Group 5

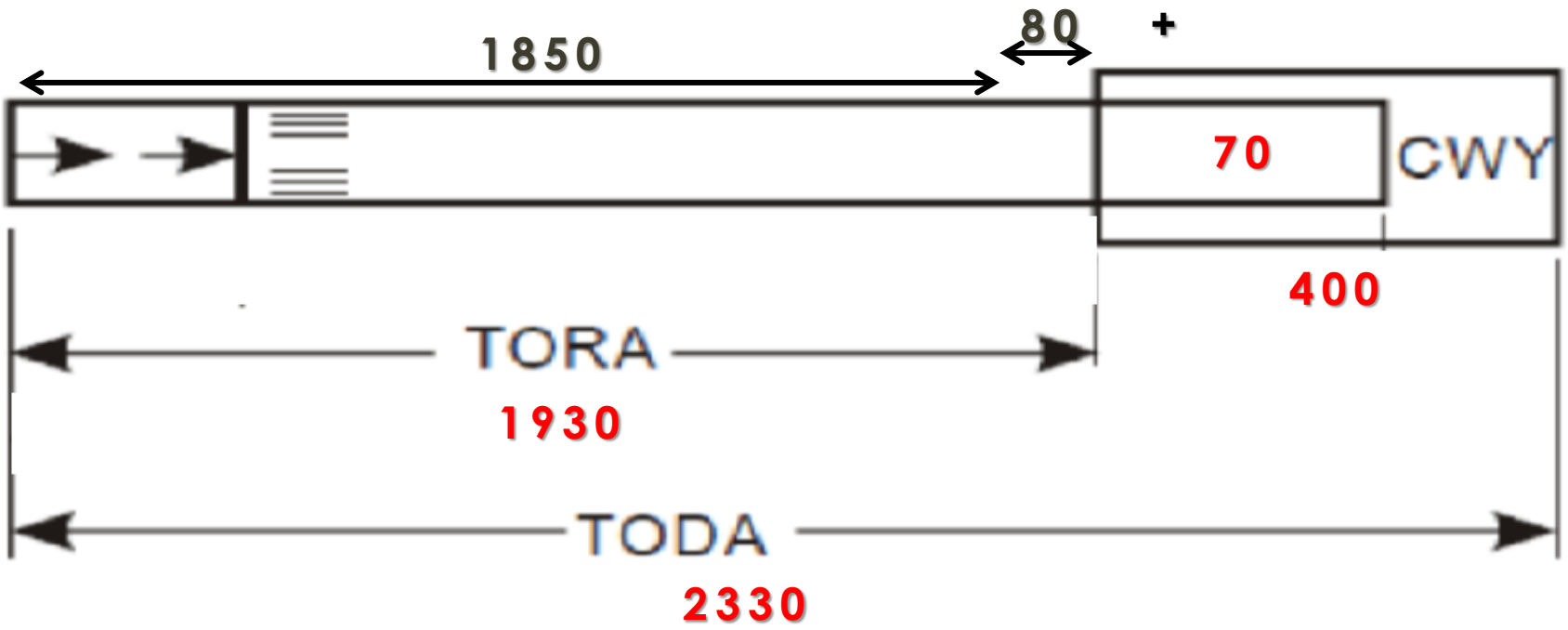
Case of Studie #1

Options

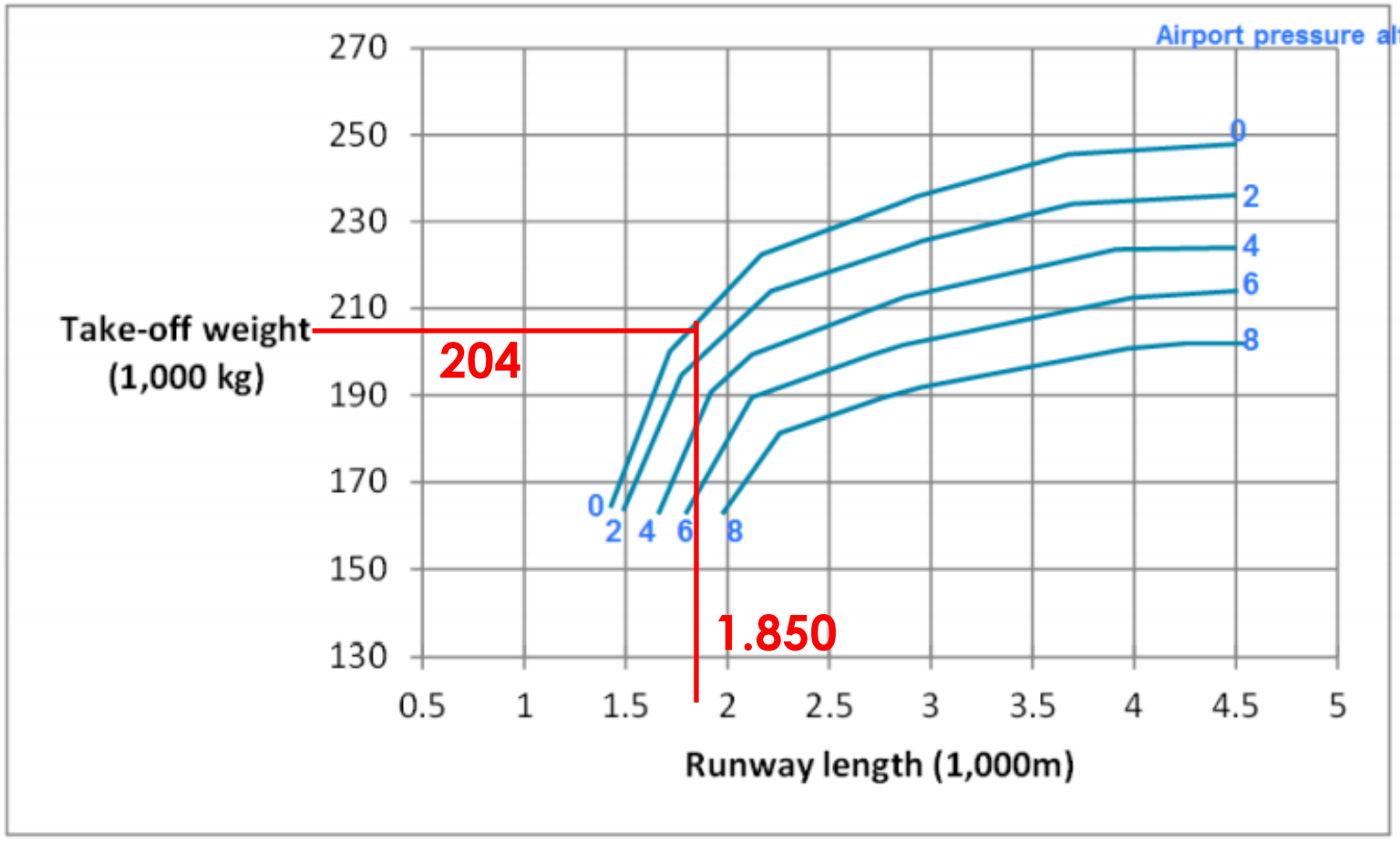
- Reduction of RWY Lenght (35% payload reduction)
- Build an EMA´s
- Build Over the Sea

