

BEST FORWARD SPEED



Target ALT	Altitude Type	VS Profile
4200 FT	MSL	800 FPM
Offset	Before	Target Waypoint
0 NM		DARTS

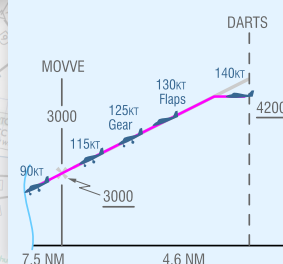
SCENARIO

Every instrument pilot ends up here sooner or later: You thought there was time to slow down before the go down—and it didn't work out. Now you're behind the eight-ball and above the V-speeds to get stuff out and slow down. Is there a sure way to fix this that's not salvaging an already unstable approach?

CHOICES

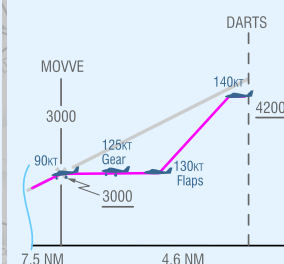
CHOICE 1

Go down and slow down: Descend now to follow the glidepath. Reduce throttle to idle to slow down, and add gear and flaps when able. Maintain 90 knots.



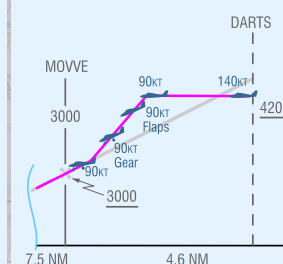
CHOICE 2

Go down aggressively, then slow down: Reduce power to descend rapidly to 3000', level off to intercept the glidepath at 90 knots with gear down and flaps 10°.



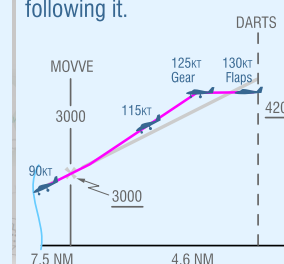
CHOICE 3

Slow down, then go down: Level off and slow to 90 knots as planned, even though you'll end up above the glidepath. Once configured at 90 knots with gear down and flaps 10°, descend more quickly to recapture the glidepath.



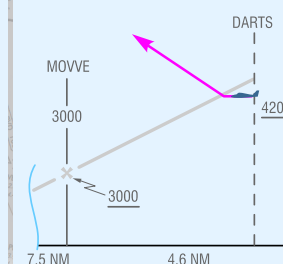
CHOICE 4

Slow enough to reconfigure, then go down and slow down: Level off for a moment to slow to 130 knots and extend 10° flaps then gear, allowing the plane to go above the glidepath. Then, descend to recapture the glidepath, and slow to 90 knots while following it.

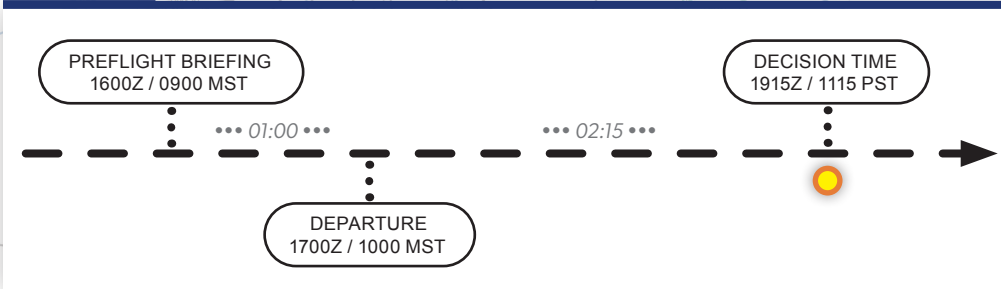


CHOICE 5

Go missed approach: Level off and let ATC know you need vectors back for another approach. You won't have to worry about the jet behind you.



