

*Appendix C*

**FAA Airport Design  
Computer Program  
Printouts**

Runway Length.TXT  
AIRPORT AND RUNWAY DATA

Airport elevation . . . . .	429 feet
Mean daily maximum temperature of the hottest month . . . . .	79.80 F.
Maximum difference in runway centerline elevation . . . . .	17 feet
Length of haul for airplanes of more than 60,000 pounds . . . . .	500 miles

wet and slippery runways

RUNWAY LENGTHS RECOMMENDED FOR AIRPORT DESIGN

Small airplanes with approach speeds of less than 30 knots . . . . .	310 feet
Small airplanes with approach speeds of less than 50 knots . . . . .	830 feet
Small airplanes with less than 10 passenger seats	
75 percent of these small airplanes . . . . .	2540 feet
95 percent of these small airplanes . . . . .	3070 feet
100 percent of these small airplanes . . . . .	3670 feet
Small airplanes with 10 or more passenger seats . . . . .	4170 feet
Large airplanes of 60,000 pounds or less	
75 percent of these large airplanes at 60 percent useful load . . . . .	5330 feet
75 percent of these large airplanes at 90 percent useful load . . . . .	6960 feet
100 percent of these large airplanes at 60 percent useful load . . . . .	5500 feet
100 percent of these large airplanes at 90 percent useful load . . . . .	7790 feet
Airplanes of more than 60,000 pounds . . . . .	Approximately 5160 feet

REFERENCE: Chapter 2 of AC 150/5325-4A, Runway Length Requirements for Airport Design, no Changes included.

Standard Dimensions.TXT  
AIRPORT DESIGN AIRPLANE AND AIRPORT DATA

Aircraft Approach Category B

Airplane Design Group I (Small Airplanes Exclusively)  
 Airplane wingspan . . . . . 48.99 feet  
 Primary runway end approach visibility minimums are visual exclusively  
 Other runway end approach visibility minimums are visual exclusively  
 Airplane undercarriage width (1.15 x main gear track) . . . 14.85 feet

RUNWAY AND TAXIWAY WIDTH AND CLEARANCE STANDARD DIMENSIONS

Airplane Group/ARC

Runway centerline to parallel runway centerline simultaneous operations  
 when wake turbulence is not treated as a factor:

VFR operations with no intervening taxiway . . . . . 700 feet  
 VFR operations with one intervening taxiway . . . . . 700 feet  
 VFR operations with two intervening taxiways . . . . . 700 feet  
 IFR approach and departure with approach to near threshold 2500 feet less  
 100 ft for each 500 ft of threshold stagger to a minimum of 1000 feet.

Runway centerline to parallel runway centerline simultaneous operations  
 when wake turbulence is treated as a factor:

VFR operations . . . . . 2500 feet  
 IFR departures . . . . . 2500 feet  
 IFR approach and departure with approach to near threshold . . . 2500 feet  
 IFR approach and departure with approach to far threshold 2500 feet plus  
 100 feet for each 500 feet of threshold stagger.  
 IFR approaches . . . . . 3400 feet

Runway centerline to parallel taxiway/taxilane centerline . 149.5 150 feet  
 Runway centerline to edge of aircraft parking . . . . . 125.0 125 feet  
 Runway width . . . . . 60 feet  
 Runway shoulder width . . . . . 10 feet  
 Runway blast pad width . . . . . 80 feet  
 Runway blast pad length . . . . . 60 feet  
 Runway safety area width . . . . . 120 feet  
 Runway safety area length beyond each runway end  
 or stopway end, whichever is greater . . . . . 240 feet  
 Runway object free area width . . . . . 250 feet  
 Runway object free area length beyond each runway end  
 or stopway end, whichever is greater . . . . . 240 feet  
 Clearway width . . . . . 500 feet  
 Stopway width . . . . . 60 feet

Obstacle free zone (OFZ):

Runway OFZ width . . . . . 250 feet  
 Runway OFZ length beyond each runway end . . . . . 200 feet  
 Inner-approach OFZ width . . . . . 250 feet  
 Inner-approach OFZ length beyond approach light system . . . . 200 feet  
 Inner-approach OFZ slope from 200 feet beyond threshold . . . 50:1  
 Inner-transitional OFZ slope . . . . . 0:1