Existing Situation

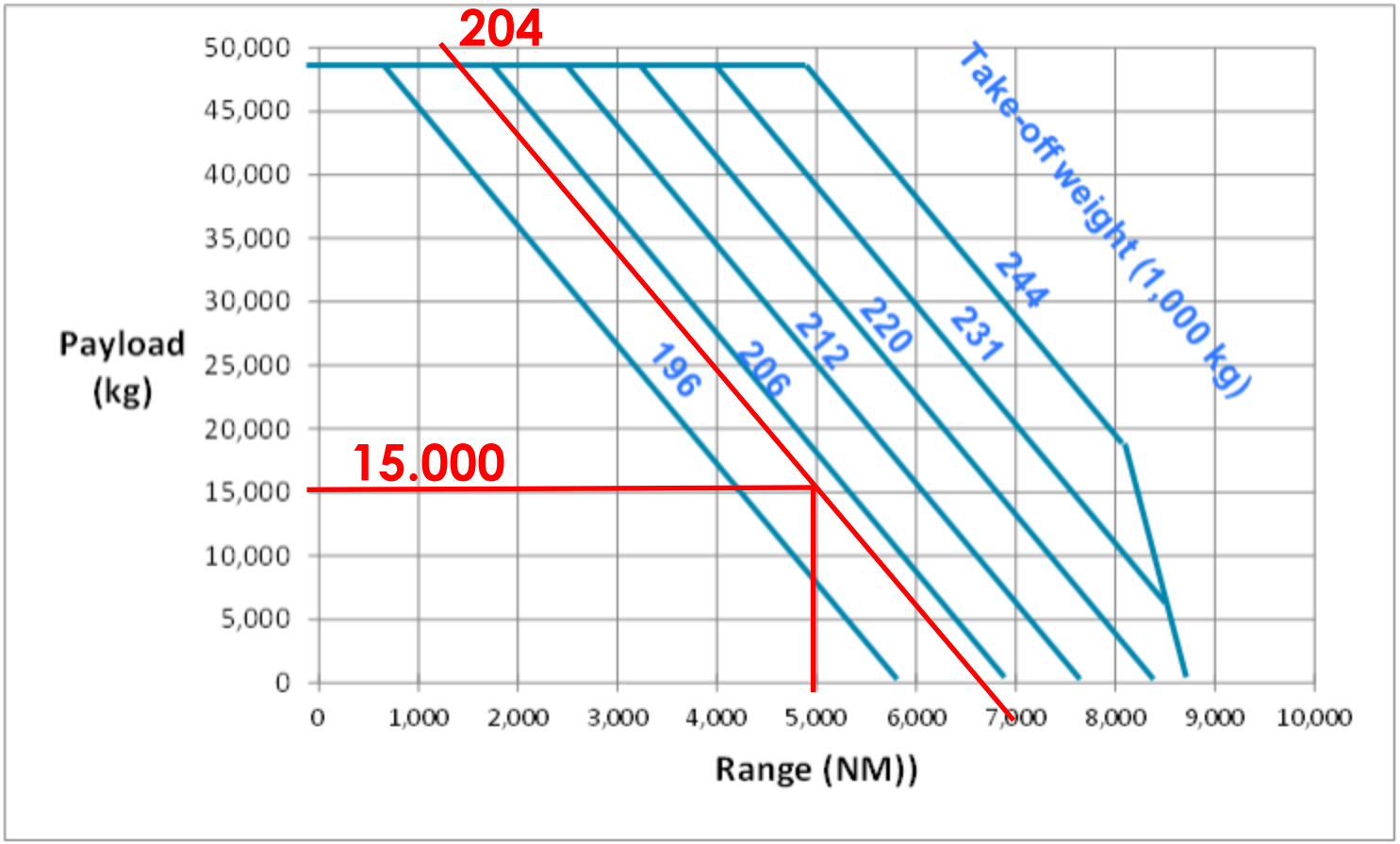
Option #1



Option #1


Airport pressure altitude (1,000 ft)
270
250
230
210
190
170
150
130
Take-off weight
(1,000 kg)
204
0
2
4
6
8
1.850
0.5
1
1.5
2
2.5
3
3.5
4
4.5
5
Runway length (1,000m)

