

Appendix 4 - Design Strategies Checklist

This appendix provides a template for identifying possible design strategies to address climate change hazards, as described throughout the Guidelines.

Project Title:							
Extreme Heat		Comments	Design Strategies Checklist (not exhaustive)		Sea Level Rise & Storm Surge		Comments
			Extreme Precipitation	Comments			
	Mechanical Cooling System		Bioswales			Select High Elevation Site	
	Minimize East-West Building Orientation		Green roof			Select Higher Elevation within Existing Site	
	Passive Solar Cooling and Ventilation Systems		Planters			Raise Building Floor Elevation	
	Cool Roof (SRI appropriate)		Grass filter strip			Waterproof Building Envelope	
	Green Roof (extensive)		Permeable or open grid pavements			Elevate Critical Building Functions	
	Vegetated Structures (planters, walls)		Rainwater reuse cisterns			Elevate Critical Equipment	
	Enhanced HVAC System, including space layout optimization, system scalability, and improved controls		Trees and shrubs			Perimeter Floodwall ⁹² / Levee (passive or active)	
	More Efficient Building Envelope		Vegetated Structures (walls, etc)			Dry/Wet Floodproofing	
	Shade Structures		Vegetated planters			Utility Redundancy Design ⁹³	
	Structures Covered by Energy Generation Systems		Upsize detention/retention systems			Resilient Materials & Landscape Treatments	
	Light Colored Pavements (appropriate SRI)		Reduce impervious surfaces			Design for Storm Surge Outflow	
	Increase Planted Areas		Preserve natural/native vegetation			Install Backwater Flow Prevention	
	Permeable Surfaces and Open-grid Pavement		Reduce native soil disturbance			Design for Scour	
	Bioswales		Deployable flood barrier			Raise Road Elevation	

⁹² Permanent perimeter flood walls are not permitted to meet floodproofing requirements in buildings with substantial improvements and/or damages.

⁹³ Utility redundancy design should be pursued for critical systems, not all building systems.

Design Strategies Checklist - continued (not exhaustive)

Extreme Heat		Comments	Extreme Precipitation		Comments	Sea Level Rise & Storm Surge		Comments
	Daylighting			Build structures at a higher elevation within the existing site			Flexible Adaptation Pathway	
	Window shading			Dry floodproof below-grade areas			Constructed Wetland	
	Operable windows			Elevate critical equipment			Preservation of Natural Wetland	
	Waste Heat Recovery			Wet floodproofing			Other:	
	Solar + storage			Select water-resistant finishes				
	Trees and Shrubs			Design basement and ground floor walls to tolerate anticipated flood loads				
	Preservation of Natural Vegetation			Redundant/elevated conduit entrances				
	MEP Systems to meet future climate criteria			Install back up power				
	Other:			Protect below-ground utilities from water damage				
				Install backwater valves				
				Install sump pumps				
				Locate primary building frontage outside of stormwater flood area				
				Incorporate cloudburst management				
				Direct floodwaters away from critical equipment, building access points/toward detention areas				
				Exterior waterproofing				
				Other:				

Please refer to the CRDG v4.1 (<https://www1.nyc.gov/assets/sustainability/downloads/pdf/publications/CRDG-4-1-May-2022.pdf>) for clarification on design strategies.