

4.0 GROUND MANEUVERING

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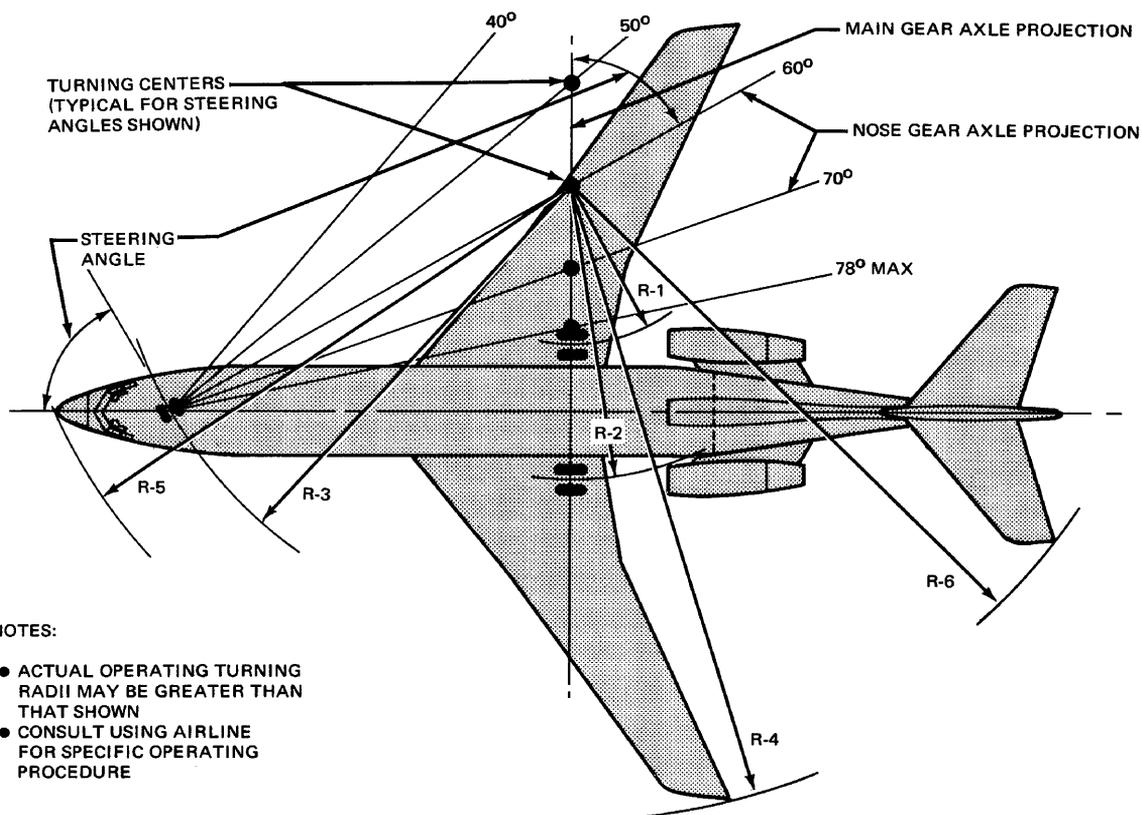
4.0 GROUND MANEUVERING

4.1 GENERAL INFORMATION

This section provides airplane turning capability and maneuvering characteristics.

For ease of presentation, these data have been determined from the theoretical limits imposed by the geometry of the aircraft, and where noted, provides for a normal allowance for tire slippage. As such, it reflects the turning capability of the aircraft in favorable operating circumstances. These data should only be used as guidelines for the method of determination of such parameters and for the maneuvering characteristics of this aircraft type.

In the ground operating mode, varying airline practices may demand that more conservative turning procedures be adopted to avoid excessive tire wear and reduce possible maintenance problems. Airline operating techniques will vary, in the level of performance, over a wide range of operating circumstances throughout the world. Variations from standard aircraft operating patterns may be necessary to satisfy physical constraints within the maneuvering area, such as adverse grades, limited area or high risk of jet blast damage. For these reasons, ground maneuvering requirements should be coordinated with the using airlines prior to layout planning.



NOTES:

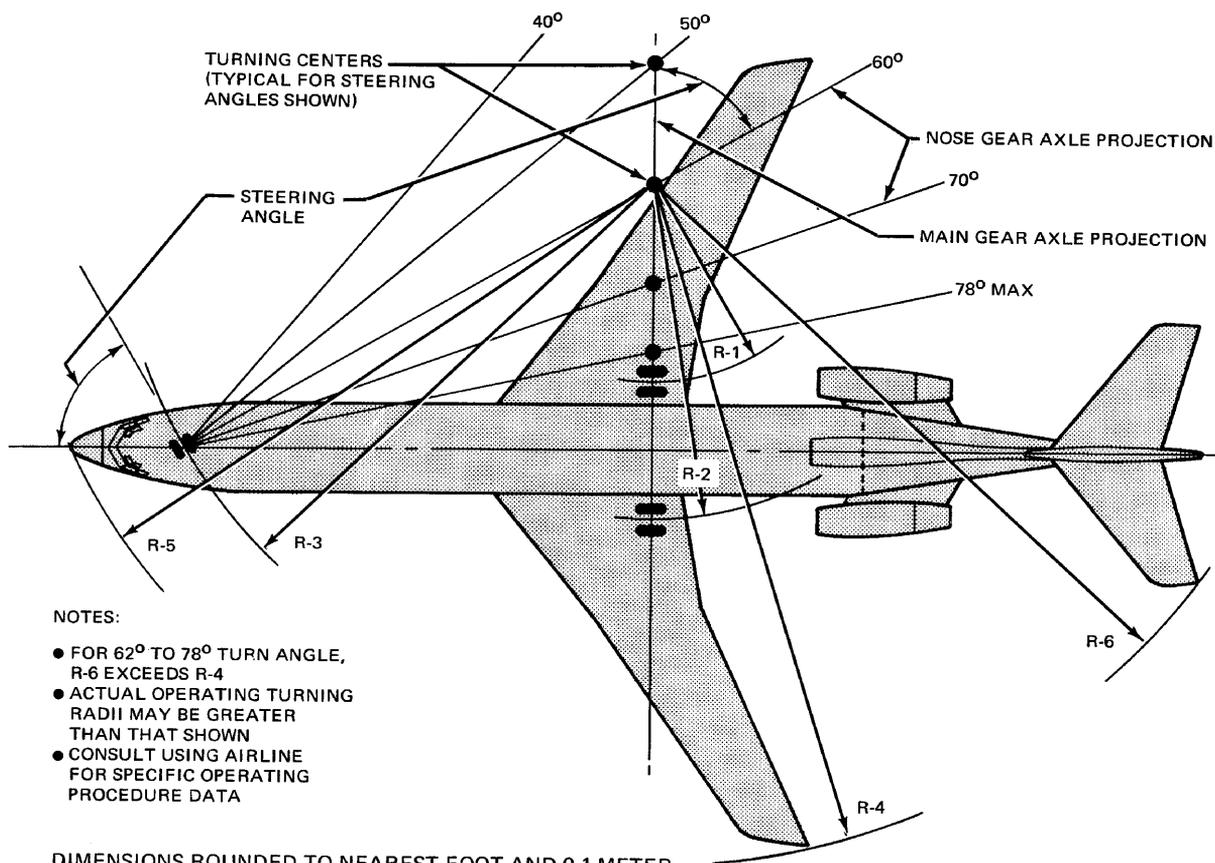
- ACTUAL OPERATING TURNING RADII MAY BE GREATER THAN THAT SHOWN
- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE

DIMENSIONS ROUNDED TO NEAREST FOOT AND 0.1 METER

STEERING ANGLE (DEG)	R-1		R-2		R-3		R-4		R-5		R-6	
	INNER GEAR		OUTER GEAR		NOSE GEAR		WING TIP		NOSE		TAIL	
	FT	M	FT	M	FT	M	FT	M	FT	M	FT	M
30	83	25.3	102	31.1	106	32.3	148	45.1	115	35.1	127	38.7
35	67	20.4	86	26.2	93	28.3	132	40.2	102	31.1	114	34.7
40	54	16.5	73	22.3	83	25.3	120	36.6	93	28.3	103	31.4
45	44	13.4	63	19.2	75	22.9	109	33.2	87	26.5	96	29.3
50	35	10.7	54	16.5	70	21.3	101	30.8	82	25.0	89	27.1
55	28	8.5	47	14.3	65	19.8	94	28.7	78	23.8	85	25.9
60	21	6.4	40	12.2	62	18.9	87	26.5	75	22.9	80	24.4
65	15	4.6	34	10.4	59	18.0	82	25.0	73	22.3	77	23.5
70	10	3.0	29	8.8	57	17.4	77	23.5	71	21.6	74	22.6
75	5	1.5	24	7.3	55	16.8	72	21.9	70	21.3	72	21.9
78 MAX	2	0.6	21	6.4	54	16.5	69	21.0	69	21.0	71	21.6

4.2 TURNING RADII—NO SLIP ANGLE

MODELS 727-100, -100C



NOTES:

- FOR 62° TO 78° TURN ANGLE, R-6 EXCEEDS R-4
- ACTUAL OPERATING TURNING RADII MAY BE GREATER THAN THAT SHOWN
- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE DATA

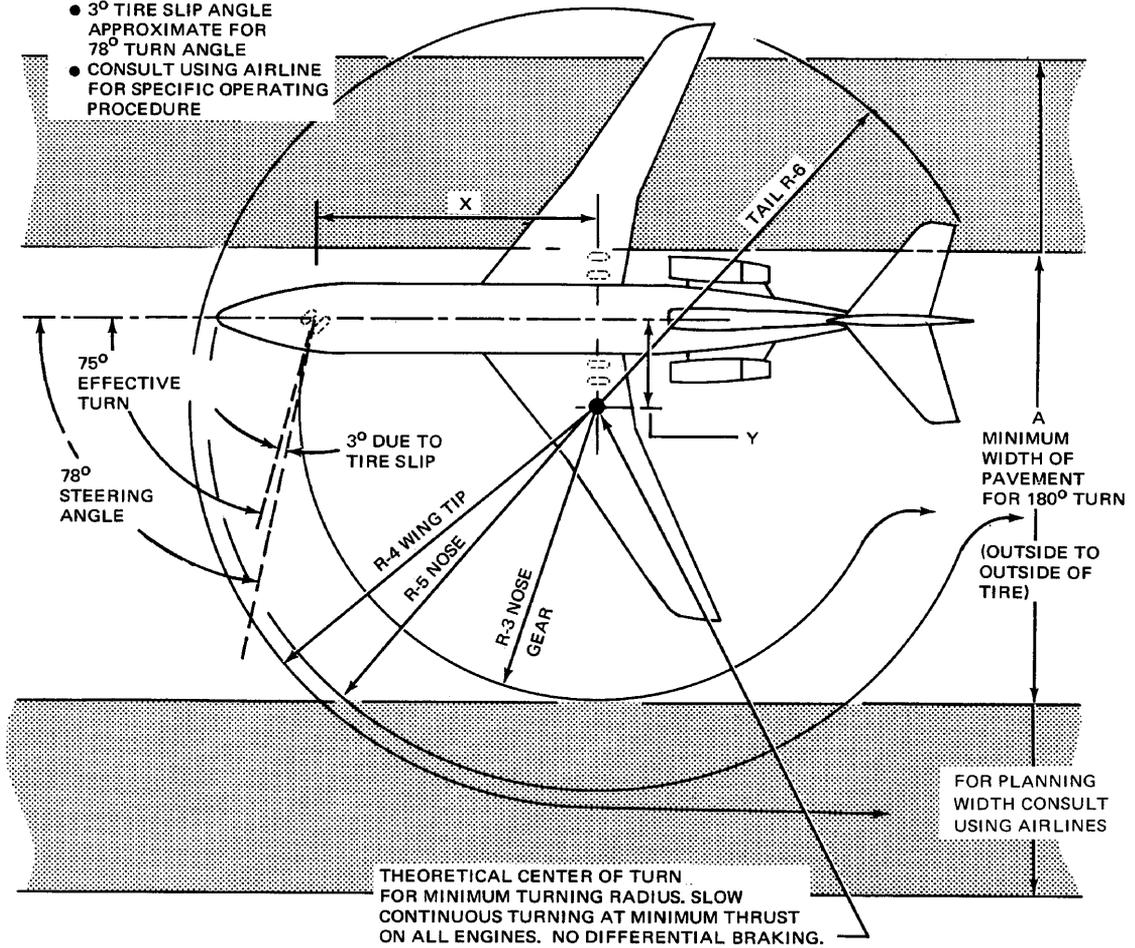
DIMENSIONS ROUNDED TO NEAREST FOOT AND 0.1 METER

