

Supplementary Material

Supplementary Material S1

Table S1. Ageing suitability evaluation criteria

AAT	Indicators	Scoring Criteria	Reference Criteria
Health	Healthcare	(a) it can provide telemedicine services (1') and medical records (1'). (b) two or more pharmacies nearby (2'); only one pharmacy (1'). (c) a medical and health station is located within two kilometers (1'). (d) provide free blood pressure blood sugar, and weight measurement services (1').	<i>GB 50867-2013</i> <i>GCT 50378-2019</i> <i>GB/T 50340-2003</i>
	Dynamic Activity	Outdoor area: (a) the area is at least 100m ² (1'); over 200m ² (2').	<i>T/ASC02-2016</i> <i>GB 50867-2013</i>

	Places	<p>(b) open to owners freely (1').</p> <p>(c) at least 6 sports facilities suitable for the elderly (1'). over 4 types of facilities (1').</p> <p>Indoor area:</p> <p>(d) free sports and fitness space is over 50% (1').</p> <p>(e) over 0.5% and 100 m² of the above-ground construction area (1'); over 1% and 200 m² (1').</p> <p>(f) over 6 sports facilities suitable for the elderly (1'); over 4 types of facilities (1').</p> <p>(g) with restrooms (1').</p> <p>(h) provide fitness guidance and safety reminders (1').</p>	<p><i>GCT 50378-2019</i></p> <p><i>GB/T 50340-2003</i></p>
	<p>Static</p> <p>Activity</p> <p>Places</p>	<p>(a) a dedicated area provides static activities like flower appreciation, meditation, chess, and gossip (1').</p> <p>(b) over 0.2% of the total land area and over 50 m² (1').</p> <p>(c) have a certain degree of privacy (1').</p> <p>(d) with a quiet atmosphere (1').</p>	<p><i>T/ASC02-2016</i></p> <p><i>GB 50867-2013</i></p> <p><i>GB/T 50340-2003</i></p>

		(e) with a public library having a minimum of 30m ² (1').	
	Pedestrian Environment	<p>(a) the net width is over 1.2m and the local regional width is not less than 1.8m (1').</p> <p>(b) the road surface is anti-slip and the walking slope is less than 2.5% (1').</p> <p>(c) the net width of the outdoor wheelchair ramp is over or equal to 1m, and the starting and ending points of the ramp should have a wheelchair swing space with a diameter over 1.50m (1').</p> <p>(d) the slope of the outdoor wheelchair ramp is less than 1:12, and for every 0.75m rise, a platform should be set up, and the depth of the platform over 1.50m (1').</p> <p>(e) an outdoor wheelchair ramp with handrails and railings on the airside (1').</p> <p>(f) there are at least two steps in the tread (1'); The step has a width of at least 0.32m (1'); the height of the step is less than 0.13m (1'); The net width of the step is at least 0.90m (1').</p>	<p><i>GCT 50378-2019</i></p> <p><i>DB 11/1222-2015</i></p> <p><i>GB 50763-2012</i></p> <p><i>GB/T 50340-2003</i></p>
	Traffic Environment	(a) the road of passage is focused on vehicle diversion (1').	<p><i>DB 11/1222-2015</i></p> <p><i>GB 50763-2012</i></p>

		(b) two private cars traveling in opposite directions is not to cause prolonged traffic congestion phenomenon (1').	<i>GB/T 50340-2003</i>
	Green	(a) the landscape level is richer and the plant group type complies with the local climatic conditions (1'). vertical greening (1'). a greening rate beyond 30% (1').	<i>T/ASC02-2016</i> <i>GCT 50378-2019</i> <i>GB/T 50340-2003</i>
	Landscape	(b) over 40 kinds of outdoor plant species (over 30 kinds in the cold region) (1'); proper color configuration (1').	
	Environment	(c) at least one green plant per 50 m2 (1').	
		(d) configured landscape vignettes or artwork (1').	
		(e) the garbage of the water can be cleaned up in time (1').	
		(f) the location of the septic tank is far from the main entrances and exits (1').	
		(g) keep records of extermination work, and over 2 times each year (1').	
		(h) the use of insecticides and other impact drugs with detailed records (1').	
		(i) have facilities for cleaning pet waste supplies (1').	

