

CONTROL ROOM DIMENSION RECOMMENDATIONS

	MINIMUM	PREFERED	IDEAL/MAX
AISLES AND WALKWAYS			
Area behind rack/console	24	30	36
Space between rows of consoles	36 (ADA)	42	48
Aisle width	30	36 (ADA min)	48
Doorway width (24" max length)	32 (ADA doorway – wheelchair)		
Door approach – pull side	48D (latch side)	60D (hinge side)	
Door approach – push side	42D	48D	
Wheelchair turning diameter	60 (ADA min)		78
Wheelchair clear floor space	30W x 48D (ADA)		
RAMPS AND STAIRS			
Raised floor slope for 3" max rise	1:8		1:10
Raised floor slope for 6" max rise	1:10		1:12
Raised floor/theater ramp slope (30' max slope)	1:12		1:16
Raised floor/theater ramp slope (40' max slope)	1:16		1:20
Rise in any given slope (max)			30
Landing length	60		
Stair tread depth	9.5	11 (ADA)	12 (Mil-Std)
Stair riser height	5		8 (Mil-Std)
SITTING AND STANDING HEIGHT			
Wheelchair armrest height		30 (ADA)	
Wheelchair operator eye level	43		51
Monitor See-over height		46 (Mil-Std)	41
5 th percentile standing eye-level height		56	
5 th percentile sitting eye height		41	
5 th percentile sitting popliteal height		14	
95 th percentile standing eye-level height		68-3/8	
95 th percentile sitting eye height		52-1/2	
95 th percentile sitting popliteal height		19-1/4	
Seat pan vertical adjustment	15		21
REACHING LIMITS			
Wheelchair reach-max	17-forearm only	31-forearm & upper arm	
5 th percentile reach to touch screen & controls-normal		15-3/4	
5 th percentile reach to touch screen & controls-max		22	
95 th percentile reach to touch screen & controls-normal		20	
95 th percentile reach to touch screen & controls-max		28	
ADA forward reach to touch screen & controls-max			25
Low (L) and High (H) reach of controls-front	15L (ADA min)	44H	48H (ADA max)
Low (L) and High (H) reach of control-side (at 10" away)	9L (ADA min)		54H (ADA max)
Side reach 34"H – 46"H			24 (ADA max)
SEATING, WORK SPACE AND KNEE CLEARANCE			
Kick (toe) space			4Hx4D
Knee space width and depth	20x18 (Mil-Std)	30x19 (ADA)	32D
Knee space height	25 (Mil-Std)	27 (ADA)	
Minimum workspace width and depth	24x16	30x16	48x30 (DoJ)



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HORIZONTAL SURFACE HEIGHT

Work surface height	28 (ADA)	29	34 (ADA max)
Sit/stand range (Mil-Std-1472F)	25-1/2		36
Service counter height			38 (ADA max)

VIEWING ANGLES AND DISTANCE

Viewing distance to display image	2XH-8XH	4XH-6XH	
Normal line of sight	-8°	-15°	-22°
Vertical eye rotation from normal line of sight		+15° -15°	+40° -20°
Vertical head rotation from normal line of sight		+65° -35°	
Vertical head & eye rotation from normal line of sight			+90° -55°
Horizontal eye rotation from normal line of sight		+15° -15°	+35° -35°
Horizontal head rotation from normal line of sight		+60° -60°	
Horizontal head & eye from normal line of sight			+95° -95°

WHEELCHAIR (ADA)

Wheelchair accessible position quantity	1	5%	
Wheelchair turning diameter	60		78
Wheelchair clear floor space		30W x 48D	
Wheelchair dimensions including footrest		26W x 48D	
Wheelchair armrest height		30	
Wheelchair operator eye level	43		51
Wheelchair reach-max	17-forearm only	31-forearm & upper arm	
ADA forward reach to touch screen & controls-max			25
Low (L) and High (H) reach of controls-front	15L (ADA min)	44H	48H (ADA max)
Low and (L) High (H) reach of controls-side (at 102 away)	9L (ADA min)		54H (ADA max)
Side reach 34"H-46"H			24 (ADA max)

ENVIRONMENTAL

Air flow ventilation speed	65 ft/min	100 ft/min	200 ft/min
Humidity @ 70°F	15%	45%	
Illumination on console surface lux (foot-candles)	325 (30)	540 (50) (Mil-Std)	

HUMAN FACTORS REFERENCES

ANSI/HFES 100-2007 Human Factors Engineering of Computer Workstations 16-Nov-07
 NUREG 0700 Rev.2
 NEMA: ICS 6, 250
 MIL-STD-1472F 23-Aug-99
 ASTM: A182-F316, A269, A276
 ISA: RP60.11, RP60.8
 IEEE: 518, 1050, 1202
 UL: 1332
 NFPA: 70
 ISO: 11064
 ISO: 9241-9 Ergonomic Requirements for Work with Visual Display Terminals
 Source for all ADA specifications is ADA Accessibility Guidelines for Buildings and Facilities, Sept. 2002
<http://www.access-board.gov/adaag/html/figures/index.html>

****All measurements in inches.**