STEERING ANGLE (DEG)	R-1		R-2		R-3		R-4		R-5		R-6	
	INNER GEAR		OUTER GEAR		NOSE GEAR		WING TIP		NOSE		TAIL	
	FT	M	FT	M	FT	M	FT	M	FT	M	FT	M
30	100	30.5	119	36.3	126	38.4	165	50.3	135	41.1	147	44.8
35	81	24.7	100	30.5	110	33.5	146	44.5	120	36.6	131	39.9
40	66	20.1	85	25.9	99	30.2	131	39.9	109	33.2	119	36.3
45	54	16.5	73	22.3	90	27.4	119	36.3	101	30.8	110	33.5
50	44	13.4	63	19.2	83	25.3	109	33.2	95	29.0	103	31.4
55	35	10.7	54	16.5	77	23.5	100	30.5	90	27.4	97	29.6
60	27	8.2	46	14.0	73	22.3	93	28.3	86	26.2	92	28.0
65	20	6.1	39	11.9	70	21.3	86	26.2	84	25.6	88	26.8
70	14	4.3	33	10.1	67	20.4	80	24.4	81	24.7	85	25.9
75	8	2.4	27	8.2	66	20.1	74	22.6	80	24.4	82	25.0
78 MAX	4	1.2	23	7.0	65	19.8	71	21.6	79.5	24.2	80	24.4

TURNING RADII—NO SLIP ANGLE
MODEL 727-200

NOTES:

- 3° TIRE SLIP ANGLE APPROXIMATE FOR 78° TURN ANGLE
- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE

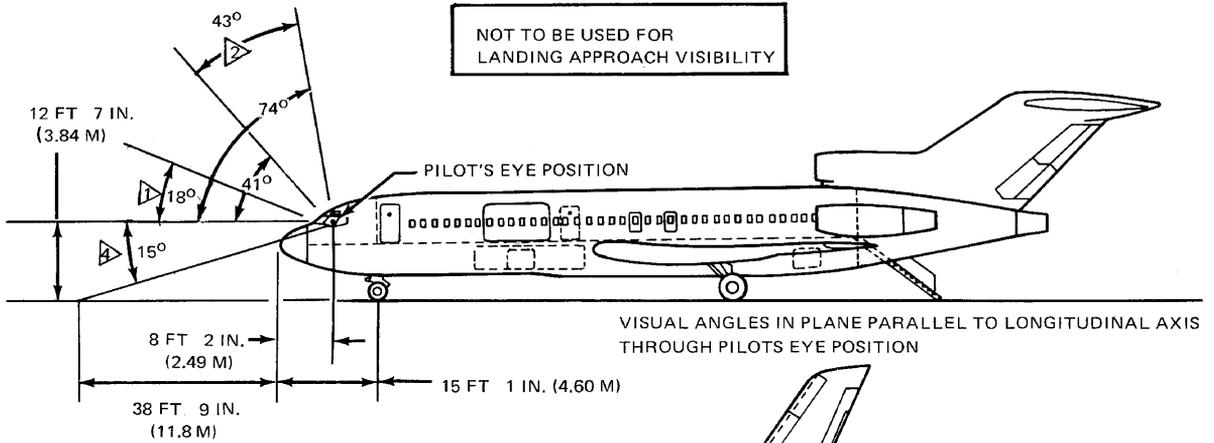


FOR AN EFFECTIVE TURN ANGLE OF 75°

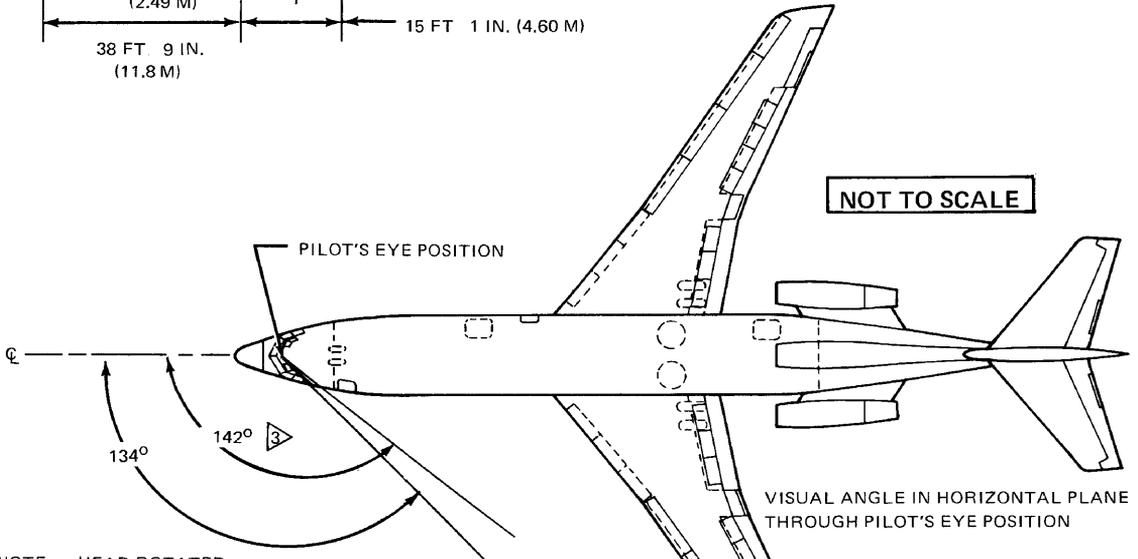
MODEL		X	Y	A	R-3	R-4	R-5	R-6
727-100 -100C	FT-IN.	53-3	14-4	82-6	55-0	72-0	70-0	72-0
	M	16.2	4.4	25.2	16.8	21.9	21.3	21.9
727-200	FT-IN.	63-3	16-11	95-8	66-0	74-0	80-0	82-0
	M	19.3	5.16	29.2	20.1	22.6	24.4	25.0

