【Appendix 8】 Green Building Certification Criteria for Office building

sector	category	evaluation item	Detailed Evaluation Criteria	division	points
1. Land use (Rating: 5 points Addition: 2 points)	1.1 ecological value	1.1.1 Ecological value of the existing site	Evaluation based on the ecological value of the existing site, land use status, use area, etc.	evaluation item	2
	1.2 land use	1.2.1 coverage ratio	Planning building-to-land ratio evaluation	evaluation item	3
	1.3 Adjacent land effect	1.3.1 Adequacy of measures to prevent interference with the right to sunlight	The maximum elevation angle measured by the height of each part of the target building from the adjacent site boundary	Addition item	2
2. Transportation (Rating: 3 points Addition: 2 points)	2.1 traffic load reduction	2.1.1 Proximity to public transport	Walking distance to public transportation facilities (railway station, subway station, bus stop)	evaluation item	2
		2.1.2 Whether or not bicycle storage is installed on the site	Installation of bicycle storage and provision of shower facilities for cyclists	evaluation item	1
		2.1.3 Level of high-speed information communication facilities	Evaluated according to the installation level of high-speed information communication facilities	Addition item	2
3. Energy (Rating: 23 points Addition: 0 points)	3.1 energy consumption	3.1.1 energy consumption	Evaluated based on the scores obtained from the 'Energy Performance Index' (EPI) of the energy-saving design standards for buildings (Notice No. 2001-118 of the Ministry of Construction and Transportation)	evaluation item	15
	3.2 Saving energy	3.2.1 use of alternative energy	Points given depending on whether alternative energy facilities are installed	evaluation item	2
		3.2.2 lighting energy saving	Evaluation of lighting density and lighting method	evaluation item	6
4. Materials and Resources (Rating: 12	4.1 conserve resources	4.1.1 Application of industrialization method and new environmental technology	Number of construction methods using industrialization methods and adoption of new environmental technologies	evaluation item	3

points Addition: 9 points)		4.1.2 Save on consumer goods used in the bathroom	Evaluation of the drying method after washing in the bathroom in the building	evaluation item	1
	4.2 Recycling	4.2.1 Recycling ratio for designated by-products and other by-products	Establishing a recycling target rate for usable by-products and evaluating performance data	evaluation item	2
		4.2.2 Use of eco-friendly certified products for effective resource recycling	Evaluate the use of products that have acquired a type 1 or 3 environmental mark or GR mark	evaluation item	3
		4.2.3 Separate collection of recyclable resources	Establishment of separate collection facilities for recycling office waste and evaluation by type of separated items	evaluation item	3
		4.2.4 Reuse of existing buildings to save materials and resources	Evaluated according to the reuse rate of major structural parts for a completely remodeled building	Addition item	7
		4.2.5 Reuse of existing buildings to save materials and resources	Evaluated according to the reuse rate of non-load-bearing walls for a completely remodeled building	Addition item	2
5. Water resources (Rating: 10 points Addition: 4 points)	5.1 Establishment of water circulation system	5.1.1 Relevance of Stormwater Load Reduction Measures	Evaluated according to the presence of permeable pavement for rainwater penetration	evaluation item	3
	5.2 conserve water resources	5.2.1 Feasibility of measures to reduce water supply for daily use	Evaluated according to the application of products that have obtained eco-label certification	evaluation item	4
		5.2.2 best use	Evaluated according to the installation of facilities that use rainwater as water for sprinkling, landscaping, etc.	evaluation item	3
		5.2.3 gray water installation	Evaluate the installation of facilities to utilize the gray water produced by the installation of gray water to treat used tap water as water for sprinkling, landscaping, etc.	Addition item	4

6. Air Pollution (Rating: 6 points Addition: 0 points)	6.1 global warming prevention	6.1.1	CO2 emission reduction	Evaluate 20% or more of the heating load by using heat from cogeneration or by calculating the energy source used and the resulting carbon dioxide emission	evaluation item	3
		6.1.2	Prohibiting the use of certain substances for the protection of the ozone layer	Specify in specifications not to use products/facility containing substances that destroy the ozone layer	evaluation item	3
7. Maintenance (Rating: 4 points Addition: 6 points)	7.1 Systematic on-site management	7.1.1	Establishment of a site management plan considering the environment	Whether the construction company has obtained ISO14001 and the degree of adoption of environment-first policies in site operation guidelines	Addition item	2
	7.2 Efficient operation management	7.2.1	Adequacy of provision of operation/maintenance documents and instructions	Evaluate whether manuals and guidelines for effective operation/maintenance of related equipment/facility are provided for building managers	evaluation item	4
	7.3 Ease of system change	7.3.1	Ease of space arrangement and system change in response to residents' needs	Evaluate the ease of change in the technical aspect of the system installed in the indoor space	Addition item	4
8. Ecological environment (Rating: 13 points Addition: 6 points)	8.1 Creation of green spaces within the site	8.1.1	Application of artificial environment recording technique considering the ecological environment	For each construction method, a weight is calculated considering the area of application, etc., and reflected in the distribution of points.	evaluation item	6
		8.1.2	green space rate	Identification of landscaping area by drawing and floor plan	evaluation item	7
	8.2 Creation of living space	8.2.1	Aquatic Biotope Composition	Calculation formula and weights are calculated for the detailed items related to the area of construction and techniques to calculate the ratings, and the ratings are summed up.	Addition item	3
		8.2.2	Formation of terrestrial biotope	Calculation formula and weights are calculated for the detailed items related to the area of construction and techniques to calculate the ratings, and the ratings are	Addition item	3

