Scenario 1

Runway designator	TORA	TODA	ASDA	LDA	Remarks
1	2	3	4	5	6
09R	3660 m	3660 m	3660 m	3353 m	**LDA:** 09R landing threshold is displaced by 307 m.
27L	3660 m	3660 m	3660 m	3660 m	
09L	3902 m	3902 m	3902 m	3595 m	**LDA:** 09L landing threshold is displaced by 306 m.
27R	3884 m	3962 m	3884 m	3884 m	

12m tall obstacle, on the centreline, 50m **before** the 09L threshold, i.e. to the west of the threshold. The same obstacle is 3646m from the 27R threshold.

09L (Take Off Away, Landing Over):

TORA = Original TORA - Blast Protection - Distance from Threshold - Displaced Threshold
= 3902 - 300 - -50 - 306
= 3346

ASDA = (R) TORA + STOPWAY
= 3346

TODA = (R) TORA + CLEARWAY
= 3346

LDA = Original LDA - Distance from Threshold – Strip End - Slope Calculation
= 3595 - -50 - 60 - 12*50
= 2985

27R (Take Off Towards, Landing Towards)

TORA = Distance from Threshold - Slope Calculation - Strip End
= 3646 - 60 - 12*50
= 2986

ASDA = (R) TORA
= 2986

TODA = (R) TORA
= 2986

LDA = Distance from Threshold - RESA - Strip End
= 3646 - 240 - 60
= 3346

Scenario 2

25m tall obstacle, 20m south of the centerline, 500m from the 27L threshold and 2853m from 09R threshold.

09R (Take Off Towards, Landing Towards)

TORA = Distance from Threshold + Displaced Threshold - Slope Calculation - Strip End
= 2853 + 307 - 25*50 - 60
= 1850
TODA = (R) TORA
= 1850
ASDA = (R) TORA
= 1850
LDA = Distance From Threshold - Strip End - RESA
= 2853 - 60 - 240
= 2553

27L (Take off Away, Landing Over)

TORA = Original TORA - Strip End - RESA - Distance From Threshold
= 3660 - 60 - 240 - 500
= 2860
ASDA = (R) TORA + STOPWAY
= 2860
TODA = (R) TORA + CLEARWAY
= 2860
LDA = Original LDA - Slope calculation - dist. from THR - stripend
= 3660 - (25*50) - 500 - 60
= 1850

Scenario 3

15m tall obstacle, 60m north of centreline, 150m from 09R threshold and 3203m from 27L threshold.

09R (Take Off Away, Landing Over)

TORA = Original TORA - Blast Protection - Distance from Threshold - Displaced Threshold
= 3660 - 300 - 150 - 307
= 2903
ASDA = (R) TORA + STOPWAY
= 2903
TODA = (R) TORA + CLEARWAY
= 2903
LDA = Original LDA - Distance from Threshold - Slope Calculation - Strip End

= 3353 - 150 - 15 * 50 - 60
= 2393

27L (Take Off Towards, Landing Towards)

TORA = Distance from Threshold - Slope Calculation - Strip End
= 3203 - 15*50 - 60
= 2393
TODA = (R) TORA
= 2393
ASDA = (R) TORA
= 2393
LDA = Distance from Threshold - RESA - Strip End
= 3203 - 240 - 60
= 2903

Scenario 4

20m tall obstacle, 20m right of centreline (to the north), 50m from 27R threshold and 3546m from 09L threshold.

09L (Take Off Towards, Landing Towards)

TORA = Distance from Threshold + Displaced Threshold - Slope Calculation - Strip End
= 3546 + 306 - 20*50 - 60
= 2792
TODA = (R) TORA
= 2792
ASDA = (R) TORA
= 2792
LDA = Distance from Threshold - RESA - Strip End
= 3546 - 240 - 60
= 3246

27R (Take off Away, Landing Over)

TORA = Original TORA - Strip End - RESA - Distance From Threshold
= 3884 - 60 - 240 - 50
= 3534
ASDA = (R) TORA + STOPWAY
= 3534
TODA = (R) TORA + CLEARWAY
= 3534 + (3962 - 3884)
= 3612
LDA = Original LDA - Slope Calculation - Distance from Threshold - Strip End
= 3884 - 20*50 - 50 - 60
= 2774