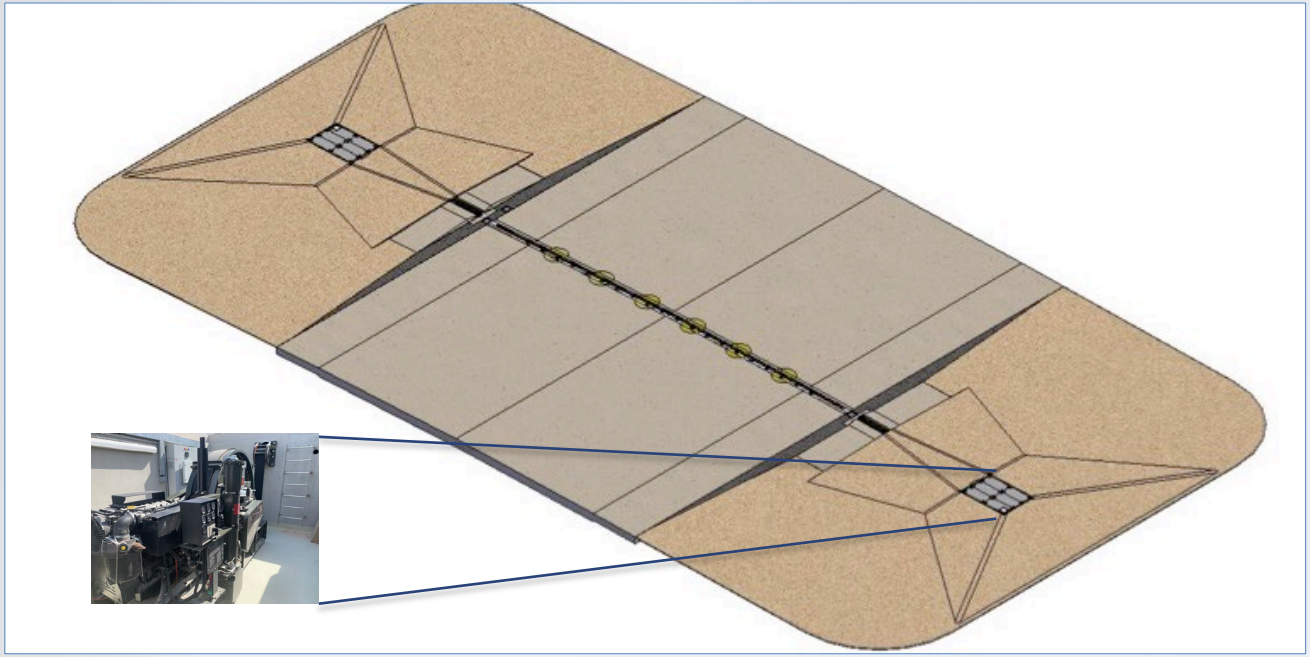
Aircraft Arresting System
Introduction to the local construction