				summed up.		
9. Indoor environment (Rating: 24 points Addition: 7 points)	9.1 air environment	9.1.1	Use of materials with low emission of volatile organic compounds	Evaluated for materials with low emission of volatile organic compounds	evaluation item	6
		9.1.2	Prevention of exposure of residents to smoking	Whether there is a no-smoking policy in the building or in the workplace	evaluation item	3
		9.1.3	Design of outdoor air supply and exhaust system	Confirmation of air conditioning supply and exhaust design drawings for introducing fresh outside air	evaluation item	3
		9.1.4	Air purification work carried out	Whether to remove indoor pollutants through air purification work	evaluation item	2
		9.1.5	Introduction of natural ventilation design and creation of a pleasant indoor air environment	Evaluate the installation of adjustable ventilation windows/ventilators so that residents can directly introduce outside air	evaluation item	3
		9.1.6	Control of other harmful substances emitted from building materials	Evaluate whether materials containing asbestos are used in buildings	evaluation item	One
	9.2 thermal environment	9.2.1	Adoption of indoor climate control or not	Percentage of application of automatic temperature control system for each room or zone	evaluation item	2
	9.3 sound environment	9.3.1	Allowable indoor noise for external noise	Noise level evaluation (measurement or prediction) result at the target site boundary, window sound insulation performance measurement result according to KS F 2808, indoor noise level in the lowest floor of the non-residential area and space facing the outside calculated using the indoor sound absorption capacity (Japan Evaluate based on the noise rating curve for building interior noise of the Architectural Institute) or indoor noise level (dB(A))	Addition item	2

	9.4 Creating a pleasant indoor environment	9.4.1	Providing space for residents to rest and recharge in the building	Evaluate whether planting/resting areas are created for residents to rest and recharge	evaluation item	4
		9.4.2	Creating a pleasant indoor environment for residents	Evaluation through provision of indoor environment control method to residents	Addition item	4
	9.5 caring for the elderly	9.5.1	Adequacy of care for the elderly and the disabled	Evaluated according to the design level considering the elderly and disabled	Addition item	One

Sum of evaluation item scores	100
Addition Item Score Sum	36
total points	136

<table>
<tr><th colspan="2">Green Building Certification Criteria</th><th>Office Building</th></tr>
<tr><td>evaluation section</td><td colspan="2">One land use</td></tr>
<tr><td>evaluation category</td><td colspan="2">1.1 ecological value</td></tr>
<tr><td>Evaluation standard</td><td colspan="2">1.1.1 Ecological value of the existing site</td></tr>
<tr><td colspan="3">■ Detailed evaluation criteria</td></tr>
<tr><td>evaluation purpose</td><td colspan="2">Evaluate the environmental and ecological value of the existing site to protect environmentally valuable land resources.</td></tr>
<tr><td>Assessment Methods</td><td colspan="2">Scores based on the ecological value of the existing site, land use status, use area, etc.</td></tr>
<tr><td>points</td><td colspan="2">2 points (evaluation items)</td></tr>
<tr><td>Calculation standard</td><td colspan="2">• Rating = (weight) × (points awarded)

<table>
<tr><th>division</th><th>Ecological value of existing land</th><th>weight</th></tr>
<tr><td>1st grade</td><td>If land with low ecological value occupies more than 80% of the total land area</td><td>1.0</td></tr>
<tr><td>2nd grade</td><td>If land with low ecological value occupies more than 50% of the total land area</td><td>0.5</td></tr>
</table>

Here, a land with low ecological value corresponds to a case that satisfies one of the following conditions.

- In case of construction using previously used land (reuse site) (reuse site)
- If located in a landfill, etc.
- In case of full-scale remodeling</td></tr>
</table>

■ Evaluation reference materials and submission documents		
Reference		- BREEAM 98 for offices - USGBC LEED Green Building Rating System - Article 32 of the Urban Planning Act (designation of regions), Article 29 of the Enforcement Decree (subdivision of regions) - Article 53 of the Urban Planning Act (Restrictions on construction in regions or districts)
Documents to be submitted	Preliminary certification	- City planning checker - Land use plan checker - Transformation change checker - On-site photos ※ Among the above documents, submit documents that satisfy the evaluation criteria
	Certification	- Same as preliminary Certification