4.3 MINIMUM TURNING RADII—3° SLIP ANGLE
MODELS 727-100, -100C, -200

NOT TO BE USED FOR
LANDING APPROACH VISIBILITY



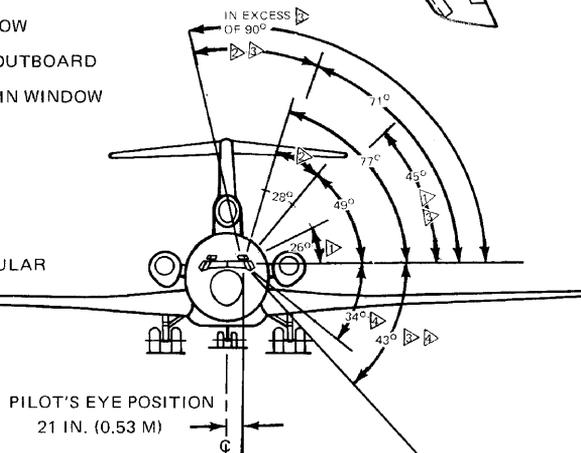
NOT TO SCALE



NOTE: HEAD ROTATED ABOUT POINT 3.3 IN. (0.08 M) AFT OF PILOT'S EYE POSITION

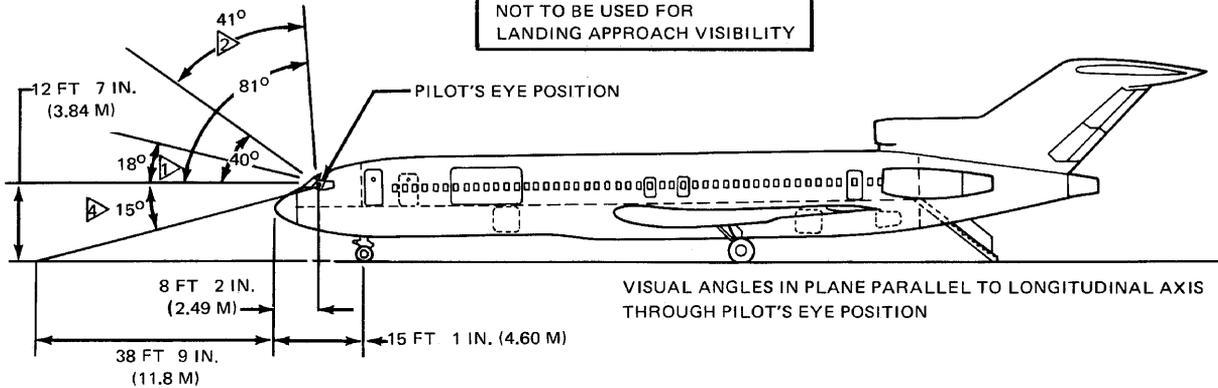
- ① UPWARD VISION THROUGH MAIN WINDOW
- ② VISION THROUGH EYEBROW WINDOW
- ③ WITH HEAD MOVED 5 IN. (0.13 M) OUTBOARD
- ④ DOWNWARD VISION THROUGH MAIN WINDOW