Retractable cable system installed below grade in Pit

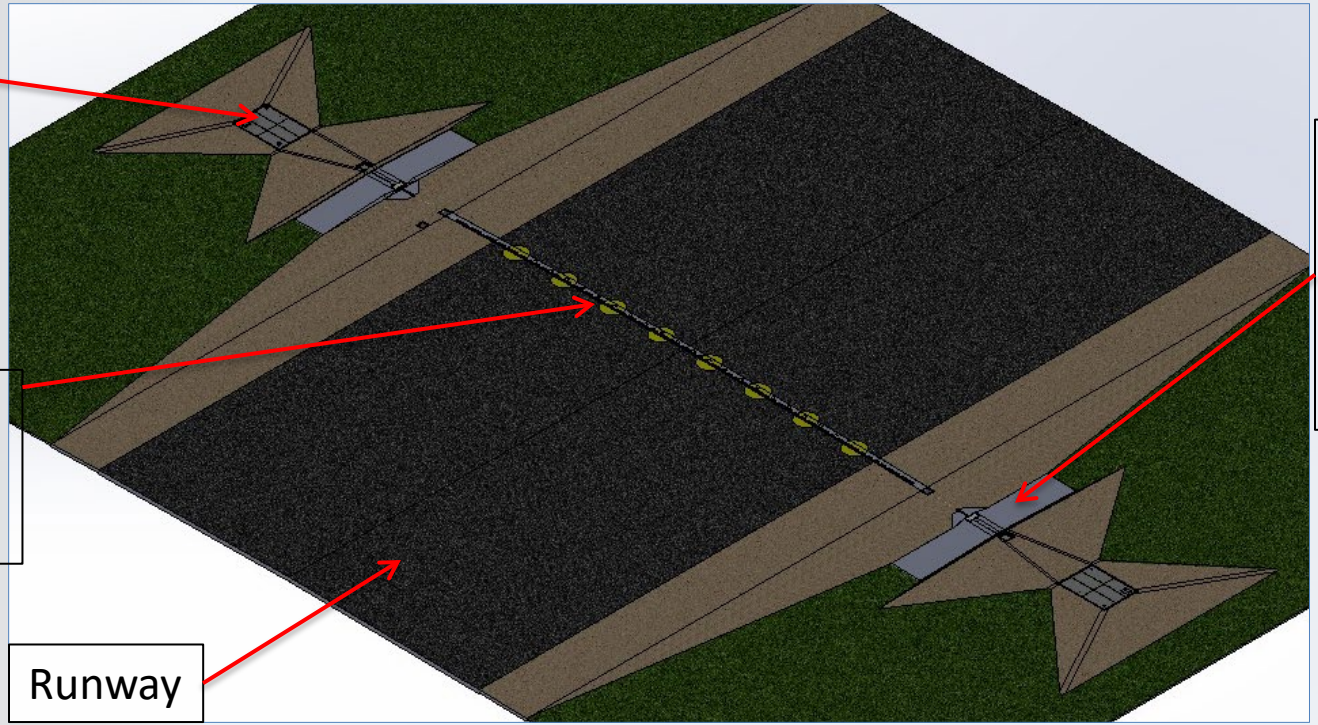
Example installation layout

Retractable cable aircraft arresting system

Retractable Cable System below grade



Main parts for construction



Main parts for construction of one system

- One cross runway foundation (for installation of retractable mechanisms in cast-in boxes)
- Two pits (for installation of energy absorbers and hydraulic- and electrical cabinets)
- Two ramped runway edge sheave foundations, one on each side of the runway
- Additional civil works include foundations for fairlead tube, connection to drainage, cable laying,

Cross runway retract foundation

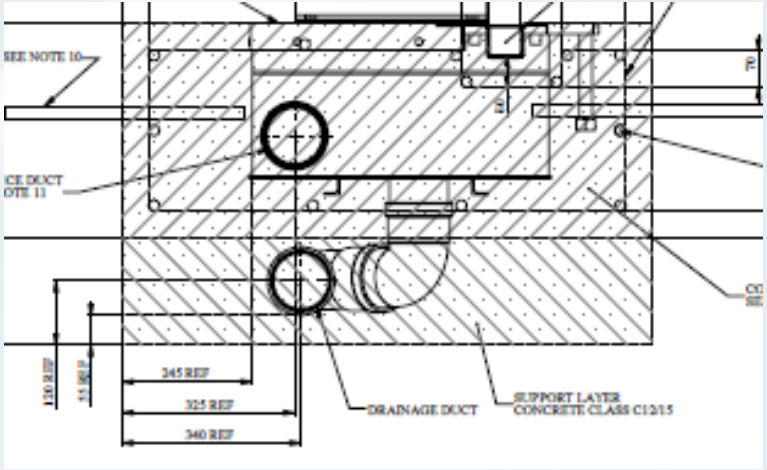
SCAMA supply the cast-in templates including retract boxes

Retract system foundation

- Concrete volume (for 60m wide runway) – Approx 37m^3
- Reinforcing steel weight (for 60m wide runway) – 650kg