Timeline



Flight Planning Information

Aircraft Cessna 177	Estimated Flight Time (hh:mm) 02:24	
Cruise Altitude 10,000	Fuel on Board (hh:mm) 06:00	
Cruise Speed 143 KTS	Number Aboard 1	
Departure E63	Destination KSMO	Alternate KPSP
Route SADLL BLH V16 PSP V388 PDZ T306 LAX		

METARs and TAFs (Preflight)

Departure

KGXF METAR (5 NM S of E63)

KGXF 071558Z AUTO 05003KT 10SM CLR 08/04 A2993

KLUF TAF (37 NM N of E63)

KLUF 071200Z 0712/0818 VRB06KT 9999 FEW250 QNH2989INS
BECMG 0804/0805 VRB06KT 9999 BKN200 QNH2987INS TX19/0723Z
TN04/0713Z

Destination

KSMO 071551Z 00000KT 1 1/2SM BR OVC003 11/11 A2995

KSMO 071508Z 0715/0812 VRB03KT 1 1/2SM BR OVC003

FM071630 VRB03KT 2SM BR OVC005

FM071730 VRB05KT P6SM BR OVC004

FM072000 23006KT P6SM BKN022

FM080300 VRB03KT P6SM OVC015

Alternate

KPSP 071553Z 33005KT 10SM CLR 11/03 A2992

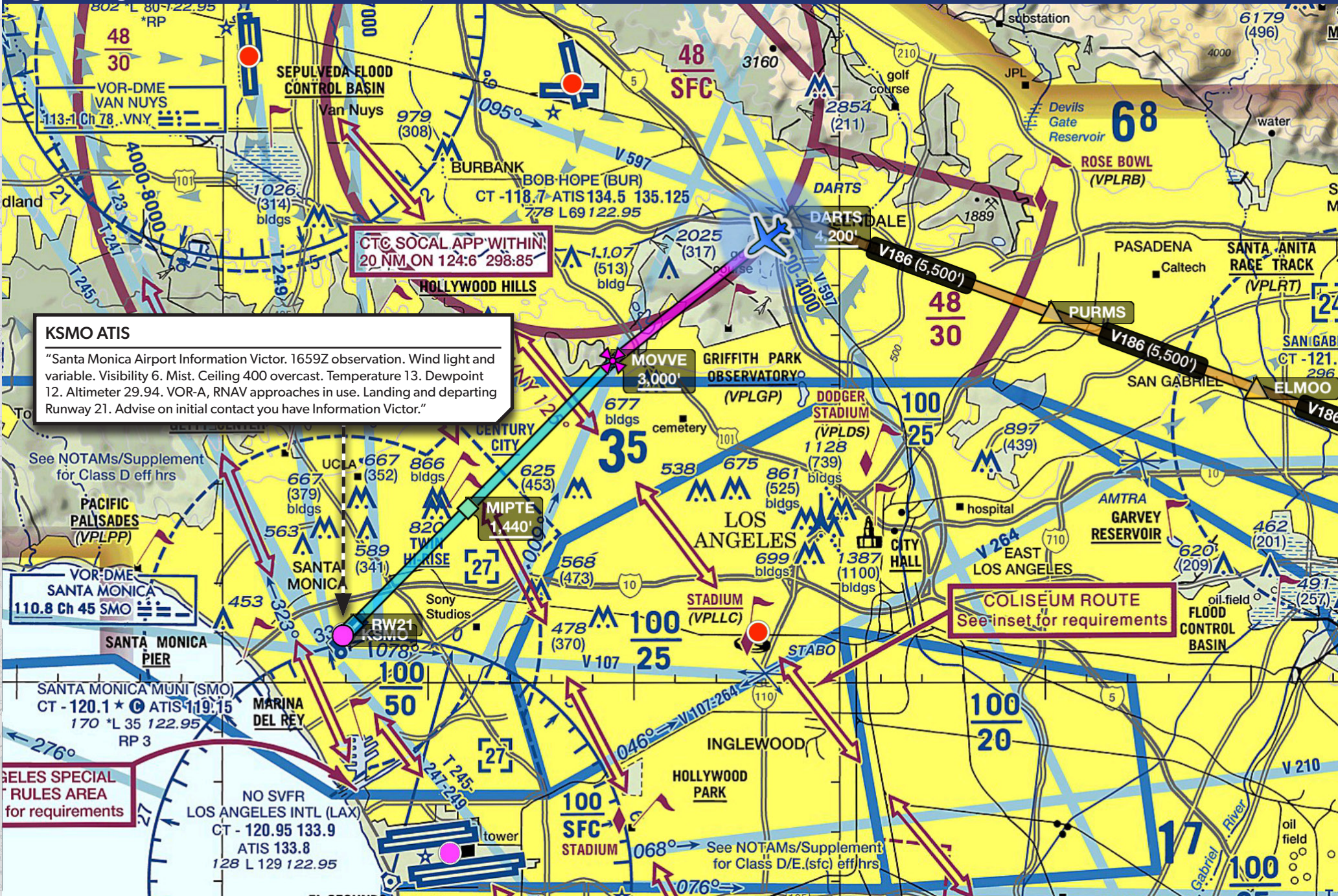