Option #1



Runway 1.850m = Payload 15.000kg → Reduction of 35%

Option #2

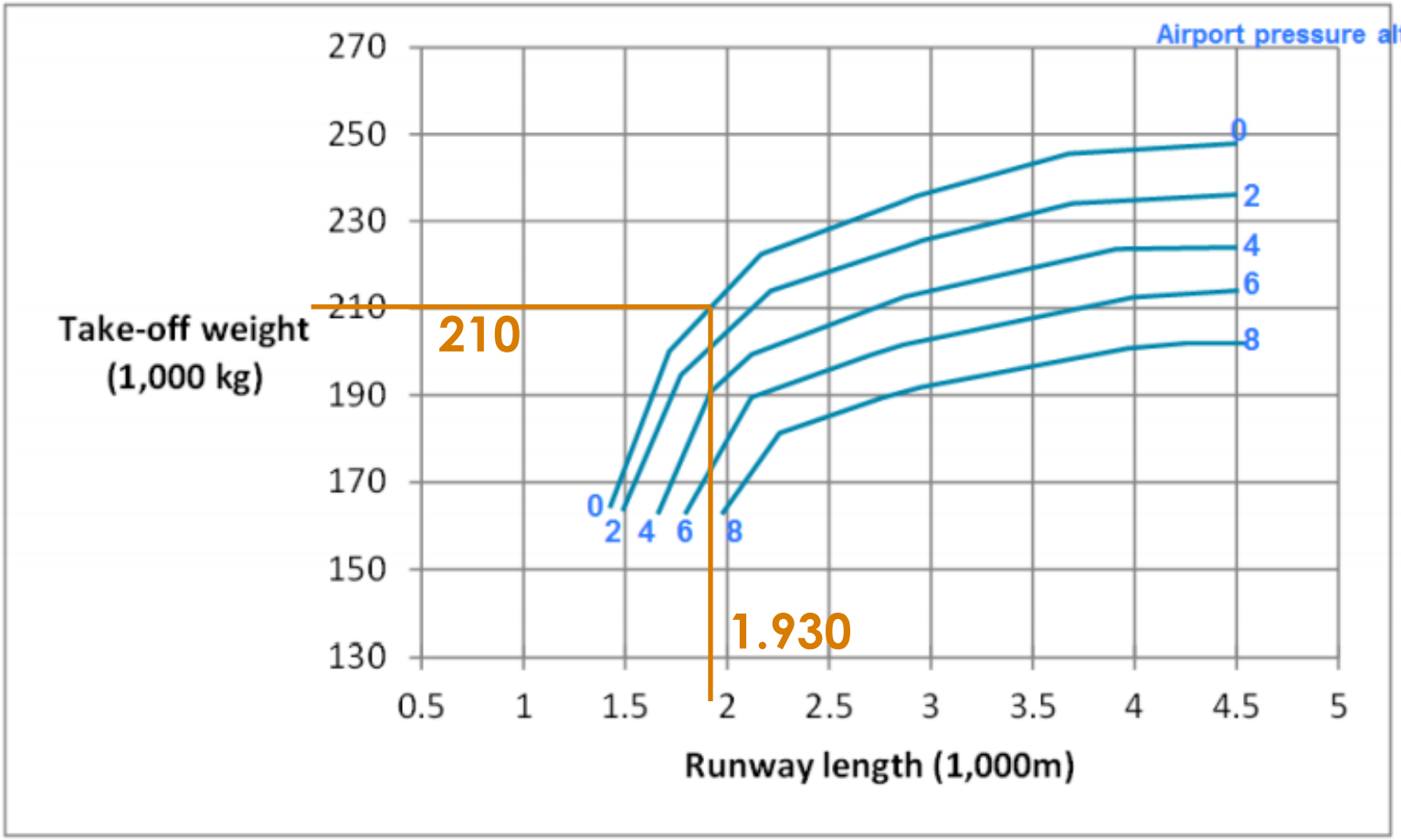
- EMAS: considerar 12 Millones US dollars