Cutting the runway

Cross runway excavation cross section



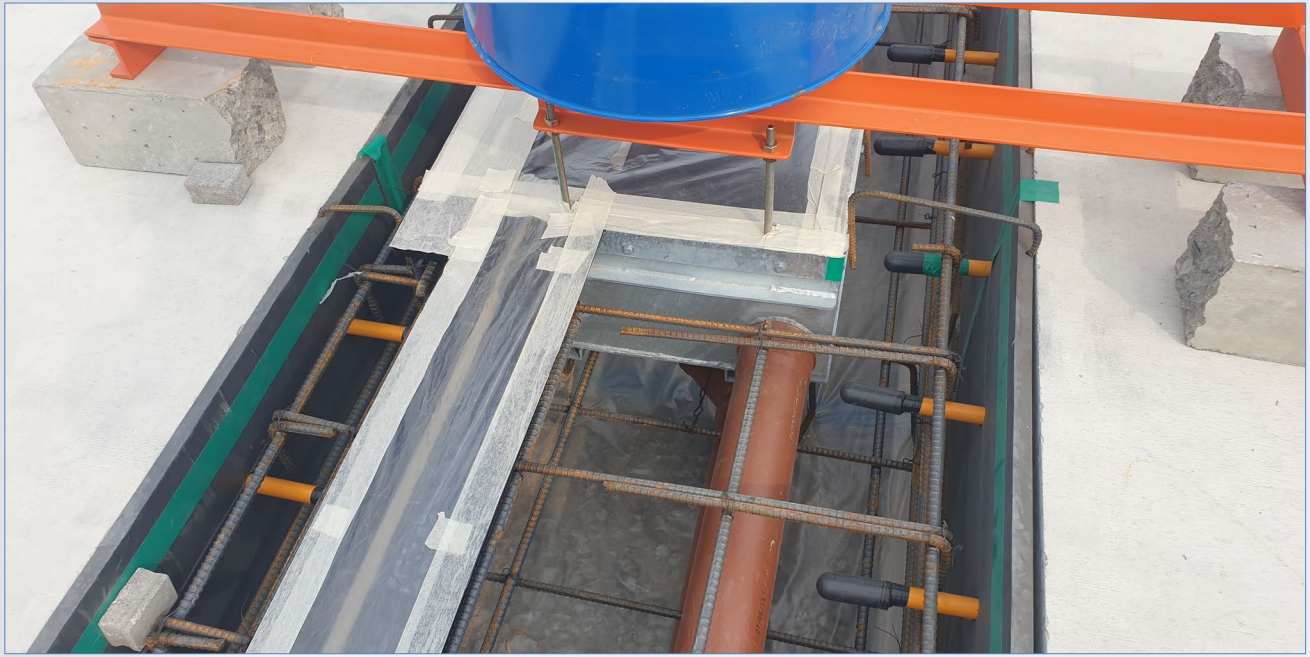
1000 wide x 600 deep

After cutting, place the templates (boxes)