Green Building Certification Criteria	Office Building

evaluation section	One land use
evaluation category	1.2 land use
Evaluation standard	1.2.1 coverage ratio
■ Detailed evaluation criteria	
evaluation purpose	By evaluating the building coverage ratio, it is induced to secure the basic environmental level of the site, such as the quality and comfort of the outdoor space within the site.
Assessment Methods	Planning building-to-land ratio evaluation
points	3 points (evaluation items)
Calculation standard	· Calculation formula: Y = 0.15 × X X = (maximum building coverage ratio − planned building coverage ratio)/maximum building coverage ratio ×100 (Y: rating, X: ratio of planned building coverage to maximum building coverage) - The maximum rating is 3 points
■ Evaluation reference materials and submission documents	
Reference	- Article 47 of the Building Act - Article 78 of the Enforcement Decree of the Building Act - Article 54 of the Urban Planning Act - Construction ordinance

Documents to be submitted	Preliminary certification	- Architectural design book (design summary) - Building-to-land ratio calculation details
	Certification	- Same as preliminary Certification

<table>
<tr><th colspan="2">Green Building Certification Criteria</th><th>Office Building</th></tr>
<tr><td>evaluation section</td><td colspan="2">One land use</td></tr>
<tr><td>evaluation category</td><td colspan="2">1.3 Adjacent Land Influence</td></tr>
<tr><td>Evaluation standard</td><td colspan="2">1.3.1 Adequacy of measures to prevent interference with the right to sunlight</td></tr>
<tr><td colspan="3">■ Detailed evaluation criteria</td></tr>
<tr><td>evaluation purpose</td><td colspan="2">Evaluate whether the ratio of the maximum height of the target building and the horizontal distance from the adjacent site boundary to the target building is appropriate so that the target building does not block useful daylight to the adjacent site.</td></tr>
<tr><td>Assessment Methods</td><td colspan="2">The maximum elevation angle measured by the height of each part of the target building from the adjacent property line</td></tr>
<tr><td>points</td><td colspan="2">Bonus 2 points (countable item)</td></tr>
<tr><td>Calculation standard</td><td colspan="2">• Rating = (weight) × (points awarded)

The maximum elevation angle (V) measured from the adjacent property line to the height of each part of the target building.

<table>
<tr><th>division</th><th>The maximum elevation angle measured by the highest height of the target building from the boundary of the adjacent site</th><th>weight</th></tr>
<tr><td>1st grade</td><td>V < 30°</td><td>1.0</td></tr>
<tr><td>2nd grade</td><td>30° ≤ V < 35°</td><td>0.8</td></tr>
</table>
</td></tr>
</table>

3rd grade	35° ≤ V < 40°	0.6
4th grade	40° ≤ V < 50°	0.4
5th grade	50° ≤ V < 60°	0.2

※ - Consideration should be given not only to the existing buildings but also to the potential impact on the future development of adjacent sites.

■ Evaluation reference materials and submission documents

Reference		- Article 53 of the Building Act (restrictions on the height of buildings to secure sunlight, etc.) - Ministry of Construction and Transportation Environment-friendly Building Design Guidelines (Ministry of Construction and Transportation, 1999.12)
Documents to be submitted	Preliminary certification	- Layout - Longitudinal and cross-sectional views - Maximum elevation angle calculation
	Certification	- Same as preliminary Certification

<table>
<tr><th colspan="2">Green Building Certification Criteria</th><th>Office Building</th></tr>
<tr><td>evaluation section</td><td colspan="2">2 traffic</td></tr>
<tr><td>evaluation category</td><td colspan="2">2.1 traffic load reduction</td></tr>
<tr><td>Evaluation standard</td><td colspan="2">2.1.1 Proximity to public transport</td></tr>
<tr><td colspan="3">■ Detailed evaluation criteria</td></tr>
<tr><td>evaluation purpose</td><td colspan="2">It is intended to induce the reduction of pollution and energy consumption through the use of public transportation.</td></tr>
<tr><td>Assessment Methods</td><td colspan="2">Walking distance from public transportation facilities (railway station, subway station, bus terminal, bus stop (excluding village bus stop))</td></tr>
<tr><td>points</td><td colspan="2">2 points (evaluation item)</td></tr>
<tr><td>Calculation standard</td><td colspan="2">• Rating = (weight)×(points awarded)

<table>
<tr><th>division</th><th>Walking distance from public transportation facilities</th><th>weight</th></tr>
<tr><td>1st grade</td><td>2 or more public transport options are located within 300m</td><td>1.0</td></tr>
<tr><td>2nd grade</td><td>If the nearest public transport is within 200m</td><td>0.8</td></tr>
<tr><td>3rd grade</td><td>If the nearest public transport is within 200m or 300m</td><td>0.6</td></tr>
<tr><td>4th grade</td><td>If the nearest public transport is within 300m or 400m</td><td>0.4</td></tr>
<tr><td>5th grade</td><td>If the nearest public transport is within 400m or 500m</td><td>0.2</td></tr>
</table></td></tr>
</table>