VISUAL ANGLES IN PLANE PERPENDICULAR TO LONGITUDINAL AXIS THROUGH PILOT'S EYE POSITION

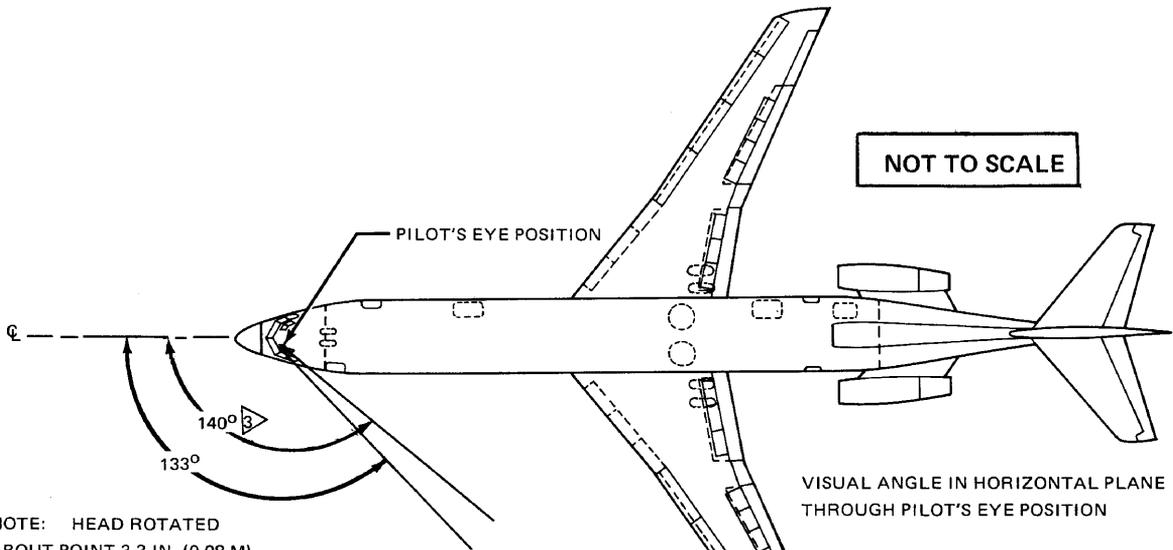


**4.4 VISIBILITY FROM COCKPIT IN STATIC POSITION (AMBINOcular VISION)
MODEL 727-100**

NOT TO BE USED FOR
LANDING APPROACH VISIBILITY



NOT TO SCALE

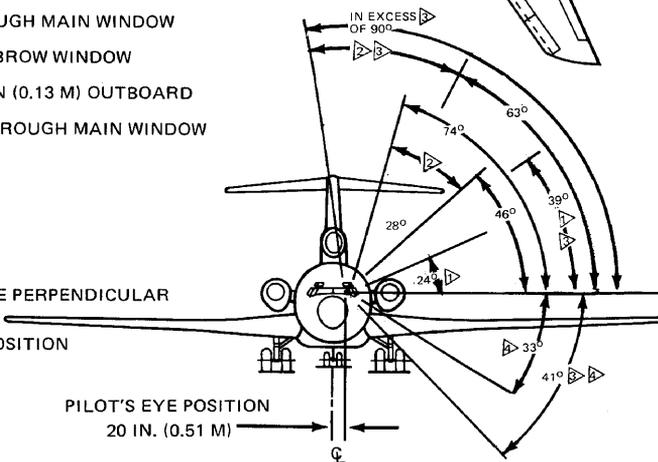


NOTE: HEAD ROTATED ABOUT POINT 3.3 IN. (0.08 M) AFT OF PILOT'S EYE POSITION

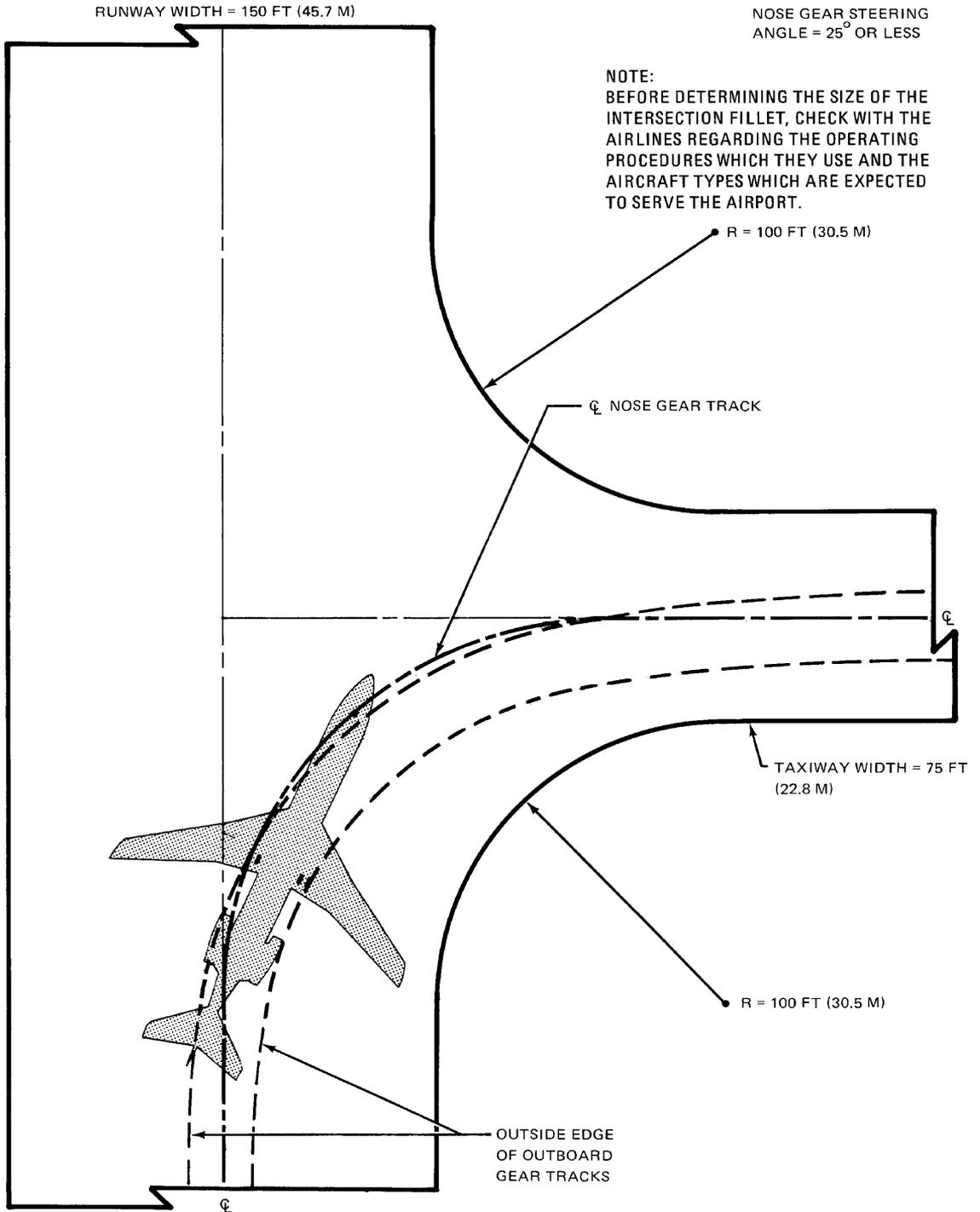
- ▷ UPWARD VISION THROUGH MAIN WINDOW
- ▷ VISION THROUGH EYEBROW WINDOW
- ▷ WITH HEAD MOVED 5 IN (0.13 M) OUTBOARD
- ▷ DOWNWARD VISION THROUGH MAIN WINDOW