Installation frames (orange) are supplied by SCAMA

Cast-in retract boxes, drainage, ducting, re-inforcement rebars, dowels in place

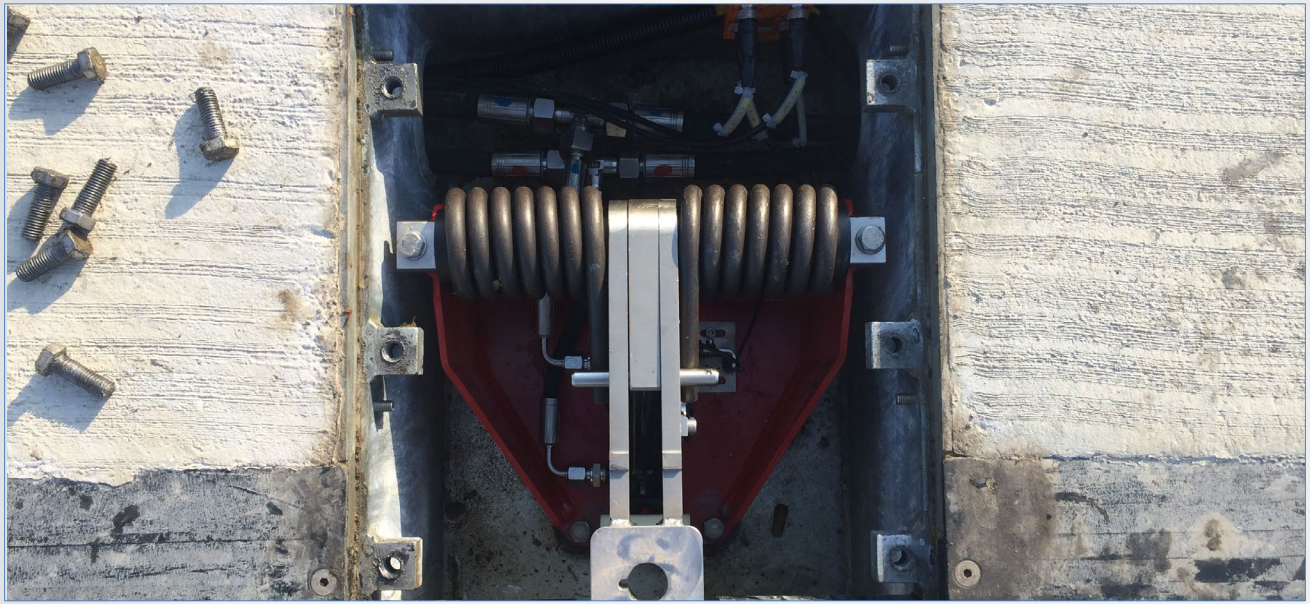
Detail of cross runway forming



Placing concrete

Concrete curing

Installation of retract mechanism



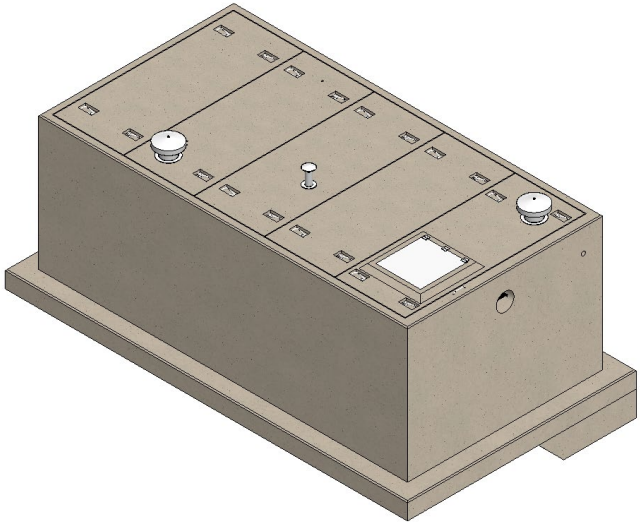
Hook cable system installed and operational

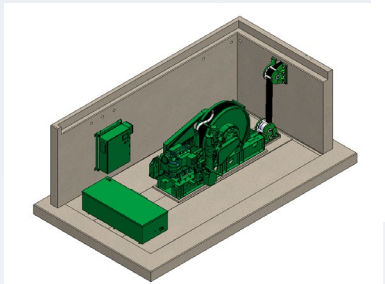
Pit

Concrete foundation (room) below grade for installaton of energy absorber and cabinets

BAK-12 Pit – US Air Force standard

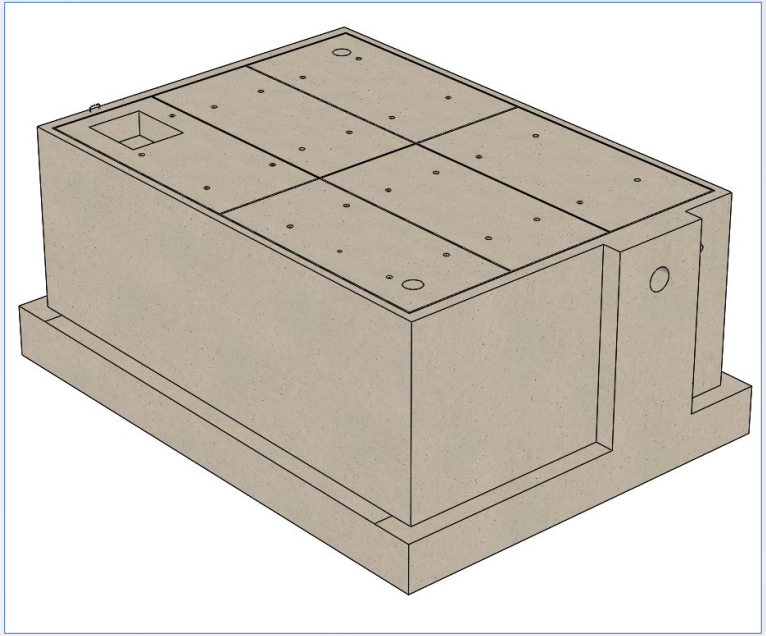
- Inside 6,12 x 3,05 x 2,20 m
- Concrete volume ~ 55m^3
- Reinforcing steel weight ~ 4,700kg
- This is what we consider to be minimum size.





