

# Design Submission Requirements DSG-3.10 Renal Dialysis Centers

<b>REQUIRED ELEMENTS FOR RENAL DIALYSIS CENTERS</b>						
Guidelines for Design and Construction of Hospitals and Outpatient Facilities (FGI 2014)						
ANSI/ASHRAE/ASHE Standard 170-2013, Ventilation of Health Care Facilities (ASHRAE)						
Code Reference Category						
Phase		Code Section	Component/Requirements	Complies	Comments	
Schematic	Design Development					
<b>3.10-3 Diagnostic and Treatment Areas</b>						
<b>3.10-3.1 Examination Room</b>						
•	•	<b>3.10-3.1.1</b>	<b>General Purpose Examination/Observation Room(s)</b>	<b>Required</b>		
•	•	3.10-3.1.1	Area	100 S.F. min		
•	•	3.1-3.2.2.2(2)	Clearances	3 sides of table	2'-8"	
•	•	3.10-3.1.2.1	Handwashing Station		<b>Required</b>	
•	•	3.10-3.1.2.2	Documentation Area (Written or Electronic)		<b>Required</b>	
	•	3.1-3.2, Table 3.1-1	Electrical Receptacles	Total number	8 Single	
	•			# @ head of exam table	4 min	
	•	ASHRAE 7.1	Pressure Relationship to Adjacent Areas		N/R	
	•	ASHRAE 7.1	Min. Outdoor Air Changes /Hour		2	
	•	ASHRAE 7.1	Min. Total Air Changes /Hour		6	
	•	ASHRAE 7.1	All Room Air Exhausted Directly to Outdoor		N/R	
	•	ASHRAE 7.1	Air Recirculated by Means of Room Units		N/R	
	•	ASHRAE 7.1	Relative Humidity (%)		60 max	
	•	ASHRAE 7.1	Design Temperature (*F)		70-75	
<b>3.10-3.2 Hemodialysis Treatment Area</b>						
•	•	3.10-3.2.1	<b>Treatment Area</b> *permitted to be an open area	<b>Required*</b>		
•	•	3.10-3.2.2.1	Area	@ Bays w chairs	80 S.F. min	
•	•			@ Bays w beds	90 S.F. min	
•	•	3.10-3.2.2.2	Clearances	Between beds or dialysis chairs	4'-0" min	
•	•	3.10-8.4.1.2	Treated water distribution outlets *at each hemodialysis treatment bay		<b>Required*</b>	
•	•	3.10-3.2.5, 3.1-3.6.5.3	Hand-wash station *1 per (4) patient care areas including (1) at entry to treatment area		<b>Required*</b>	
<b>3.10-3.3 Home Training Room</b>						
•	•	<b>3.10-3.3.1</b>	<b>Home Training Room</b> *a private treatment room	<b>Required*</b>		
•	•	3.10-3.3.1	Area		120 S.F. min	
•	•	3.10-3.3.2.1	Counter		<b>Required</b>	
•	•	3.10-3.3.2.2	Hand-washing station		<b>Required</b>	
•	•	3.10-3.3.2.3	Separate drain for fluid disposal		<b>Required</b>	

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		<b>3.10-3.4 Special Patient Care Rooms</b>			
•	•	<b>3.10-3.4.2</b>	<b>Separation Area</b> *a private treatment room or patient care station with 5'-0" high walls. Under direct staff observation	<b>Required*</b>	
•	•	3.10-3.4.2.1	Area	120 S.F. min	
•	•	3.10-3.4.2.2	Hand-washing station	<b>Required</b>	
		<b>3.10-3.6 Support Areas for the Renal Dialysis Center</b>			
•	•	<b>3.10-3.3.1</b>	<b>Nurse Station</b>	<b>Required</b>	