		※ - Walking distance refers to the physical distance using the safest and most convenient road - Submission of documentary evidence proving proximity to public transportation at the time of evaluation If it is difficult, additional points are applied from the time of actual operation (e.g. bus, etc.) - The distance is calculated from the most advantageous entrance to the site
■ Evaluation reference materials and submission documents		
Reference		- Ministry of Construction and Transportation Environment-friendly Building Design Guidelines (Ministry of Construction and Transportation, 1999.12) - Article 2 of the Urban Traffic Improvement Promotion Act "Means of transportation" means a bus used to move people or goods from one point to another . It refers to trains (including urban railway trains) and other means of transportation prescribed by the Presidential Decree.
Documents to be submitted	Preliminary certification	- Situation map near the site (mark the location of public transportation and entrance to the complex, specify the distance from the location of public transportation to the entrance to the complex)
	Certification	- Same as preliminary Certification

<table>
<tr><th colspan="2">Green Building Certification Criteria</th><th>Office Building</th></tr>
<tr><td>evaluation section</td><td colspan="2">2 traffic</td></tr>
<tr><td>evaluation category</td><td colspan="2">2.1 traffic load reduction</td></tr>
<tr><td>Evaluation standard</td><td colspan="2">2.1.2 Whether or not bicycle storage is installed on the site</td></tr>
<tr><td colspan="3">■ Detailed evaluation criteria</td></tr>
<tr><td>evaluation purpose</td><td colspan="2">By determining whether or not to install a bicycle storage facility, a human-friendly traffic environment is induced, and energy consumption and pollution are reduced.</td></tr>
<tr><td>Assessment Methods</td><td colspan="2">Installation of bicycle storage and provision of shower facilities for cyclists</td></tr>
<tr><td>points</td><td colspan="2">1 point (evaluation item)</td></tr>
<tr><td>Calculation standard</td><td colspan="2">• Rating = (weight)×(points awarded)

<table><tr><th>division</th><th>Whether to install bike storage</th><th>weight</th></tr><tr><td>1st grade</td><td>Installation of bicycle storage and shower facilities</td><td>1.0</td></tr><tr><td>2nd grade</td><td>bike storage installation</td><td>0.5</td></tr></table>– However, the bicycle storage space must be of a size that can store more than the number of bicycles below.
Number of bicycles = Number of legal car parking spaces × 10%</td></tr>
<tr><td colspan="3">■ Evaluation reference materials and submission documents</td></tr>
</table>

<table>
<tr><td colspan="2">Reference</td><td>- Standards for bicycle parking lot installation (Article 16 of the Rules on Structure and Facility Standards for Bicycle Facilities)
. It should be installed in a place where cyclists can use it safely and conveniently, and signs for bicycle parking lots should be installed so that there are no obstacles to passers-by.
. For the convenience of bicycle parking, install a bicycle parking device and a tent to cover snow and rain.
. Facilitate the installation of a device to prevent bicycle theft
. To install lighting facilities so that there is no inconvenience when using them at night
- BREEAM 98 for offices</td></tr>
<tr><td rowspan="2">Documents to be submitted</td><td>Preliminary certification</td><td>- Bicycle storage layout and design floor plan</td></tr>
<tr><td>Certification</td><td>- Bicycle storage layout and design floor plan
- Photos of the bicycle parking lot</td></tr>
</table>

<table>
<tr><th colspan="2">Green Building Certification Criteria</th><th>Office Building</th></tr>
<tr><td>evaluation section</td><td colspan="2">2 traffic</td></tr>
<tr><td>evaluation category</td><td colspan="2">2.1 traffic load reduction</td></tr>
<tr><td>Evaluation standard</td><td colspan="2">2.1.3 Level of high-speed information communication facilities</td></tr>
<tr><td colspan="3">■ Detailed evaluation criteria</td></tr>
<tr><td>evaluation purpose</td><td colspan="2">Indirectly suppress factors that cause traffic by utilizing high-speed information and communication facilities for work-related matters.</td></tr>
<tr><td>Assessment Methods</td><td colspan="2">Evaluated according to the installation level of high-speed information communication facilities</td></tr>
<tr><td>points</td><td colspan="2">Bonus 2 points (countable item)</td></tr>
<tr><td>Calculation standard</td><td colspan="2">• Rating = (weight) × (points awarded)

<table>
<tr><th>division</th><th>Installation level of high-speed information communication facilities</th><th>weight</th></tr>
<tr><td>1st grade</td><td>When high-speed information communication facility level 1 or higher is installed</td><td>1.0</td></tr>
<tr><td>2nd grade</td><td>When high-speed information communication facility level 2 or higher is installed</td><td>0.5</td></tr>
</table></td></tr>
</table>

■ Evaluation reference materials and submission documents		
Reference		- Ministry of Information and Communication 'high-speed information communication building certification system'
Documents to be submitted	Preliminary certification	- High-speed information communication (preliminary) certificate or high-speed information communication certification grade plan
	Certification	- High-speed information communication certificate