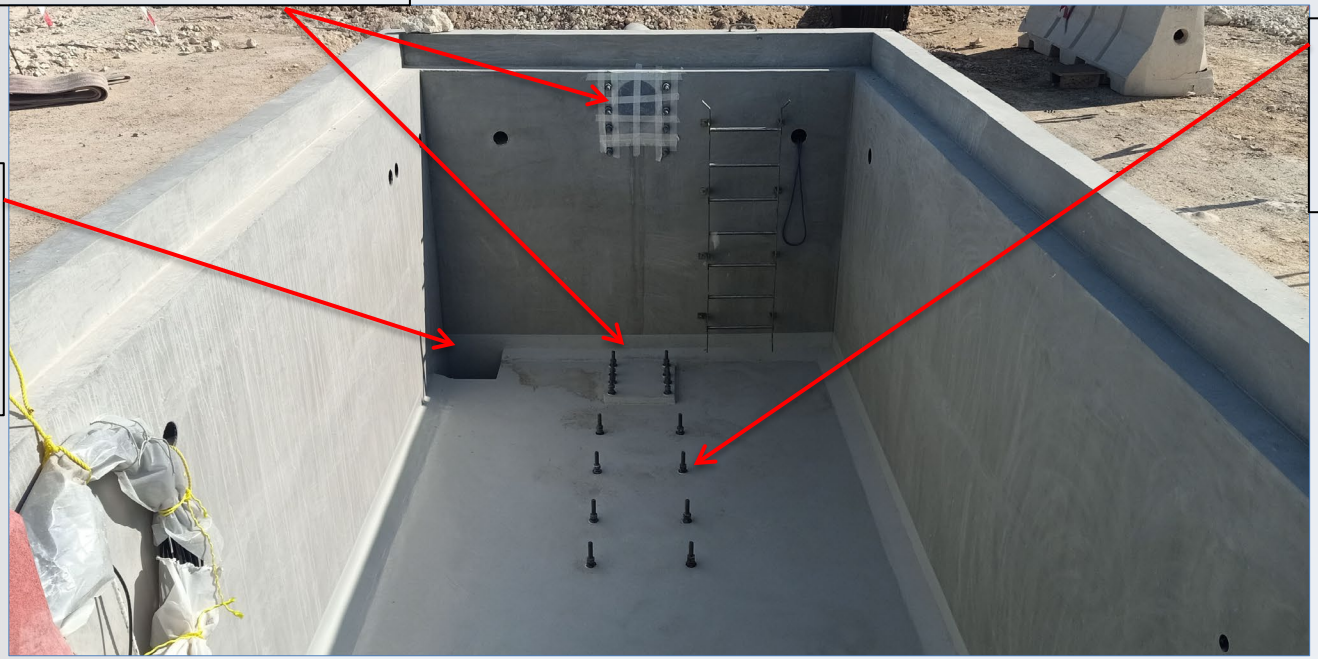
BAK-12 Pit – SCAMA design

- In case US Air Force standard pit is considered too small, specific design to meet customer requirements is available.
- Based on experience:
- Concrete volume ~ 60-80m^3
- Reinforcing steel weight ~ 5,000-10,000kg



Pit foundation (small size example)