•	•	<b>3.7-3.5.2.2, 3.7-3.6, 3.1- 3.6.6</b>	<b>Medication Preparation Room</b> *Select medication preparation room <b>and/or</b> Self-contained medication dispensing unit	<b>Required *</b>	
•	•	3.10-3.6.6.2	Location – away from any individual dialysis treatment chair or bed	6 feet	
•	•	3.1-3.6.6	Work counter	<b>Required</b>	
•	•	3.1-3.6.6	Hand-washing station	<b>Required</b>	
•	•	3.1-3.6.6	Lockable refrigerator	<b>Required</b>	
•	•	3.1-3.6.6	Locked storage for controlled drugs	<b>Required</b>	
	•	Table 7.1	Pressure Relationship to Adjacent Areas	N/R	
	•	Table 7.1	Min. Outdoor Air Changes / Hour	2	
	•	Table 7.1	Min. Total Air Changes / Hour	54	
	•	Table 7.1	All Room Air Exhausted Directly to Outdoor	N/R	
	•	Table 7.1	Air Recirculated by Means of Room Units	N/R	
	•	Table 7.1	Relative Humidity (%)	60 max	
	•	Table 7.1	Design Temperature (*F)	70-75	
•	•	<b>3.1-3.6.6</b>	<b>Self-contained medication dispensing unit</b> *Select medication preparation room <b>and/or</b> Self-contained medication dispensing unit	<b>Required *</b>	
•	•	3.10-3.6.6.2	Location – away from any individual dialysis treatment chair or bed	6 feet	
•	•	3.1-3.6.6	Hand-washing station/sanitation *Located next to dispensing unit.	<b>Required *</b>	
•	•	3.1-3.6.6	Work Counter	<b>Required</b>	
•	•	<b>3.10-3.6.9.1</b>	<b>Clean Workroom or Clean Supply</b> *Select either or both	<b>Required*</b>	
•	•	3.10-3.6.9.1(1), 3.10-3.6.9.2	Work surface(s) *Not required at clean supply	<b>Required*</b>	
•	•	3.10-3.6.9.1(2), 3.10-3.6.9.2	Hand-washing station *Not required at clean supply	<b>Required*</b>	
•	•	3.10-3.6.9.1(3)	Clean and sterile supply storage	<b>Required</b>	
	•	ASHRAE 7.1	Pressure Relationship to Adjacent Areas	Positive	
	•	ASHRAE 7.1	Min. Outdoor Air Changes / Hour	2	
	•	ASHRAE 7.1	Min. Total Air Changes / Hour	4	
	•	ASHRAE 7.1	All Room Air Exhausted Directly to Outdoors	N/R	
	•	ASHRAE 7.1	Air Recirculated by Means of Room Units	N/R	
	•	ASHRAE 7.1	Relative Humidity (%)	N/R	
	•	ASHRAE 7.1	Design Temperature(*F)	N/R	

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•	•	<b>3.10-3.6.10</b>	<b>Soiled Workroom and/or Soiled Holding</b> *Clean and soiled rooms must be separate	Required *		
•	•	3.10-3.6.10.2, 3.7-3.6.10.3	Flushing-rim clinical sink or equivalent *Not required in Soiled Holding but other liquid waste disposal shall be provided	Required*		
•	•	3.10-3.6.10.1	Hand-washing station	Required		
•	•	3.10-3.6.10.1	Work Counter *Not required in soiled holding	Required		
•	•	3.10-3.6.10.1	Space for waste and soiled linen receptacles			
	•	ASHRAE 7.1	Pressure Relationship to Adjacent Areas	Negative		
	•	ASHRAE 7.1	Min. Outdoor Air Changes / Hour	2		
	•	ASHRAE 7.1	Min. Total Air Changes / Hour	10		