Build over the Sea

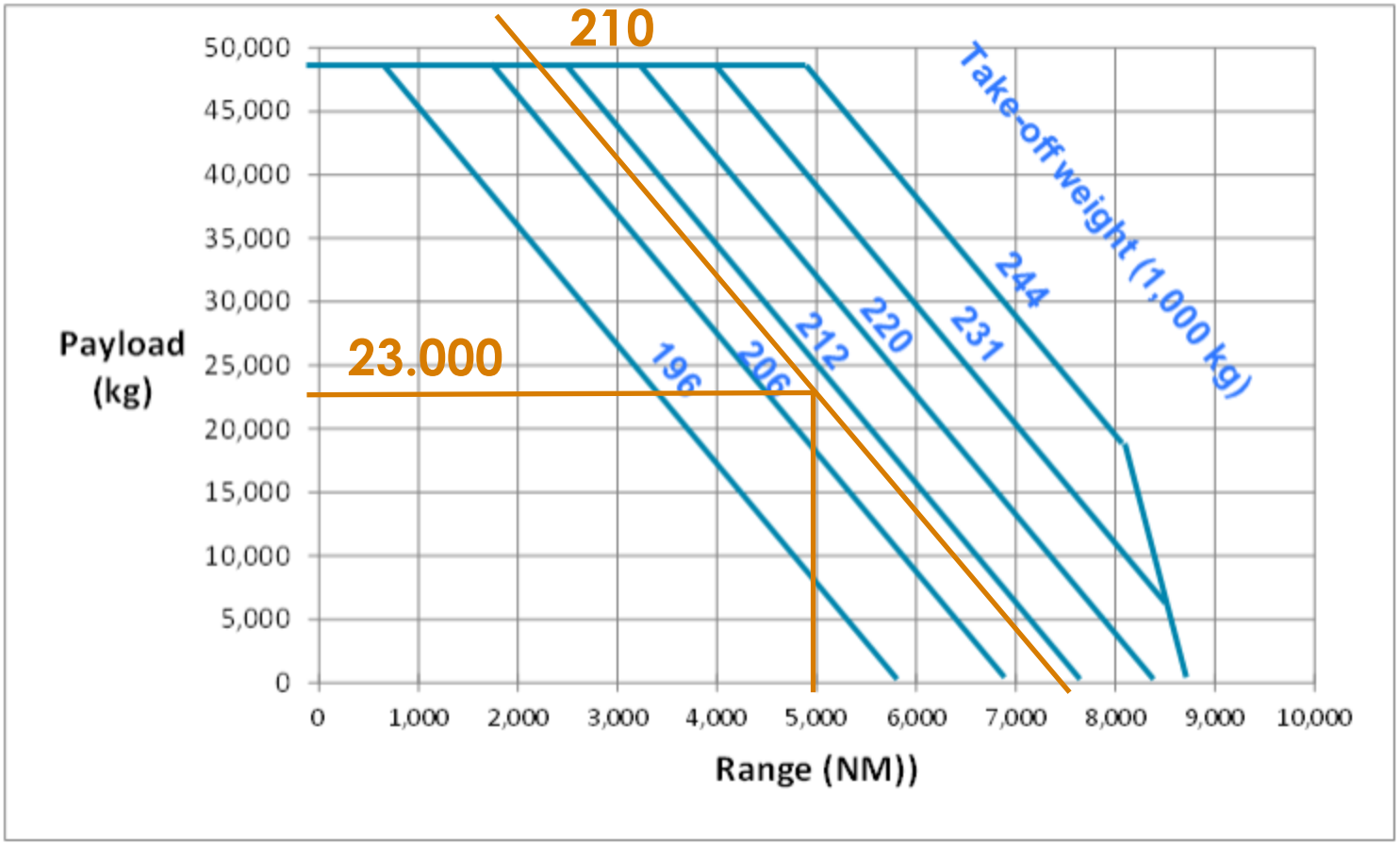
3.1 Existing conditions: build an 80x90 area