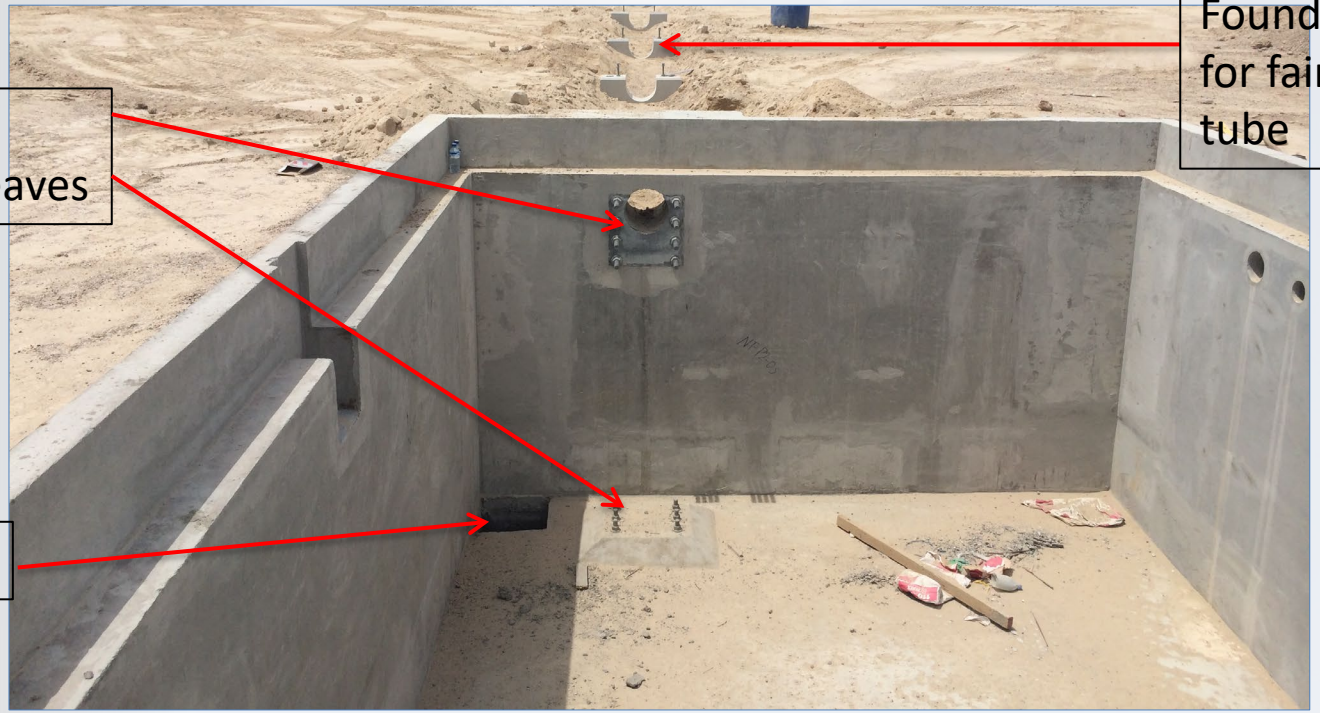
Fixations for deflector sheaves



Hole for sump pump

Fixation for energy absorber

Pit foundation (large size example)