Runway protection zone at the primary runway end:

width 200 feet from runway end . . . . . 250 feet  
 width 1200 feet from runway end . . . . . 450 feet  
 Length . . . . . 1000 feet

Runway protection zone at other runway end:

Standard Dimensions.TXT

width 200 feet from runway end . . . . .	250 feet
width 1200 feet from runway end . . . . .	450 feet
Length . . . . .	1000 feet

Departure runway protection zone:

width 200 feet from the far end of TORA . . . . .	250 feet
width 1200 feet from the far end of TORA . . . . .	450 feet
Length . . . . .	1000 feet

Threshold surface at primary runway end:

Distance out from threshold to start of surface . . . . .	0 feet
width of surface at start of trapezoidal section . . . . .	250 feet
width of surface at end of trapezoidal section . . . . .	700 feet
Length of trapezoidal section . . . . .	2250 feet
Length of rectangular section . . . . .	2750 feet
Slope of surface . . . . .	20:1

Threshold surface at other runway end:

Distance out from threshold to start of surface . . . . .	0 feet
width of surface at start of trapezoidal section . . . . .	250 feet
width of surface at end of trapezoidal section . . . . .	700 feet
Length of trapezoidal section . . . . .	2250 feet
Length of rectangular section . . . . .	2750 feet
Slope of surface . . . . .	20:1

Taxiway centerline to parallel taxiway/taxilane centerline . . . . .	68.8	69 feet
Taxiway centerline to fixed or movable object . . . . .	44.3	44.5 feet
Taxilane centerline to parallel taxilane centerline . . . . .	63.9	64 feet
Taxilane centerline to fixed or movable object . . . . .	39.4	39.5 feet
Taxiway width . . . . .	24.9	25 feet
Taxiway shoulder width . . . . .		10 feet
Taxiway safety area width . . . . .	49.0	49 feet
Taxiway object free area width . . . . .	88.6	89 feet
Taxilane object free area width . . . . .	78.8	79 feet
Taxiway edge safety margin . . . . .		5 feet
Taxiway wingtip clearance . . . . .	19.8	20 feet
Taxilane wingtip clearance . . . . .	14.9	15 feet

REFERENCE: AC 150/5300-13, Airport Design, including Changes 1 through 4.

Revised DD 4-21-07.TXT  
DECLARED DISTANCE LENGTHS (feet)

Aircraft Approach Category A  
Airplane Design Group I (Small Airplanes Exclusively)  
Runway 7 approach visibility minimums are visual exclusively  
Runway 25 approach visibility minimums are visual exclusively

Runway 7 and 25

Runway length . . . . .	2620	2620
Stopway length . . . . .	0	0
Clearway length . . . . .	0	0
Runway safety area length beyond the stop end of runway . . . . .	110	0
Runway object free area length beyond the stop end of runway . . . . .	110	0

The following distances are positive in the direction of aircraft operations and negative in the opposite direction:

Distance from:

the departure end of runway to the beginning of clearway . . . . .	0	0
the departure end of runway to the beginning of departure RPZ . . . . .	70	-40
the approach end of runway to the start of takeoff . . . . .	0	0
the approach end of runway to the threshold . . . . .	404	416
the end of approach RPZ to the approach end of runway . . . . .	-204	-216

The following lengths are standard RSA and ROFA lengths:

Runway safety area length to be provided:

beyond the stop end of ASDA . . . . .	240	240
beyond the stop end of LDA . . . . .	240	240
before the approach end of LDA . . . . .	240	240

Runway object free area length to be provided:

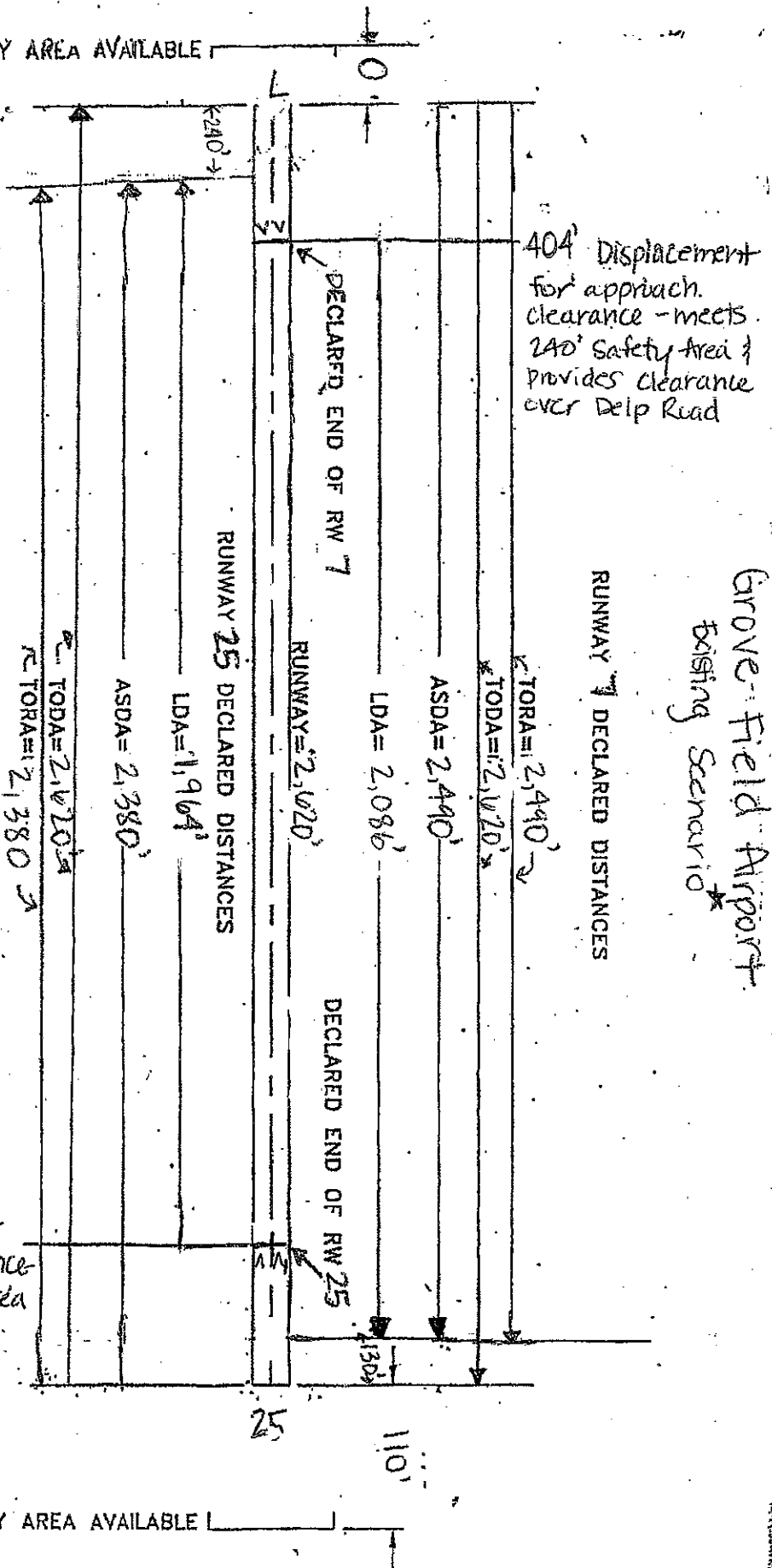
beyond the stop end of ASDA . . . . .	240	240
beyond the stop end of LDA . . . . .	240	240
before the approach end of LDA . . . . .	240	240

The following declared distances are for Approach Category A and B airplanes of 12,500 pounds or less maximum certificated takeoff weight exclusively.

	Runway 7 (feet)	Runway 25 (feet)
Takeoff run available (TORA)	2490	2380
Takeoff distance available (TODA)	2620	2620
Accelerate-stop distance available (ASDA)	2490	2380
Landing distance available (LDA)	2086	1964
Usable stopway length	0	0
Distance from the stop end of LDA to runway end	130	240
Distance from the departure end of TORA to RPZ	200	200
Distance from the approach RPZ to the threshold	200	200

REFERENCE: Appendix 14 of AC 150/5300-13, Airport Design, including Changes 1 through 4.

# Grove Field Airport Existing Scenario



404' Displacement for approach clearance - meets 240' Safety Area & provides clearance over Delp Road

416' Displacement for approach clearance meets 240' Safety Area

This is what declared distances should be, based on existing conditions

These numbers correspond to declared distance printouts in Appendix of Report & match existing columns on ALP.

4/21/07  
RMMW