Green Building Certification Criteria	Office Building

evaluation section	3 energy
evaluation category	3.1 energy consumption
Evaluation standard	3.1.1 Energy consumption evaluation
■ Detailed evaluation criteria	
evaluation purpose	Since the energy consumption of buildings is closely related to the emission of greenhouse gases due to the use of fossil fuels, energy consumption in the operation stage, which consumes the most energy in the life cycle of buildings, is reduced with the intention that energy reduction in buildings directly suppresses greenhouse gas emissions. By evaluating in advance, we want to reduce the energy of the building and further reduce the emission of greenhouse gases.
Assessment Methods	Evaluated based on the scores obtained from the 'Energy Performance Indicator Review' of the Building Energy Saving Design Standards (Notice No. 2001-118 of the Ministry of Construction and Transportation)
points	15 points (evaluation items)
Calculation standard	• Energy consumption evaluation score Y = 15 × (Office building EPI score − 60) ÷ 25 ※ − EPI: Energy Performance Index − Rounding to the second decimal place of the calculated result − If the evaluation score exceeds 15 points, the highest evaluation score is 15 points
■ Evaluation reference materials and submission documents	
Reference	※ Energy consumption according to EPI score Unit: Mcal/㎡·year , ※ ( ) is the ratio of 60 points

<table>
<tr><td colspan="2"></td><td>
<table>
<tr><td>EPI score</td><td>60 points</td><td>70 points</td><td>80 points</td><td>90 points</td><td>100 points</td></tr>
<tr><td>office use</td><td>180
(100)</td><td>160
(88.8)</td><td>140
(77.5)</td><td>120
(66.3)</td><td>99
(55)</td></tr>
</table>
- Since the EPI score has a proportional relationship with the amount of energy consumption, the evaluation score is given based on the EPI score.
- With the goal of 'reducing 25% compared to current energy consumption', which is the government's mid- to long-term goal of the 2nd stage of energy efficiency improvement for buildings, the highest evaluation score is obtained when the EPI score is 85 points.
- Energy saving design standards for buildings (Ministry of Construction and Transportation Notice No. 2001-118)
</td></tr>
<tr><td rowspan="2">Documents to be submitted</td><td>Preliminary certification</td><td>- Energy saving plan and related evidence (drawings, reports, etc.)</td></tr>
<tr><td>Certification</td><td>- Same as preliminary Certification
- Changed energy saving plan when design changes occur</td></tr>
</table>

<table>
<tr><th colspan="2">Green Building Certification Criteria</th><th>Office Building</th></tr>
<tr><td>evaluation section</td><td colspan="2">3 energy</td></tr>
<tr><td>evaluation category</td><td colspan="2">3.2 Saving energy</td></tr>
<tr><td>Evaluation standard</td><td colspan="2">3.2.1 use of alternative energy</td></tr>
<tr><td colspan="3">■ Detailed evaluation criteria</td></tr>
<tr><td>evaluation purpose</td><td colspan="2">Since the use of alternative energy can reduce the use of fossil fuels and reduce greenhouse gas emissions, this item is evaluated from the perspective of recommending and encouraging the use of alternative energy.</td></tr>
<tr><td>Assessment Methods</td><td colspan="2">Points given depending on whether alternative energy facilities are installed</td></tr>
<tr><td>points</td><td colspan="2">2 points (evaluation item)</td></tr>
<tr><td>Calculation standard</td><td colspan="2">• Rating = (weight) × (points awarded)

<table>
<tr><th>division</th><th>Installation level of alternative energy facilities</th><th>weight</th></tr>
<tr><td>1st grade</td><td>In case of installing alternative energy facilities that account for 5% or more of the cooling, heating or electrical design load</td><td>1.0</td></tr>
<tr><td>2nd grade</td><td>In case of installing alternative energy facilities</td><td>0.5</td></tr>
</table>
※ Alternative energy refers to solar energy, bioenergy, wind energy, etc., other than oil, coal, nuclear power, and natural gas as defined in the "Act on the Promotion of Development, Use, and Diffusion of Alternative Energy."</td></tr>
<tr><td colspan="3">■ Evaluation reference materials and submission documents</td></tr>
</table>

Reference		- Law No. 5446 "Act on Promotion of Alternative Energy Development, Utilization and Distribution "
Documents to be submitted	Preliminary certification	- Alternative energy utilization facility installation plan and related design documents
	Certification	- Alternative energy utilization facility installation drawing - On-site photos

<table>
<tr><th colspan="2">Green Building Certification Criteria</th><th>Office Building</th></tr>
<tr><td>evaluation section</td><td colspan="2">3 energy</td></tr>
<tr><td>evaluation category</td><td colspan="2">3.2 Saving energy</td></tr>
<tr><td>Evaluation standard</td><td colspan="2">3.2.2 lighting energy saving</td></tr>
<tr><td colspan="3">■ Detailed evaluation criteria</td></tr>
<tr><td>evaluation purpose</td><td colspan="2">Save power energy by efficient lighting design.</td></tr>
<tr><td>Assessment Methods</td><td colspan="2">Evaluation of lighting density and lighting method</td></tr>
<tr><td>points</td><td colspan="2">6 points (evaluation items)</td></tr>
<tr><td>Calculation standard</td><td colspan="2">• Rating = (weight) × (points awarded)