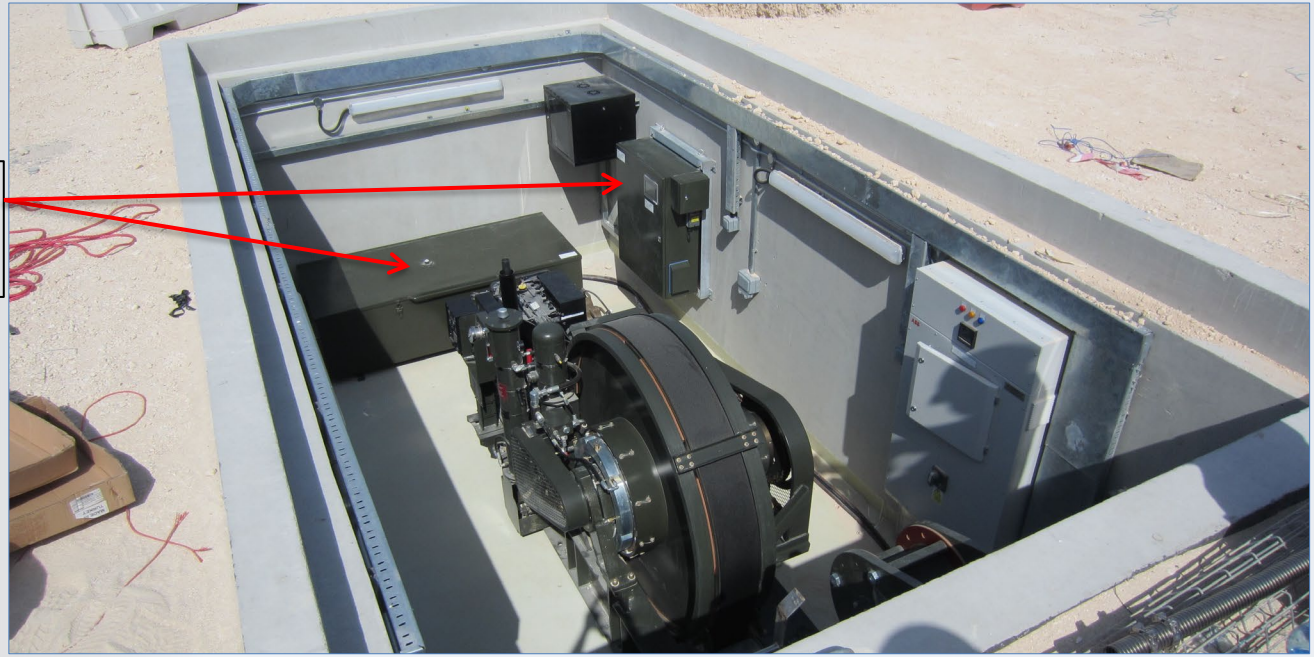


BAK-12 below grade in Pit (small size example)

Purchase tape in Pit (large size example)