	•	ASHRAE 7.1	All Room Air Exhausted Directly to Outdoors	Yes		
	•	ASHRAE 7.1	Air Recirculated by Means of Room Units	No		
	•	ASHRAE 7.1	Relative Humidity (%)	N/R		
	•	ASHRAE 7.1	Design Temperature(°F)	N/R		
•	•	<b>3.10-3.6.11</b>	<b>Equipment and Supply Storage</b>	Required		
•	•	3.10-3.6.11.1	Clean Linen Storage *If clean blankets or other linens are provided. *Permitted to be in a clean workroom, a closet or an approved distribution system.	Required*		
•	•	3.10-3.6.11.3	Stretcher and Wheelchair Storage and Parking *space for (1) wheelchair per (4) patient care areas	Required*		
•	•	3.10-3.6.11.2	Equipment supply facilities	Required		
•	•	<b>3.10-3.6.12, A3.1-5.5.1.1</b>	<b>Environmental Services Room</b> *Exclusive use by dialysis treatment areas	Required*		
•	•	3.1-5.5.1.2	service or floor mounted sink	Required		
•	•	3.1-5.5.1.2	Storage for supplies and housekeeping equip	Required		
•	•	3.1-5.5.1.2	hand-washing station or hand sanitation dispenser	Required		
	•	ASHRAE 7.1	Pressure Relationship to Adjacent Areas	Negative		
	•	ASHRAE 7.1	Min. Outdoor Air Changes / Hour	N/R		
	•	ASHRAE 7.1	Min. Total Air Changes / Hour	10		
	•	ASHRAE 7.1	All Room Air Exhausted Directly to Outdoors	Yes		
	•	ASHRAE 7.1	Air Recirculated by Means of Room Units	No		
	•	ASHRAE 7.1	Relative Humidity (%)	N/R		
	•	ASHRAE 7.1	Design Temperature (°F)	N/R		
<b>3.10-3.7 Support Areas for Staff</b>						
•	•	3.10-3.7.1	Lockers	Required		
•	•	3.10-3.7.3	Refrigerator	Required		
•	•	<b>3.10-3.7.2</b>	<b>Staff Toilet Room</b>	Required		
	•	ASHRAE 7.1	Pressure Relationship to Adjacent Areas	Negative		
	•	ASHRAE 7.1	Min. Outdoor Air Changes / Hour	N/R		
	•	ASHRAE 7.1	Min. Total Air Changes / Hour	10		
	•	ASHRAE 7.1	All Room Air Exhausted Directly to Outdoors	Yes		
	•	ASHRAE 7.1	Air Recirculated by Means of Room Units	No		
	•	ASHRAE 7.1	Relative Humidity (%)	N/R		
	•	ASHRAE 7.1	Design Temperature(°F)	N/R		
•	•	3.10-3.7.2	Hand wash station	Required		

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		<b>3.10-3.8 Support Areas for Patients</b>			
•	•	<b>3.10-3.8.1</b>	<b>Toilet Room(s) for Patient Use</b>	<b>Required</b>	
•	•	3.10-3.8.1	Hand wash station	<b>Required</b>	
	•	3.10-3.8.1.1	Emergency Call	<b>Required</b>	
	•	ASHRAE 7.1	Pressure Relationship to Adjacent Areas	Negative	
	•	ASHRAE 7.1	Min. Outdoor Air Changes / Hour	N/R	
	•	ASHRAE 7.1	Min. Total Air Changes / Hour	10	
	•	ASHRAE 7.1	All Room Air Exhausted Directly to Outdoors	Yes	
	•	ASHRAE 7.1	Air Recirculated by Means of Room Units	No	
	•	ASHRAE 7.1	Relative Humidity (%)	N/R	
	•	ASHRAE 7.1	Design Temperature (*F)	N/R	
•	•	<b>3.10-3.8.2</b>	<b>Patient Storage</b>	<b>Required</b>	
<b>3.10-5 General Support Facilities</b>					