<table>
<tr><th>division</th><th>standard</th><th>weight</th></tr>
<tr><td>1st grade</td><td>When the standard floor office space secures the average illuminance of the work surface in accordance with KS A 3011 and a light sensor is installed on the outer periphery of each direction for the use of natural light, or if the average illuminance of the work surface according to KS A 3011 is secured and the average light density of the ceiling surface is In case of design under 10W/㎡</td><td>1.0</td></tr>
<tr><td>2nd grade</td><td>When the standard floor office space secures the average illuminance of the work surface according to KS A 3011 and is designed with an average ceiling light density of 13 W/m2 or less</td><td>0.7</td></tr>
</table></td></tr>
</table>

<table>
<tr><td colspan="2"></td><td colspan="3">
<table>
<tr><td>level 3</td><td>When the standard floor office space secures the average illumination of the work surface according to KS A 3011 and is designed with an average ceiling light density of 16 W/m2 or less</td><td>0.4</td></tr>
</table>
※ In the case of direct lighting, a louver must be installed on the lighting fixture to prevent glare.
</td></tr>
<tr><td colspan="5">■ Evaluation reference materials and submission documents</td></tr>
<tr><td colspan="2">Reference</td><td colspan="3">-KS A 3011
- High-efficiency energy equipment High-efficiency fluorescent lamps (T-8, T-5)</td></tr>
<tr><td rowspan="2">Documents to be submitted</td><td>Preliminary certification</td><td colspan="3">- Illuminance calculation and lighting density calculation data of the standard floor office space</td></tr>
<tr><td>Certification</td><td colspan="3">- Same as preliminary Certification</td></tr>
</table>

<table>
<tr><th colspan="2">Green Building Certification Criteria</th><th>Office Building</th></tr>
<tr><td>evaluation section</td><td colspan="2">4 materials and resources</td></tr>
<tr><td>evaluation category</td><td colspan="2">4.1 conserve resources</td></tr>
<tr><td>Evaluation standard</td><td colspan="2">4.1.1 Application of industrial chemical method and new environmental technology</td></tr>
<tr><td colspan="3">■ Detailed evaluation criteria</td></tr>
<tr><td>evaluation purpose</td><td colspan="2">By using factory-produced members or by using construction methods that reduce environmental load, waste generation in the field is reduced, and environmental load reduction is induced by applying new technology related to the environment.</td></tr>
<tr><td>Assessment Methods</td><td colspan="2">Adoption of construction methods using industrial chemical methods and new environmental technologies</td></tr>
<tr><td>points</td><td colspan="2">3 points (Industrialization method: 2 points, Environment-related new technology: 1 point) (Evaluation items)</td></tr>
<tr><td>Calculation standard</td><td colspan="2">■ Rating = Industrialization method + New technology related to the environment

1) Application of industrialization method = (weight) × (points awarded)

<table>
<tr><th>division</th><th>Application of industrialization method</th><th>weight</th></tr>
<tr><td>1st grade</td><td>If 3 or more are applied</td><td>1.0</td></tr>
<tr><td>2nd grade</td><td>If 2 are applied</td><td>0.7</td></tr>
<tr><td>level 3</td><td>If 1 is applied</td><td>0.4</td></tr>
</table>
</td></tr>
</table>

		※ Industrialization method: This is a method of producing the main structural parts and exterior walls of a building in a factory and simply assembling them on site. 2) Environment-related new technology: In case of adopting and applying a nationally recognized new technology related to the environment ※ Scope of new technology recognition (new technology certified by the Ministry of Environment and Ministry of Construction and Transportation) - New environmental technology: Technology according to Article 2, Subparagraph 1 of the "Environmental Technology Development and Support Act" - New construction technology: technology according to the provisions of Article 18 of the "Construction Technology Management Act" (However, it must be possible to confirm that it is related to environmental technology in the "technology overview" and "protection details" of the new technology designation certificate)
■ Evaluation reference materials and submission documents		
Reference		- Regulations on environmental technology evaluation procedures and evaluation standards (Ministry of Environment Notice No. 2000-104) - Regulations on evaluation standards and evaluation procedures for new technologies (Ministry of Construction and Transportation Notice No. 1999-383)
Documents to be submitted	Preliminary certification	- Design documents and new technology specifications including industrialization methods or, - Confirmation of application plan
	Certification	- Detailed design document and new technology designation - On-site photos

<table>
<tr><th colspan="2">Green Building Certification Criteria</th><th>Office Building</th></tr>
<tr><td>evaluation section</td><td colspan="2">4 materials and resources</td></tr>
<tr><td>evaluation category</td><td colspan="2">4.1 conserve resources</td></tr>
<tr><td>Evaluation standard</td><td colspan="2">4.1.2 Saving on consumer goods used in the bathroom</td></tr>
<tr><td colspan="3">■ Detailed evaluation criteria</td></tr>
<tr><td>evaluation purpose</td><td colspan="2">It induces reduction of consumer goods used in toilets in buildings and promotes a clean living environment.</td></tr>
<tr><td>Assessment Methods</td><td colspan="2">Evaluation of the drying method after washing in the bathroom in the building</td></tr>
<tr><td>points</td><td colspan="2">1 point (evaluation item)</td></tr>
<tr><td>Calculation standard</td><td colspan="2">• Rating = (weight) × (points awarded)
<table><tr><th>Drying method after washing face in all public restrooms</th><th>weight</th></tr><tr><td>Electric induction warm air dryer (air towel) installation</td><td>1.0</td></tr><tr><td>Rolling towel method installation</td><td>0.5</td></tr></table></td></tr>
<tr><td colspan="3">■ Evaluation reference materials and submission documents</td></tr>
<tr><td>Reference</td><td colspan="2"></td></tr>
</table>