BAK-12 and cabinets in Pit

BAK-14U cabinets

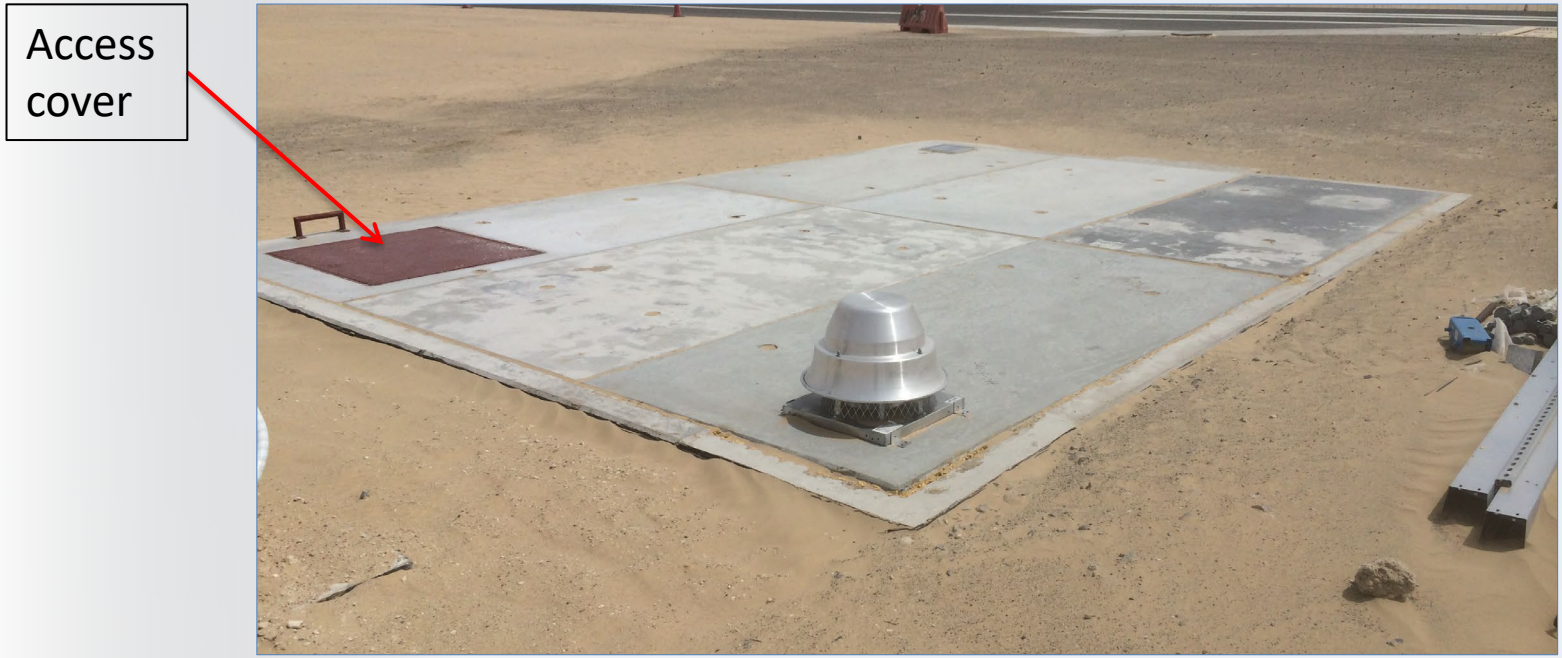


Casted roof sections

Installation of roof

Pit from outside (small size example)

Pit from outside (large size example)

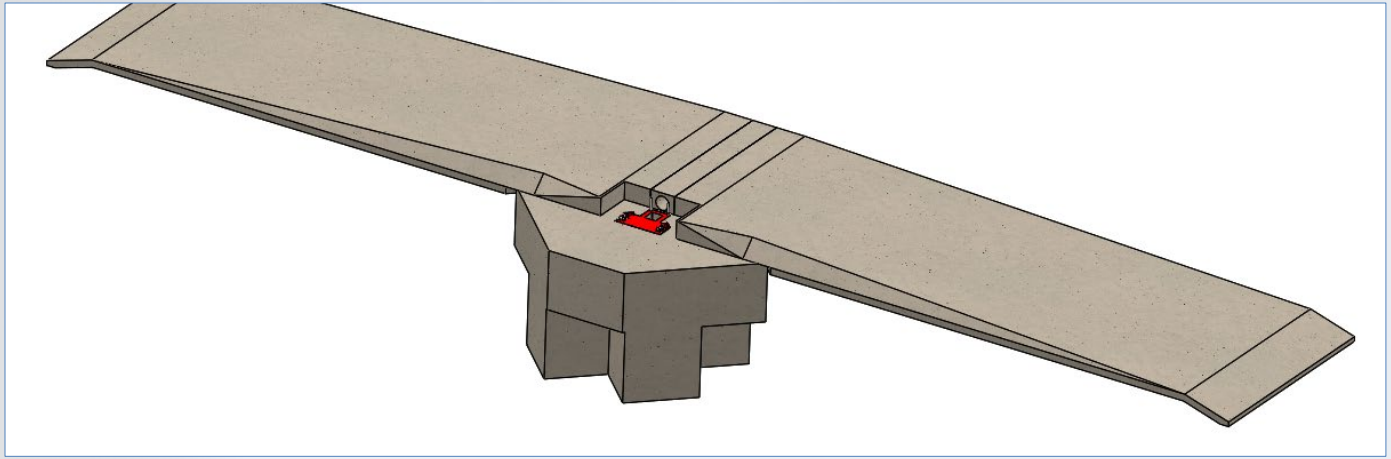


Access door - Hatch

Ramped runway edge sheave foundation

For the installation of the 3-roller sheave or USAF standard fairlead beam

Runway edge sheave foundation, retract



- Concrete volume (including ramps) – Approx 70m^3
- Reinforcing steel weight – 3,600kg

Bottom part of edge sheave foundation

Forming and placement of cast-in templates

Foundation with ramping is ready

Example with edge sheave installed

Fairlead tube

Protecting the purchase tape from the pit to the runway edge

Fairlead tube on foundations

Pit accessories are required e.g.

- Access door (hatch)
- Ladder
- Exhaust fan assembly
- Air inlet filter
- Sump pump
- Lights
- Rewind engine exhaust
- …

Pit accessories