VISUAL ANGLES IN PLANE PERPENDICULAR TO LONGITUDINAL AXIS THROUGH PILOT'S EYE POSITION

PILOT'S EYE POSITION
20 IN. (0.51 M)

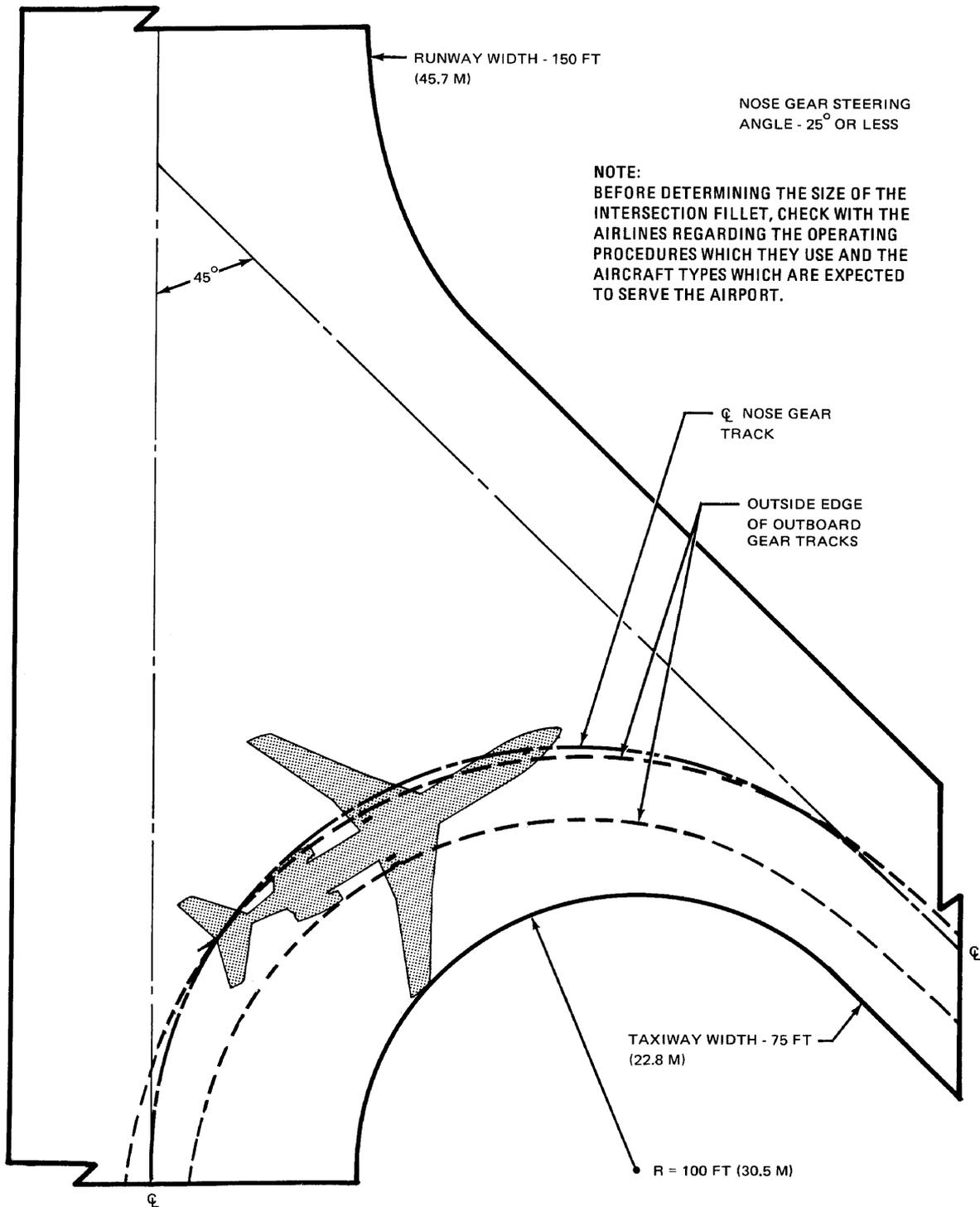


**VISIBILITY FROM COCKPIT IN STATIC POSITION (AMBINOcular VISION)
MODEL 727-200**



4.5 RUNWAY AND TAXIWAY TURN PATHS— 90° TURN, RUNWAY TO TAXIWAY (STANDARD TURN)

MODELS 727-100, -100C, -200



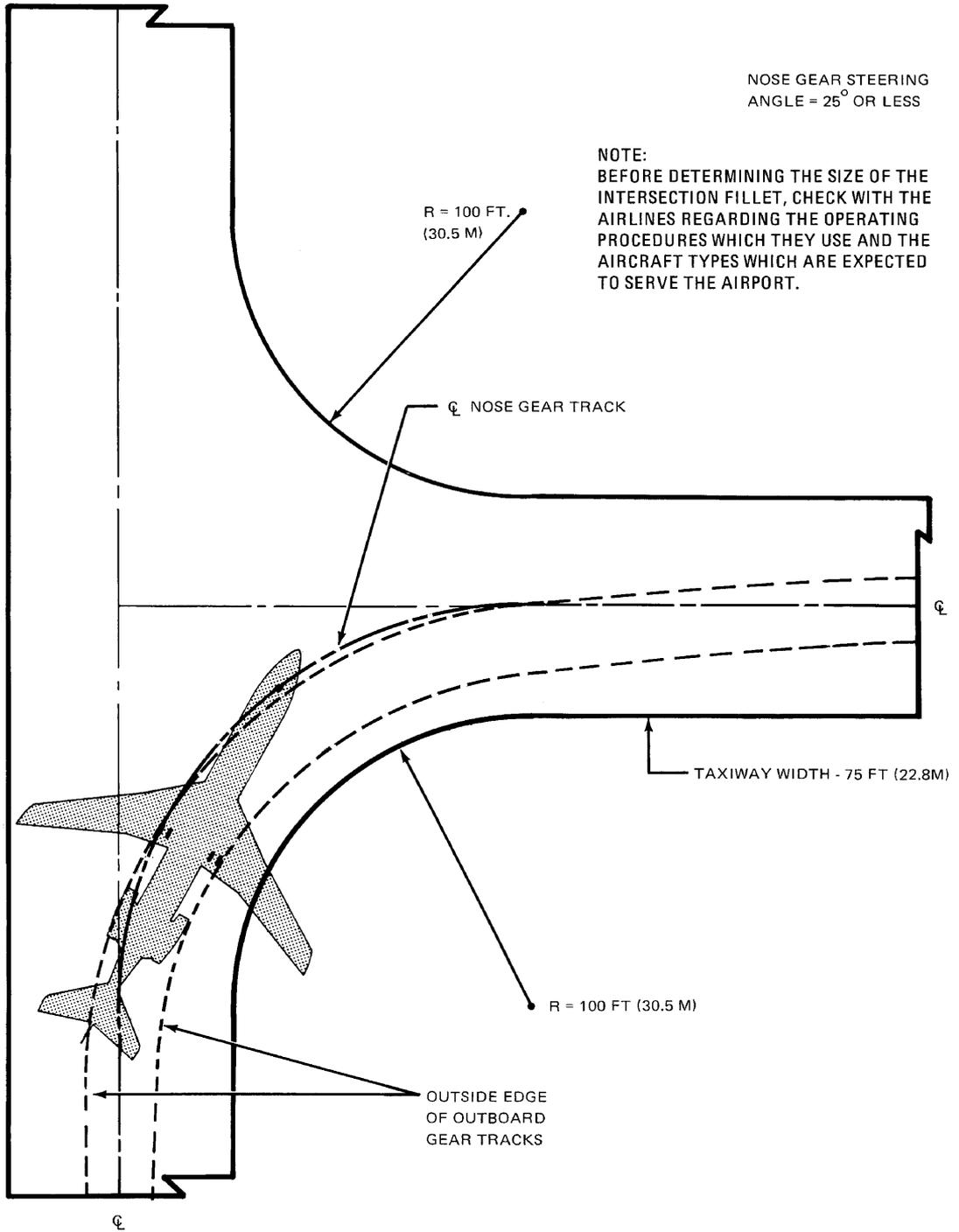
**RUNWAY AND TAXIWAY TURN PATHS—MORE THAN 90° TURN, RUNWAY TO TAXIWAY
(STANDARD TURN)**

MODELS 727-100, -100C, -200

TAXIWAY WIDTH = 75 FT (22.8M)

NOSE GEAR STEERING
ANGLE = 25° OR LESS

NOTE:
BEFORE DETERMINING THE SIZE OF THE
INTERSECTION FILLET, CHECK WITH THE
AIRLINES REGARDING THE OPERATING
PROCEDURES WHICH THEY USE AND THE
AIRCRAFT TYPES WHICH ARE EXPECTED
TO SERVE THE AIRPORT.