Documents to be submitted	Preliminary certification	- Design documents (toilet floor plan, elevation) and drawings that can confirm the drying method or, - Confirmation of application plan
	Certification	- Design documents (toilet floor plan, elevation) or on-site photos

<table>
<tr><th colspan="2">Green Building Certification Criteria</th><th>Office Building</th></tr>
<tr><td>evaluation section</td><td colspan="2">4 materials and resources</td></tr>
<tr><td>evaluation category</td><td colspan="2">4.2 Recycling of materials and resources</td></tr>
<tr><td>Evaluation standard</td><td colspan="2">4.2.1 Recycling ratio for designated by-products and other by-products</td></tr>
<tr><td colspan="3">■ Detailed evaluation criteria</td></tr>
<tr><td>evaluation purpose</td><td colspan="2">Reduce waste by saving natural resources and using reusable waste materials.</td></tr>
<tr><td>Assessment Methods</td><td colspan="2">Establishing a recycling target rate for usable by-products and evaluating performance data</td></tr>
<tr><td>points</td><td colspan="2">2 points (evaluation item)</td></tr>
<tr><td>Calculation standard</td><td colspan="2">• Rating = (weight) × (points awarded)

<table><tr><th>Recycling target rate of by-products</th><th>weight</th></tr><tr><td>When the recycling target rate of usable by-products is set at 75% (waste wood 50%) or more</td><td>1.0</td></tr><tr><td>When the recycling target rate of usable by-products is set at 70% (waste wood 30%) or more</td><td>0.7</td></tr></table>
- Calculate the recycling rate of on-site waste (road base material or embankment material, etc.) when by-products are generated at the site
- If by-products do not occur at the site, it is calculated by the use ratio of by-products purchased from outside among the amount of each material used</td></tr>
</table>

■ Evaluation reference materials and submission documents		
Reference		- Recycling Guidelines for Businesses Discharging Construction Waste (Ministry of Environment Notice No. 1999-117, Ministry of Construction and Transportation Notice No. 1999-218) - Article 12 of the Law on the Promotion of Saving and Recycling of Resources (Compliance Matters for Designated Byproduct Emission Business Operators) - Article 5 of the Enforcement Decree of the Act on the Promotion of Saving and Recycling of Resources (Designated Byproducts), Article 11 (Basic Policy) - Article 45 of the Enforcement Rule of the Construction Technology Management Act (Construction Evaluation)
Documents to be submitted	Preliminary certification	- Recycling plan for construction waste materials (Article 5 of Recycling Guidelines for Businesses Discharging Construction Waste Materials) or, - Confirmation of application plan
	Certification	- Recycling performance data of construction waste materials

<table>
<tr><th colspan="2">Green Building Certification Criteria</th><th>Office Building</th></tr>
<tr><td>evaluation section</td><td colspan="2">4 materials and resources</td></tr>
<tr><td>evaluation category</td><td colspan="2">4.2 Recycling</td></tr>
<tr><td>Evaluation standard</td><td colspan="2">4.2.2 Use of eco-friendly certified products for effective resource recycling</td></tr>
<tr><td colspan="3">■ Detailed evaluation criteria</td></tr>
<tr><td>evaluation purpose</td><td colspan="2">The purpose is to obtain effects such as resource recycling, embodied energy reduction, and environmental pollution reduction by evaluating the use of eco-friendly certified products for effective resource recycling.</td></tr>
<tr><td>Assessment Methods</td><td colspan="2">Evaluate the use of products that have acquired a type 1 or 3 environmental mark or GR mark</td></tr>
<tr><td>points</td><td colspan="2">3 points (evaluation item)</td></tr>
<tr><td>Calculation standard</td><td colspan="2">■ Rating = (weight) × (point distribution)
. Weight by grade: Grade 1 (1.0), Grade 2 (0.8), Grade 3 (0.6), Grade 4 (0.4), Grade 5 (0.2)

<table>
<tr><th>division</th><th>Number of eco-friendly certified products used</th><th>weight</th></tr>
<tr><td>1st grade</td><td>If 9 or more types are used</td><td>1.0</td></tr>
<tr><td>2nd grade</td><td>If 7 or more types are used</td><td>0.8</td></tr>
<tr><td>level 3</td><td>If 5 or more types are used</td><td>0.6</td></tr>
<tr><td>4th grade</td><td>If 3 or more types are used</td><td>0.4</td></tr>
</table>
</td></tr>
</table>

	5th grade	If more than one type is used	0.2

※ Eco-certified products for recycling of effective resources: Products that have obtained environmental marks or GR marks for recycling of effective resources according to the environmental labeling system or environmental product labeling system, or have been certified for their environmental performance. Approved if applied.