3.2 Build an 150x90 area, use the 70m existing to lenghten the runway

Option #3.1

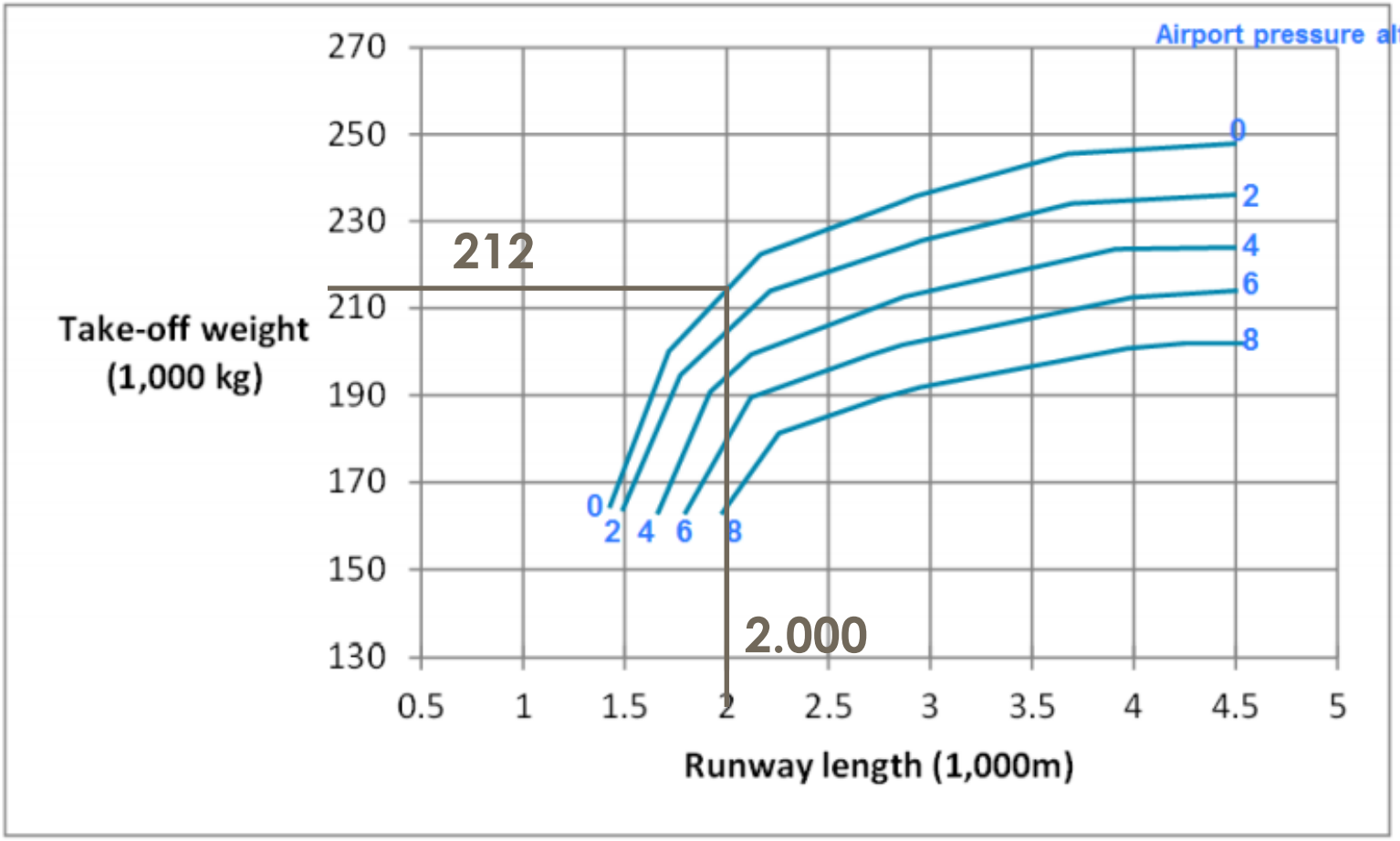

Airport pressure altitude (1,000 ft)
270
250
230
210
190
170
150
130
Take-off weight
(1,000 kg)
210
0
2
4
6
8
1.930
0.5
1
1.5
2
2.5
3
3.5
4
4.5
5
Runway length (1,000m)

