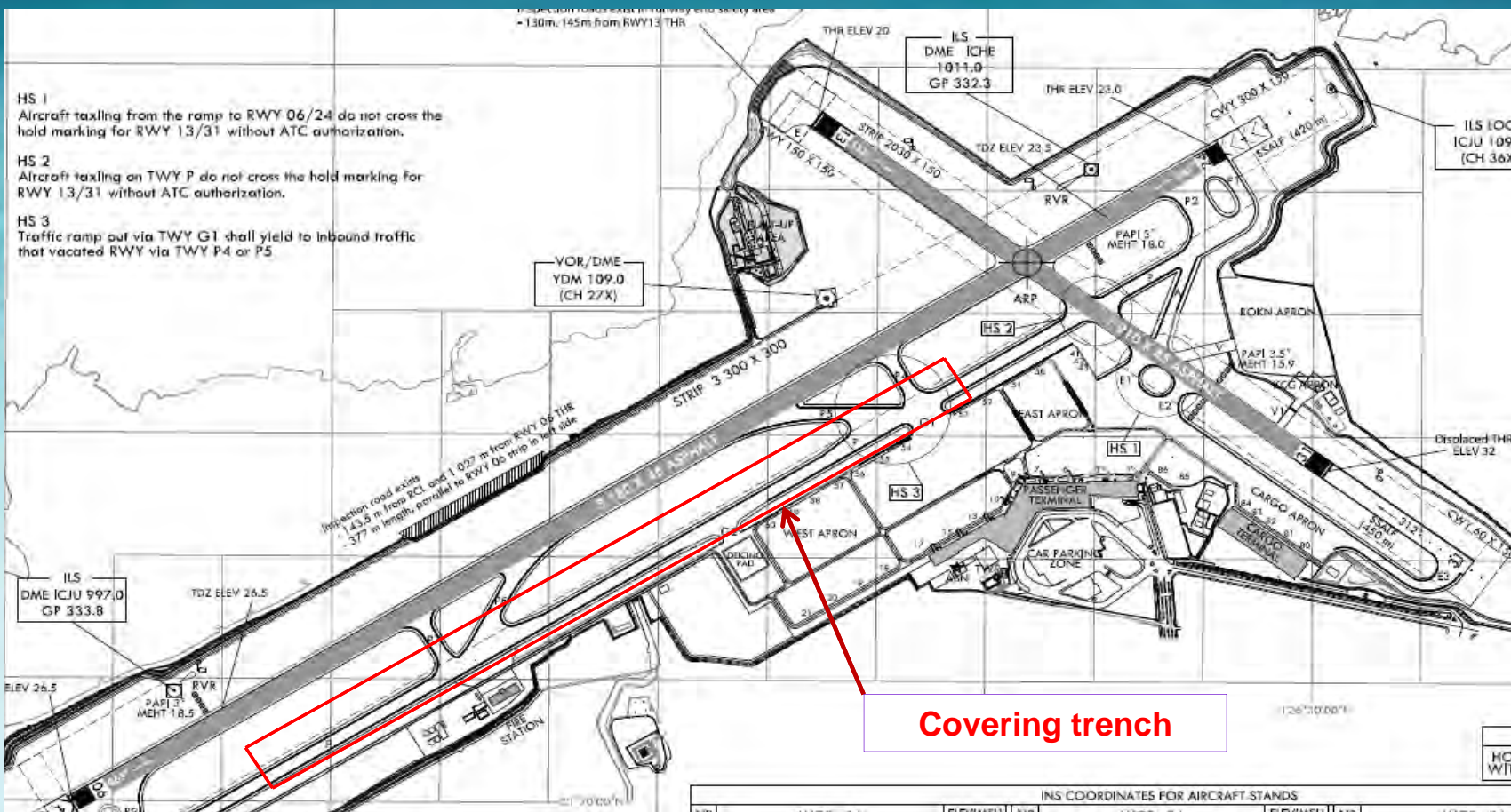
# Solutions

- Safety ensure procedures
  - Take safety education
    - ✓ SOP, Safety seminar, Simulation training..
  - Make Quick Reference Book
  - Understand ATC Communication
    - ✓ Standard Phraseology
  - Mitigation hazards
    - ✓ NOSS,..



# Solutions (Cont'd)

## Construction of covering trench





## Solutions (Cont'd)

- Safety efforts

RUNWAY INCURSION PREVENTION!!