KPSP 071126Z 0712/0812 VRB05KT P6SM SKC

FM080200 32007KT P6SM SCT150 SCT250

Entire Route and Flight Categories (Preflight)



Flight Categories and ATIS (Decision Time)



Instrument Panel at Decision Time (Glidepath Moving Down)



GTN 750 at Decision Time



KSMO RNAV (GPS) RWY 21

SANTA MONICA, CALIFORNIA

AL-5023 (FAA)

22307

WAAS CH 90339 W21A	APP CRS 213°	Rwy ldg TDZE Apt Elev	3500 170 170
--	------------------------	-----------------------------	---

RNAV (GPS) RWY 21

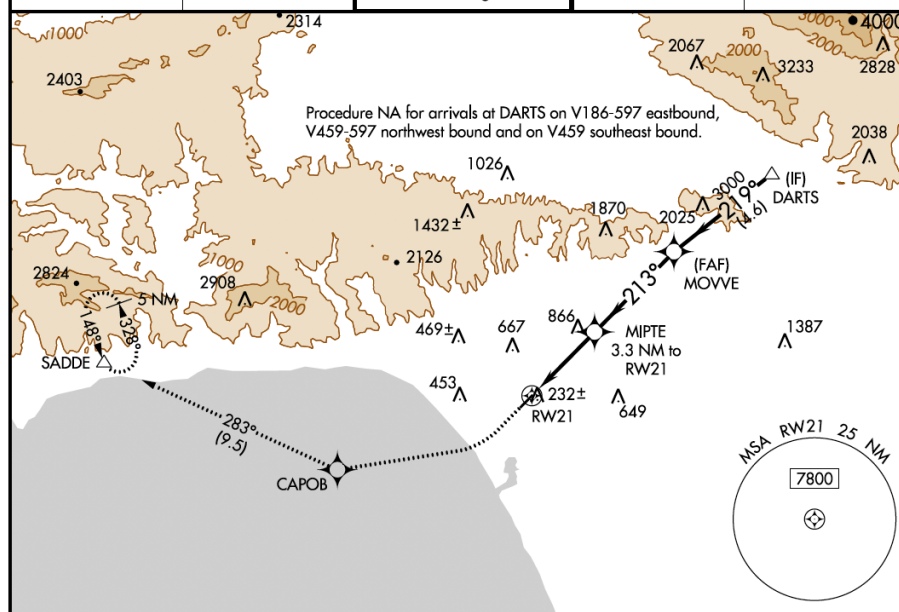
SANTA MONICA MUNI (SMO)

RNP APCH.

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below 5°C (41°F) or above 14°C (58°F). Rwy 21 helicopter visibility reduction below 1 SM NA.

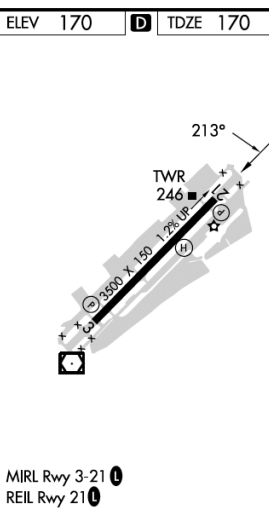
MISSED APPROACH: Climb to 600 then climbing right turn to 5000 direct CAPOB and on track 283° to SADDE and hold, continue climb-in-hold to 5000.