		(j) public garbage can be disposed of in a timely manner (1’).	
	Noise Environment	<p>(a) the environmental noise value is greater than the standard limit of class 1 sound environment functional area, and not higher than the standard limit of class 3 sound environment functional area (1’); less than class 1 (2’).</p> <p>(b) for the main functional rooms with sleep requirements, the indoor noise level at night is less than 35dB(A) (1’).</p> <p>(c) for the functional rooms that need to concentrate and improve learning and working efficiency, the indoor noise level is less than 37dB(A) (1’).</p> <p>(d) drainage lines, sanitary ware, air conditioning and other equipment installation location, minimal noise have impact on the living room (1’).</p> <p>(e) the arrangement of elevator shaft, pipe well, pump room and fan room take effective sound insulation measures (1’).</p>	<p><i>T/ASC02-2016</i></p> <p><i>GCT 50378-2019</i></p> <p><i>GB/T 50340-2003</i></p>
	Natural	(a) fully utilize natural light in underground, large-depth, and windowless areas (1’).	<i>T/ASC02-2016</i>

	Light Environment	<p>(b) residential buildings with plenty of sunshine have a major interior functional space that occupies more than 60% of the space (1').</p> <p>(c) the lighting factor in public buildings can meet the lighting requirements, and the proportion of the area reaches 60% (1').</p> <p>(d) the lighting illuminance value of the area with at least 60% area proportion of the main indoor functional space is higher than the number of hours of lighting requirements (1').</p> <p>(e) the main functional rooms have glare control measures (1').</p> <p>(f) bedrooms, living rooms, kitchens have direct lighting (1').</p>	<p><i>GCT 50378-2019</i></p> <p><i>GB/T 50340-2003</i></p>
	Wind Environment	<p>(a) the main function room indoor thermal environment parameters reach 30% (1'); another 0.5 points for each 10% increase, the maximum score of 2 points.</p> <p>(b) the ratio of ventilation opening area to room floor area reaches 18% (1'); another 0.5 points for every 2% increase, with a maximum of 2 points.</p>	<p><i>T/ASC02-2016</i></p> <p><i>GB 50867-2013</i></p> <p><i>GCT 50378-2019</i></p> <p><i>GB/T 50340-2003</i></p>

		<p>(c) the average number of natural ventilation changes in the main functional rooms is over 2 times/ h area ratio of 70% (1'); another 0.5 points for every 10% increase, the maximum score of 2 points.</p> <p>(d) the wind speed in the pedestrian area is less than 5m/s at 1.5m from the ground height (1'); the wind pressure difference between the windward and leeward surfaces is less than 5PC (1').</p> <p>(e) the wind site will not appear in the human activity area (1').</p>	
Participation	<p>Sports</p> <p>Activities</p>	<p>(a) organize 2 or more competitive sports activities per month (1').</p> <p>(b) be attractive enough for the elderly (1').</p>	<i>T/ASC02-2016</i>
	<p>Artistic</p> <p>Activities</p>	<p>(a) organize fixed forms of recreational activities, such as square dancing (1').</p> <p>(b) with more than 30 elderly people participating each time (1').</p> <p>(c) have a certain quality as well as far-reaching significance (1').</p>	<p><i>T/ASC02-2016</i></p> <p><i>GB/T 50340-2003</i></p>

	Cultural Activities	(a) organize academic exchange activities 2 times a month or more (1'). (b) the elderly express their views actively (1').	<i>T/ASC02-2016</i> <i>GB/T 50340-2003</i>
	Volunteer Activities	(a) Information about volunteer activities will be distributed to seniors via bulletin boards or other ways (1'). (b) the elderly actively take part in volunteer activities, and a positive volunteer culture exists (1').	<i>GB 50867-2013</i>
Security	Parking System	(a) non-motorized parking lot set aside 5% of space for accessible non-motorized vehicles and with charging (1'). (b) maintain appropriate distance between motor vehicle and non-motorized vehicles (1'). (c) the temporary parking in the residential area does not block the main traffic access road or the outdoor recreation area (1').	<i>GB 50867-2013</i> <i>DB 11/1222-2015</i> <i>GB 50763-2012</i>
	Building Elevator	(a) non-spiral stairs or non-curved stairs (1').	<i>GB 50867-2013</i> <i>DB 11/1222-2015</i>