		<b>3.10-5.1 Dialysis Support Facilities</b>			
•	•	<b>3.10-5.1.1, 3.10-8.2.1</b>	<b>Dialyzer Reprocessing Room</b> *If dialyzers are processed for reuse on-site One-way traffic, soiled → clean	<b>Required*</b>	
•	•	3.10-5.1.1.2	Refrigeration for temporary storage of dialyzers	<b>Required</b>	
•	•	3.10-5.1.1.2	Decontamination/cleaning areas	<b>Required</b>	
•	•	3.10-5.1.1.2	Sinks	<b>Required</b>	
	•	3.10-5.1.1.2	Processors	<b>Required</b>	
	•	3.10-5.1.1.2	Computer processors and label printers	<b>Required</b>	
•	•	3.10-5.1.1.2	A packaging area	<b>Required</b>	
•	•	3.10-5.1.1.2	Dialyzer storage cabinets	<b>Required</b>	
	•	3.10-8.2.1, ASHRAE 7.1	Pressure Relationship to Adjacent Areas	Negative	
	•	3.10-8.2.1, ASHRAE 7.1	Min. Outdoor Air Changes / Hour	2	
	•	3.10-8.2.1, ASHRAE 7.1	Min. Total Air Changes / Hour	10	
	•	3.10-8.2.1, ASHRAE 7.1	All Room Air Exhausted Directly to Outdoors	Yes	
	•	3.10-8.2.1, ASHRAE 7.1	Air Recirculated by Means of Room Units	No	
	•	3.10-8.2.1, ASHRAE 7.1	Relative Humidity (%)	NR	
	•	3.10-8.2.1, ASHRAE 7.1	Design Temperature (*F)	NR	
•	•	<b>3.10-5.1.2</b>	<b>Dialysate Preparation Area</b> *If dialysate preparation is conducted on-site	<b>Required*</b>	
•	•	3.10-5.1.2.2	Hand-washing station	<b>Required</b>	
•	•	3.10-5.1.2.2	Storage space	<b>Required</b>	
•	•	3.10-5.1.2.2	Work counter	<b>Required</b>	
	•	3.10-5.1.2.2	Floor drain	<b>Required</b>	
	•	3.10-5.1.2.2, 3.10-8.4.1.2	Treated water distribution outlet	<b>Required</b>	
•	•	<b>3.10-5.1.3</b>	<b>Equipment Repair Room</b>	<b>Required</b>	
•	•	3.10-5.1.3.1	Hand-washing station	<b>Required</b>	

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	•	3.10-5.1.3.2, 3.10-8.4.1.2	Treated water distribution outlet	Required		
•	•	3.10-5.1.3.3	Work counter	Required		
•	•	3.10-5.1.3.4	Storage cabinet	Required		
•	•	3.10-5.1.4, 3.1-8.4.3.8	Eyewash Station and Emergency Shower	Required		
	•	3.1-8.4.3.8	Quick-drench emergency deluge	Required		
<b>3.10-6 Public and Administrative Areas</b>						
<b>3.10-6.2 Public Areas</b>						
•	•	3.1-6.2.2	Reception	Required		
•	•	3.10-6.2.1	Waiting Room	Required*		
•	•	A3.10-6.2.1	Number of seats per (2) patient treatment chairs	1		
•	•	A3.10-6.2.1	Number of wheelchair spaces	2		
•	•	3.10-6.2.2	Public Toilet Room	Required		
	•	ASHRAE 7.1	Pressure Relationship to Adjacent Areas	Negative		
	•	ASHRAE 7.1	Min. Outdoor Air Changes / Hour	N/R		
	•	ASHRAE 7.1	Min. Total Air Changes / Hour	10		
	•	ASHRAE 7.1	All Room Air Exhausted Directly to Outdoors	No		
	•	ASHRAE 7.1	Relative Humidity (%)	N/R		
	•	ASHRAE 7.1	Design Temperature (*F)	N/R		
	•	3.10-6.2.4	Local Telephone Access	Required		
	•	3.10-6.2.3	Provisions for Drinking Water	Required		
•	•	3.1-6.2.6	Wheel Chair Storage	2 min.		