ATIS 119.15	SOCAL APP CON 128.5 235.975	SANTA MONICA TOWER* 120.1 (CTAF) 257.8	GND CON 121.9	UNICOM 122.95
-----------------------	---------------------------------------	--	-------------------------	-------------------------



RADAR REQUIRED

600	5000	CAPOB	ir 283°	SADDE	VGSi and RNAV glidepath not coincident (VGSi Angle 3.50/TCH 45).
LNAV only MOVE DARTS MIPT 3.3 NM to RW21 2.4 NM to RW21 213° 219° 3000 4200 1440 GP 3.50° TCH 53 2.4 NM 0.9 NM 4.2 NM 4.6 NM					
CATEGORY	A	B	C	D	
LPV DA	440-1 270 (300-1)				
LNAV/VNAV DA	685-1 515 (600-1 515)				
LNAV MDA	1120-1 950 (1000-1 950)	1120-2 950 (1000-2 950)			



SANTA MONICA, CALIFORNIA

Amdt 1B 24MAY18

34°01'N-118°27'W

SANTA MONICA MUNI (SMO) RNAV (GPS) RWY 21

KSMO Chart Supplement

SANTA MONICA MUNI (SMO)(KSMO) 3 E UTC-8(-7DT) N34°00.95' W118°27.08'

170 B TPA—See Remarks LRA NOTAM FILE SMO

RWY 03-21: H3500X150 (ASPH-GRVD) S-40, D-60, 2D-105 MRL

1.2% up NE

RWY 03: PAPI(P4L)—GA 3.42° TCH 28'. Rgt ttc.

RWY 21: REIL. PAPI(P4L)—GA 3.5° TCH 45'.

RUNWAY DECLARED DISTANCE INFORMATION

RWY 03: TORA-3500 TODA-3500 ASDA-3500 LDA-3500

RWY 21: TORA-3500 TODA-3500 ASDA-3500 LDA-3500

SERVICE: S4 FUEL 100LL, JET A, UL94 0X1, 3 LGT When twr clsd

ACTIVATE REIL Rwy 21; MRL Rwy 03-21—CTAF.

NOISE: Continuous noise ordinance in effect ctc noise office for procedures 310-458-8692. Noise limits all acft: Pure Jet and Stage II (with/without hush kits) prohibited. Maximum noise limit 95.0 DBA single event noise exposure level (senel) RCRDD 2200' extended centerline. Curfew, no engine starts, APU, or tkofs except PPR lifeguard flights 0700-1500Z Mon-Fri and 0700-1600Z weekends. PPR ex-military acft ctc arpt manager 310-458-8692. VFR departures Rwy 21 turn left 10° over SMO VOR then turn right 225°. If departure north, no right turns before reaching shoreline. Rwy 03 departure no turns prior to 405 freeway located 1 mile E. Rwy 03-21 dep end approximately 1000' from residential homes. Extended high power settings on run-up or dep negatively impact the community.

AIRPORT REMARKS: Attended continuously. Fuel: 100LL full svc only. UL94 avbl at self-serve island. PPR rqrd for DW acft in excess of 60,000 lbs crtdy max ldg wt, ctc amgr 310-458-8692. Helicopter flight training ops prohibited, helicopter ops apch boundry at midfield at or above 900' MSL. No touch/go, stop/go, or low apch permitted on Sat, Sun, holidays, weekdays SS-1500Z. IFR jets and turboprops ctc ground prior to engine start. Tnt parking south side, next to bcn. Turbine acft and acft over 12,000 lbs prohibited on south side transit parking. Eng maint run-up: Jets and turboprops north side, wi 300 ft east of Twy A4. Piston sncls and twins on south side, wi 300 ft east of Twy B4. 1700-0100Z only. TPA-1370(1200) single engine, 1870(1700) twin engine. Intersection departures and formation landings/departures prohibited. The paved areas preceding the Rwy 03-21 thlds are not avbl for ldg, tkof, or taxi Ops. The paved areas are now blast pads created from thlds relocation and rwy len reduction in December 2017. Acft must now exit the rwy at designated connector twys. The continuous rwy exit system is no longer avbl. Ldg fee.

AIRPORT MANAGER: (310) 458-8692

WEATHER DATA SOURCES: ASOS (310) 392-6453 LAWRS.

COMMUNICATIONS: CTAF 120.1 ATIS 119.15 310-450-4620 UNICOM 122.95

⑤ SOCAL APP CON 124.3 (101°-245° SMO) 124.9 (069°-100° LAX) 125.2 (246°-341° LAX) 128.5 (342°-068°)

TOWER 120.1 (1500-0500Z) GND CON 121.9

⑤ SOCAL DEP CON 125.2

CLEARANCE DELIVERY PHONE: For CD when ATCT clsd ctc SoCal Apch at 800-448-3724.