	System	<p>(b) stair tread width greater than 0.28m (1'); tread kick height less than 0.16m (1'); the same stair step height, width consistent (1'); rectangular tread (1'); rest platform area is not set tread (1').</p> <p>(c) stair tread front edge does not protrude (1'); stair tread material anti-skid (1'); tread surface set anti-skid, warning strip, anti-skid, warning strip does not protrude tread (1').</p> <p>(d) both sides of the staircase should be set continuous handrail (1'); set continuous handrail on both sides (1').</p> <p>(e) stairs at the beginning and end of the stairs by different colors to distinguish the stair treads and corridor floor (1').</p> <p>(f) elevators accommodate stretchers (1').</p> <p>(g) residential buildings for the elderly of twelve floors and above, set up two elevators per unit and set up one elevator that can accommodate stretchers (1').</p>	<p><i>GB 50763-2012</i></p> <p><i>GB/T 50340-2003</i></p>
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		<p>(h) the depth of the waiting lobby is not less than the maximum car depth in multiple elevators and not less than 1.8m (1') and the waiting lobby should be set up with handrails (1').</p> <p>(i) continuous handrails are set at the wheelchair ramp (1'); continuous handrails are set at the platform of the wheelchair ramp (1').</p> <p>(j) continuous handrails are set on both sides of the exit steps (1').</p> <p>(k) 11) handrails are set in the common corridor (1') and handrails should be continuous (1').</p> <p>(l) no obvious odor in the building elevator (1').</p> <p>(m) the entrance and exit adopt flat slope entrance and exit (1'); the canopy is set above (1').</p>	
	Artificial Light System	<p>(a) be automatically adjusted according to the level of natural light (1').</p> <p>(b) lighting system and shading device are linked and controlled (1').</p> <p>(c) outdoor lighting color rendering index higher than 60 (1').</p> <p>(d) be close to the color temperature of natural light, achieved by manual switch or knob adjustment (1'); through the intelligent mobile terminal or automatic adjustment (2').</p>	<p><i>T/ASC02-2016</i></p> <p><i>GB 50867-2013</i></p> <p><i>GCT 50378-2019</i></p> <p><i>GB 50763-2012</i></p> <p><i>GB/T 50340-2003</i></p>

	Resting System	<p>(a) a seat is set every 100m by the roadside (1').</p> <p>(b) sitting for a long time will not appear discomfort (1').</p> <p>(c) outdoor sports and exercise places with not less than 8 people seats (1').</p>	<p><i>GB 50867-2013</i></p> <p><i>DB 11/1222-2015</i></p> <p><i>GB 50763-2012</i></p> <p><i>GB/T 50340-2003</i></p>
	Signage System	<p>(a) have safety tips in the danger zone (1').</p> <p>(b) the font size of the logo is clearer and the elderly can easily identify it (1').</p> <p>(c) obvious signs are set at the beginning and end of the steps (1').</p>	<p><i>T/ASC02-2016</i></p> <p><i>DB 11/1222-2015</i></p> <p><i>GB/T 50340-2003</i></p>
	Resident Appeal System	<p>(a) manager staff complete the owner's request in a timely manner (1').</p> <p>(b) manager staff accept the suggestions made by the elderly and make timely feedback (1').</p>	Author Summary
	Equipment Maintenance System	<p>(a) relevant facilities with sound operating procedures and emergency plans (1').</p> <p>(b) develop an assessment plan for the operation effect of green buildings (1').</p> <p>(c) record results of inspection, commissioning, operation and calibration (1').</p>	<p><i>T/ASC02-2016</i></p> <p><i>GB/T 50340-2003</i></p>

		<p>(d) carry out energy-saving diagnostic assessments regularly (1').</p> <p>(e) have regular testing and public announcement of water quality (1').</p> <p>(f) no obvious damage to the facilities (1').</p>	
	Security and Control System	<p>(a) set evacuation guide signs, audio call devices (1').</p> <p>(b) evacuation doors installed on both sides with electric (1').</p> <p>(c) have a strict identity verification system (1').</p> <p>(d) have strict security patro (1').</p>	GB 50867-2013
	Commercial Services	<p>(a) have no less than 3 commercial services within 500m (1').</p> <p>(b) meat and vegetable markets with good prices and fresh food (1').</p> <p>(c) have convenient stores within 500m (1').</p> <p>(d) reach the public transport station no less than 500m, or rail transit station walking no less than 800m (1'); reach the public transport station no less than 300m, or reach the rail transit station no less than 500m (2').</p>	GB/T 50340-2003

		(e) have no less than 2 lines of public transport stations within a radius of 800m (1').	
	Living Services	(a) provide day-care services (1'). (b) provide home care services for the elderly families who need home care services convenient (1').	GB 50867-2013 GB/T 50340-2003

Note: **15J 923** (*Residential building for the aged*), **T/ASC02-2016** (*Assessment standard for healthy building*), **GB 50867-2013** (*Design code for buildings of elderly facilities*), **GCT 50378-2019** (*Assessment standard for green building*), **DB 11/1222-2015** (*Code for Accessibility Design of Residential district*), **GB 50763-2012** (*Codes for accessibility design*), **GB/T 50340-2003** (*Code for design of residential building for the aged*).