SURFACE PAINTED HOLDING POSITION SIGNS



# Solutions (Cont'd)

- Safety efforts

UNI DIRECTION TAXIWAY LIGHT

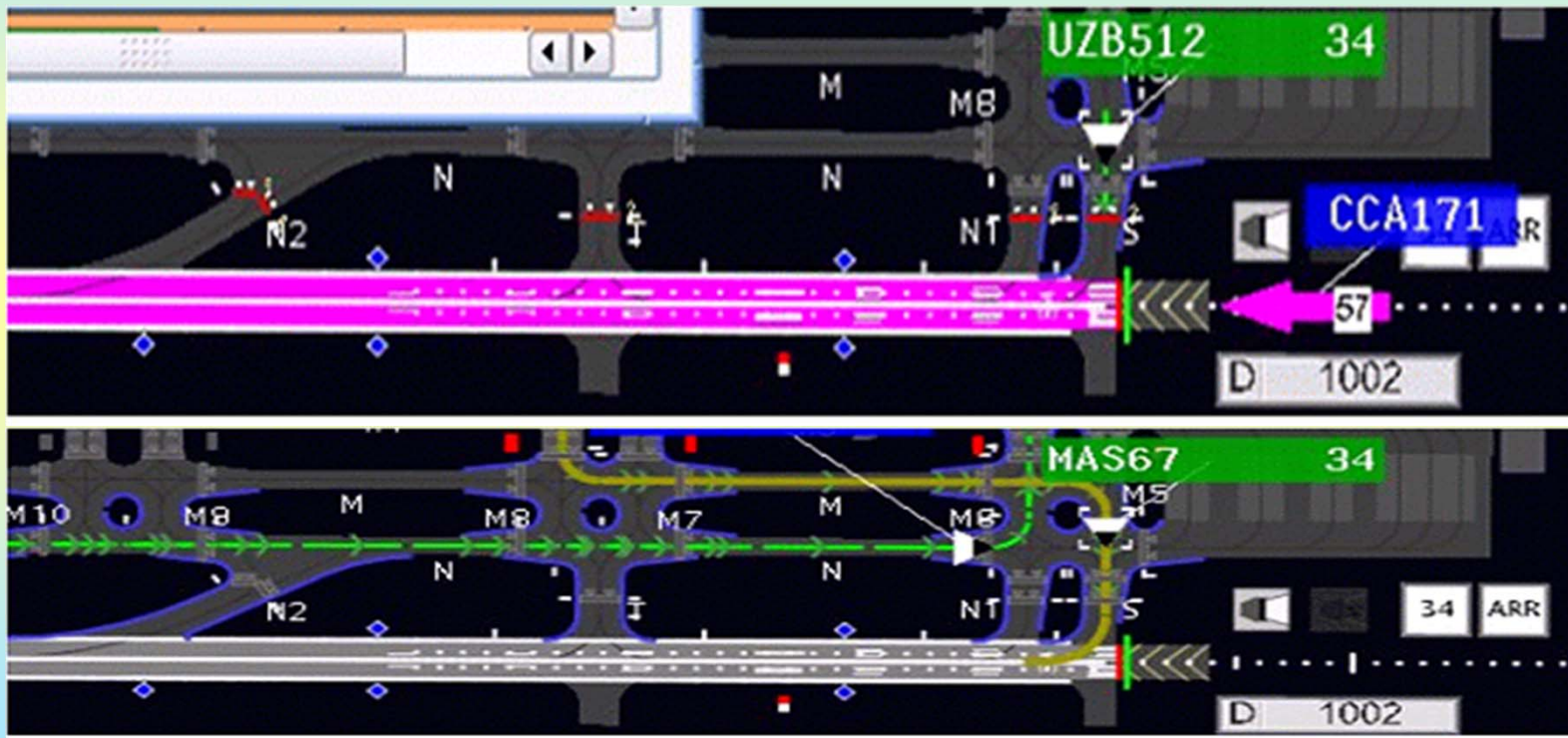




## Solutions (Cont'd)

- Stop bar

- STBs are installed at all runway access points.  
✓ on/off automatically or manually





## Solutions (Cont'd)

- Surface conflict alarm

- Sound Alarm
- Pop-up alert window
  - ✓ Alert do not stop until acknowledge

Object 1	Object 2	Type	Level	Time
AZ1234	AF0001	Runway Incurstion	Caution	13:25:38.781





## Solutions (Cont'd)

- **Surface prevent beam (in the future)**
  - Using Laser beam
    - ✓ **When the ATC clearance issues,**  
**To prevent incursion for stopbar**
  - Using Sound alarm
    - ✓ **When the ATC clearance issues,**  
**To prevent incursion for vechles' drivers**





# *Conclusion*

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## Conclusion

- ❖ As the air traffic volume grows, the chance of accident also increases.
- ❖ Runway incursions have been identified as a major hazard to the safety of aircraft worldwide.
- ❖ To prevent runway incursions, we have proper operation procedure and advanced surveillance System.
- ✓ Consist of RST for standardization, Harmonization



Making your way safe,  
Guiding your way home

▶▶▶  
**Thank you**