Option #3.1

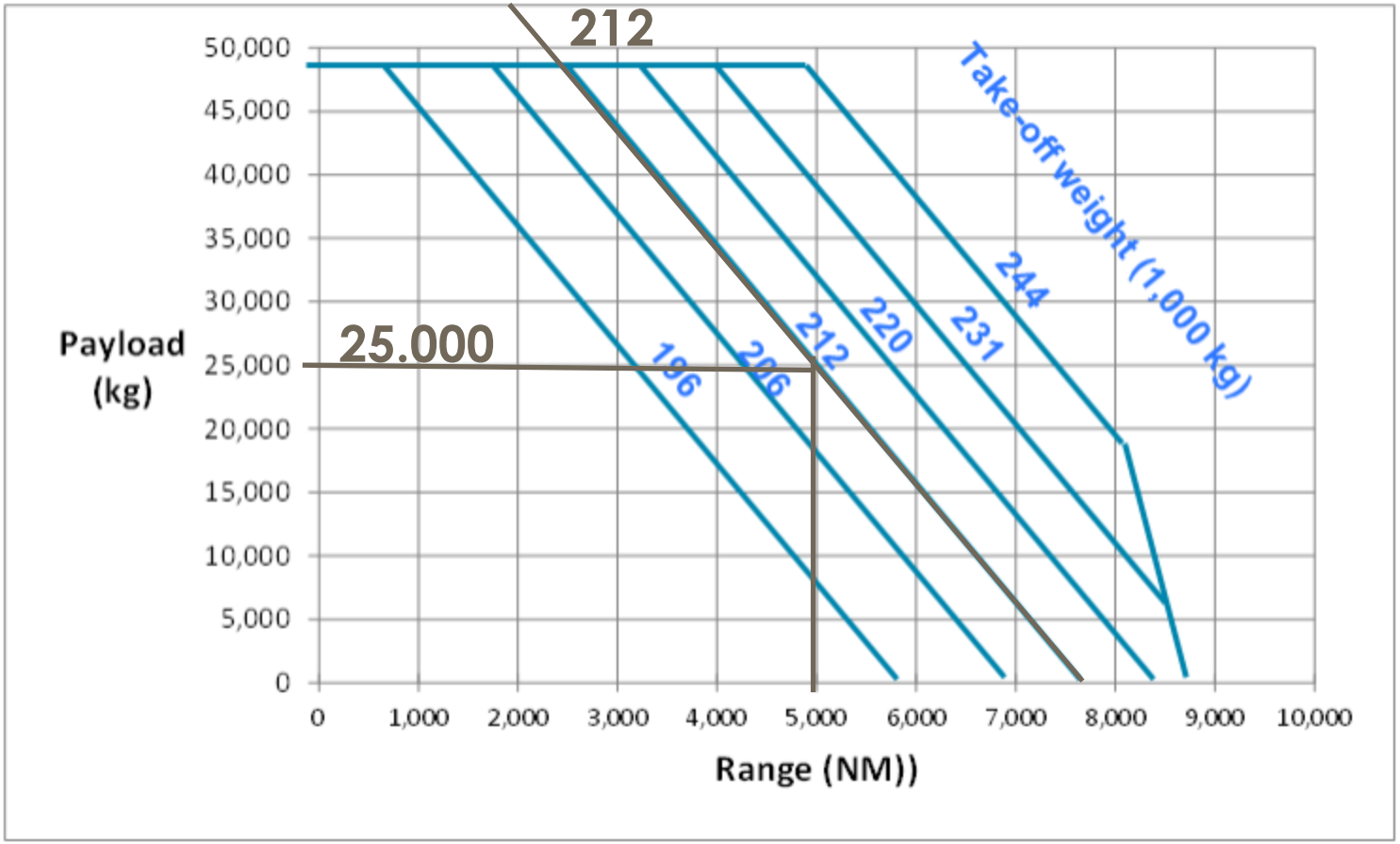


Runway 1.930m = Payload 23.000kg

Option #3.2


Airport pressure altitude (1,000 ft)
Take-off weight (1,000 kg)
270
250
230
210
190
170
150
130
212
2.000
0
2
4
6
8
0.5
1
1.5
2
2.5
3
3.5
4
4.5
5
Runway length (1,000m)

Option #3.2



Runway 2.000m = Payload 25.000kg (max)
Increase of 70m (1930 +70) and build 150m over the sea (60m strip and 90m RESA)

Build over the Sea

3.1 Existing conditions: build an 80x90 area
3.2 Build an 150x90 area

Distance	Cost (millions)
$90 * 80 = 7200\ m^2$	2.5
$90*150 = 13500\ m^2$	4.8

*This costs presented doesn't include de pavement costs.

Group 5

Case of Studie #1