<b>3.10-6.3 Administrative Areas</b>						
•	•	3.10-6.3.1	General or Individual Offices	Required		
•	•	3.7-6.3.5	Medical Records	Required		
<b>3.10-8 Building Systems</b>						
<b>3.7-8.2, 3.1-8.2.1.2 Ventilation and space-conditioning requirements</b>						
			<b>Room</b>	<b>Filter Bank</b>	<b>Minimum Filter Efficiencies</b>	
	•	ASHRAE 6.4	Administrative; bulk storage; soiled holding spaces; food preparation spaces; and laundries	Filter Bank No. 1 (MERV)	7	
	•	ASHRAE 6.4		Filter Bank No. 2 (MERV)	NR	
	•	ASHRAE 6.4	All other outpatient spaces	Filter Bank No. 1 (MERV)	7	
	•	ASHRAE 6.4		Filter Bank No. 2 (MERV)	NR	
<b>3.10-8.4 Plumbing Systems</b>						
	•	3.10-8.4.1	Plumbing and Other Piping Systems	Required		
	•	3.10-8.4.1.2	Hemodialysis Water Distribution	Required		
	•	3.10-8.4.1.2(1)a	A separate treated water distribution system	Required		
	•	3.10-8.4.1.2(1)a	A drainage system independent from the tap water	Required		
	•	3.10-8.4.1.2(2)	Treated Water Distribution System	Required		
	•	3.10-8.4.1.2(2)a	shall be in accordance with ANSI/AAMI/ISO 26722: Water Treatment Equipment for Hemodialysis Applications and Related Therapies	Required		
	•	3.10-8.4.1.2(2)b	Treated water distribution outlets for treatment bays, equipment repair, and Dialysate preparation area	Required		
	•	3.10-8.4.1.2(2)c	shall meet the current requirements of ANSI/AAMI/ISO 13959: Guidelines for Water Quality	Required		

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	•	3.10-8.4.1.2(3)	<b>Dialysis equipment or water system components</b>		Required		
	•		shall meet FDA 510 (k) approval and the requirements of Class 2 medical device(s).		Required		
	•	3.10-8.4.1.2(4)	<b>Liquid Waste and Disposal System for The Hemodialysis Treatment</b>		Required		
	•		shall be designed to minimize odor and prevent backflow		Required		
	•	3.10-8.4.1.2(5)	<b>Hemodialysis Distribution Piping</b>		Required		
	•		All shall be readily accessible for inspection and maintenance		Required		
•	•	3.10-8.4.2	<b>Hemodialysis Water Treatment Equipment Areas</b>		Required		
	•	3.10-8.4.2.1	<b>Water treatment purification equipment</b>		Required		
	•	3.10-8.4.2.1	Clearance	Provide access to all components of the equipment	Required		
•	•	3.10-8.4.2.1	Dedicated and Secure area		Required		
	•	3.10-8.4.2.1(1)	Drain		Required		
	•	3.10-8.4.2.2	<b>Hemodialysis Water Treatment and Purification Equipment</b>		Required		
	•	3.10-8.4.2.2	shall be of materials and construction in accordance with ANSI/AAMI/ISO 26722: Water Treatment Equipment for Hemodialysis Applications and Related Therapies.		Required		
<b>Other</b>							
<b>1.2-5.1.5 Design Criteria for Performance of Interior Wall and Floor/Ceiling Constructions</b>							
	•	1.2-5.1.5.2	Minimum STC rating for demising walls See Table 1.2-6		Required		
		<b>Table 1.2-6</b>	<b>Design Criteria for Minimum Sound Isolation Performance Between Enclosed Rooms</b>				
	•	Exam room	Adjacent to:	Corridor (with entrance)	35 STC		
	•			Public space	50 STC		
	•			Exam Room (no electronic masking)	50 STC		
	•			Exam Room (with electronic masking)	40 STC		
	•			MRI Room	60 STC		
	•	Treatment Room	Adjacent to:	Room	50 STC		
	•			Corridor	35 STC		
	•	Toilet Room	Adjacent to:	Public space	45 STC		

END