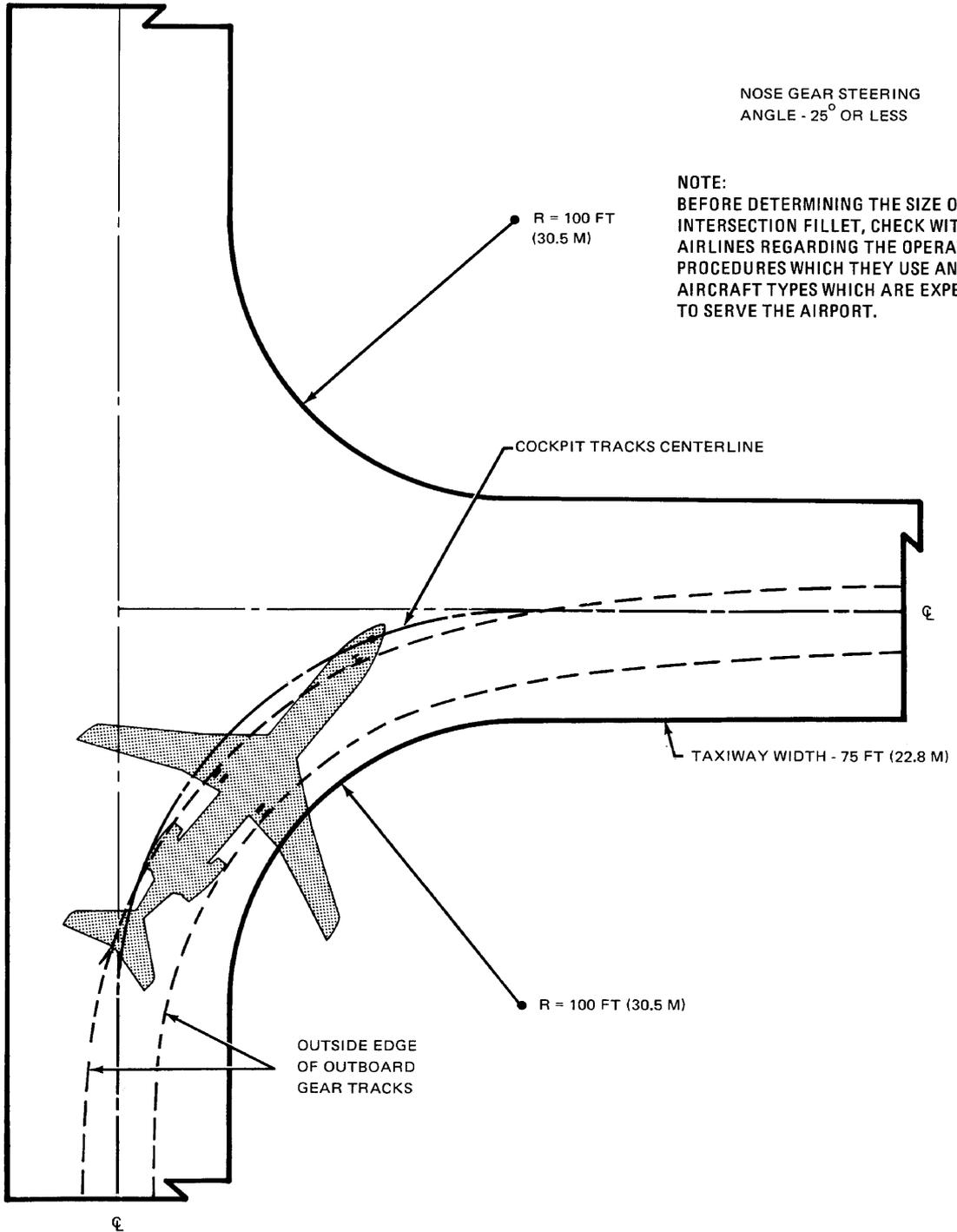


RUNWAY AND TAXIWAY TURN PATHS—90° TURN, TAXIWAY TO TAXIWAY
(STANDARD TURN) NOSE GEAR TRACKS CENTERLINE TO CENTERLINE
MODELS 727-100, -100C, -200

TAXIWAY WIDTH= 75 FT (22.8 M)

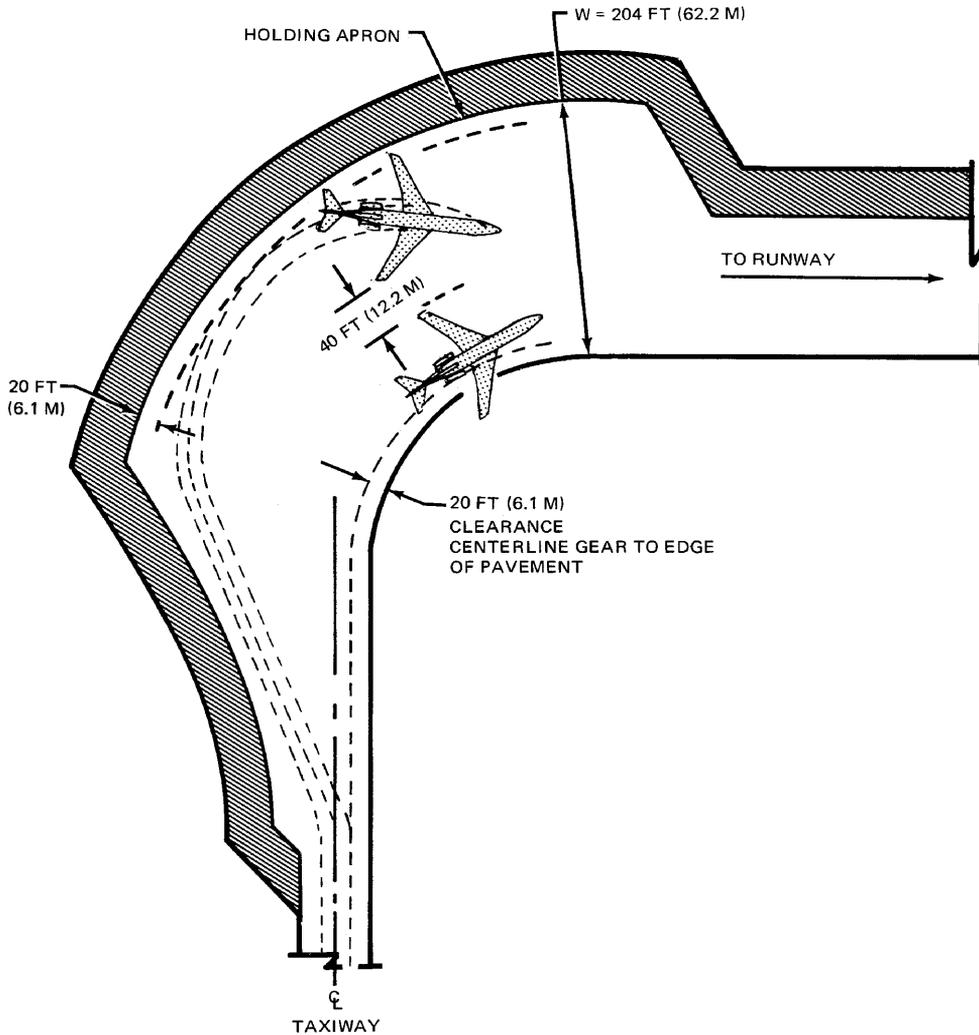
NOSE GEAR STEERING
ANGLE - 25° OR LESS

NOTE:
BEFORE DETERMINING THE SIZE OF THE
INTERSECTION FILLET, CHECK WITH THE
AIRLINES REGARDING THE OPERATING
PROCEDURES WHICH THEY USE AND THE
AIRCRAFT TYPES WHICH ARE EXPECTED
TO SERVE THE AIRPORT.



**RUNWAY AND TAXIWAY TURN PATHS—90° TURN, TAXIWAY TO TAXIWAY
COCKPIT TRACKS CENTERLINE TO CENTERLINE
MODELS 727-100, -100C, -200**

MINIMUM CLEARANCE
OF MOVING AIRCRAFT
= 40 FT (12.2 M)



NOTE: CONSULT USING AIRLINE
FOR SPECIFIC OPERATING
PROCEDURE

4.3 RUNWAY HOLDING BAY (APRON) MODELS 727-100, -100C, -200