AIRSPACE: CLASS D svc 1500-0500Z; other times CLASS G.

RADIO AIDS TO NAVIGATION: NOTAM FILE SMO.

(L) (L) VOR/DME 110.8 SMO Chan 45 N34°00.61' W118°27.40' at fld. 114/15E.

VOR & DME unusable:

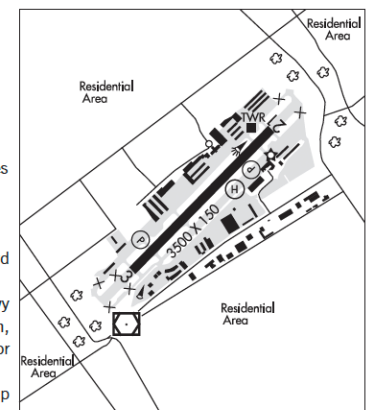
070°-080° byd 30 NM blo 7,000'

265°-275° byd 25 NM blo 14,000'

275°-005° byd 30 NM blo 14,000'

HELIPAD H1: H40X40 (ASPH) PERIMETER LGTS

HELIPORT REMARKS: Helicopter flt training opr prohibited, helicopters cross arpt boundary at 900' MSL. Rwy H1 perimeter lgts.



LOS ANGELES

COPTER

L-3E, 4G, 7B, A

IAP, AD

AIRSPEED LIMITATIONS

Airspeed limitations and their operational significance are shown in figure 2-1.

	SPEED	KCAS	KIAS	REMARKS
V _{NE}	Never Exceed Speed	169	174	Do not exceed this speed in any operation.
V _{NO}	Maximum Structural Cruising Speed	139	142	Do not exceed this speed except in smooth air, and then only with caution.
V _A	Maneuvering Speed: 2800 Pounds 2400 Pounds 2000 Pounds	113 105 96	113 105 96	Do not make full or abrupt control movements above this speed.
V _{FE}	Maximum Flap Extended Speed: To 10° Flaps 10° - 30° Flaps	128 95	130 95	Do not exceed these speeds with the given flap settings.
V _{LO}	Maximum Landing Gear Operating Speed	123	125	Do not extend or retract landing gear above this speed.
V _{LE}	Maximum Landing Gear Extended Speed	123	125	Do not exceed this speed with landing gear extended.
	Maximum Window Open Speed	105	105	Do not exceed this speed with windows open.

LANDING DISTANCE

CONDITIONS:

Flaps 30°
Power Off
Maximum Braking
Paved, Level, Dry Runway
Zero Wind

NOTES:

- Maximum performance technique as specified in Section 4.
- Decrease distances 10% for each 9 knots headwind. For operation with tailwinds up to 10 knots, increase distances by 10% for each 2 knots.
- For operation on a dry, grass runway, increase distances by 40% of the "ground roll" figure.

WEIGHT LBS	SPEED AT 50 FT KIAS	PRESS ALT FT	0°C		10°C		20°C		30°C		40°C	
			GRND ROLL	TOTAL TO CLEAR 50 FT OBS	GRND ROLL	TOTAL TO CLEAR 50 FT OBS	GRND ROLL	TOTAL TO CLEAR 50 FT OBS	GRND ROLL	TOTAL TO CLEAR 50 FT OBS	GRND ROLL	TOTAL TO CLEAR 50 FT OBS
2800	63	S.L.	690	1295	715	1330	745	1370	770	1405	795	1440
		1000	720	1335	745	1370	770	1405	795	1440	825	1480
		2000	745	1370	770	1405	800	1445	825	1480	855	1520
		3000	770	1405	800	1445	830	1485	855	1520	885	1560
		4000	800	1445	830	1485	860	1530	890	1570	920	1610
		5000	830	1485	860	1530	895	1575	925	1615	955	1655
		6000	865	1535	895	1575	925	1615	960	1665	990	1705
		7000	895	1575	930	1625	960	1665	995	1715	1030	1760
		8000	930	1625	965	1670	1000	1720	1035	1765	1070	1815

Bonus Resources

For additional resources, visit the IFR Mastery Hangar for this scenario.