■ Evaluation reference materials and submission documents

Reference		- Products subject to environmental labeling, products subject to environmental product labeling and grant standards (www.kela.or.kr) - Guidelines for quality certification of recycled products (when notified by the Korean Agency for Technology and Standards) - Article 26 of the Law on the Promotion of Saving and Recycling of Resources, Article 14 of the Enforcement Decree of the Industrial Development Act
Documents to be submitted	Preliminary certification	- Certificate and usage plan for each material or, - Confirmation of application plan
	Certification	- Certificate and usage report by material

<table>
<tr><th colspan="2">Green Building Certification Criteria</th><th>Office Building</th></tr>
<tr><td>evaluation section</td><td colspan="2">4 materials and resources</td></tr>
<tr><td>evaluation category</td><td colspan="2">4.2 Recycling</td></tr>
<tr><td>Evaluation standard</td><td colspan="2">4.2.3 Separate collection of recyclable resources</td></tr>
<tr><td colspan="3">■ Evaluation criteria</td></tr>
<tr><td>evaluation purpose</td><td colspan="2">It is intended to promote the recycling of waste by evaluating the availability of facilities for recycling waste generated in buildings.</td></tr>
<tr><td>Assessment Methods</td><td colspan="2">Establishment of separate collection facilities for recyclable waste and evaluation by type of separated items</td></tr>
<tr><td>points</td><td colspan="2">3 points (evaluation items)</td></tr>
<tr><td>Calculation standard</td><td colspan="2">. Rating = (weight) × (points awarded)

<table>
<tr><th>division</th><th>Separate collection of recycling waste</th><th>weight</th></tr>
<tr><td>1st grade</td><td>Recyclable waste storage facilities are installed, and containers that can be collected separately for 4 or more types are installed on each floor of the standard floor.</td><td>1.0</td></tr>
<tr><td>2nd grade</td><td>Recyclable waste storage facilities are installed, and containers that can be separated for three or more types are installed on each floor of the standard floor.</td><td>0.7</td></tr>
<tr><td>3rd grade</td><td>Install containers capable of separate collection of 3 or more types on each floor of the standard floor</td><td>0.4</td></tr>
</table></td></tr>
</table>

	※ Examples of separate collection containers: Recyclable waste includes paper, toner cartridges, printer cartridges, plastics, wood products, bottles and glass products, iron and stainless steel products, etc.

■ Evaluation reference materials and submission documents		
Reference		- Article 17 of the Law on the Promotion of Saving and Recycling of Resources (separate collection of recyclable resources)
Documents to be submitted	Preliminary certification	- Design documents to confirm the waste storage facility - A design document that can confirm the installation location of separate collection containers for each floor or, - Confirmation of application plan
	Certification	- Design documents that can confirm business waste storage facilities - A design document that can confirm the installation location of separate collection containers for each floor - On-site photos

<table>
<tr><th colspan="2">Green Building Certification Criteria</th><th>Office Building</th></tr>
<tr><td>evaluation section</td><td colspan="2">4 materials and resources</td></tr>
<tr><td>evaluation category</td><td colspan="2">4.2 Recycling</td></tr>
<tr><td>Evaluation standard</td><td colspan="2">4.2.4 Reducing waste of materials and resources by reusing existing buildings</td></tr>
<tr><td colspan="3">■ Detailed evaluation criteria</td></tr>
<tr><td>evaluation purpose</td><td colspan="2">Reduce the waste of materials and resources by increasing the reuse rate of existing buildings, and reduce environmental pollution caused by waste resources.</td></tr>
<tr><td>Assessment Methods</td><td colspan="2">The total remodeling building is evaluated according to the reuse rate of major structural parts.</td></tr>
<tr><td>points</td><td colspan="2">Bonus 7 points (additional item)</td></tr>
<tr><td>Calculation standard</td><td colspan="2">• Rating = (weight) × (points awarded)
<table>
<tr><th>division</th><th>Reuse rate of main structural parts</th><th>weight</th></tr>
<tr><td>1st grade</td><td>In case of full-scale remodeling of a building built on the existing site In case of reuse of 70% or more of the main structural parts (based on volume ratio)</td><td>1.0</td></tr>
<tr><td>2nd grade</td><td>In case of full-scale remodeling of a building built on the existing site In case of reuse of 50% or more of the main structural parts (based on volume ratio)</td><td>0.8</td></tr>
<tr><td>3rd grade</td><td>In case of full-scale remodeling of a building built on the existing site In case of reuse of 30% or more of the main structural parts (based on volume ratio)</td><td>0.6</td></tr>
</table>
※ Remodeling: Refers to the act of extending, reconstructing, or major repairs to suppress deterioration or improve the function of a building.</td></tr>
<tr><td colspan="3">■ Evaluation reference materials and submission documents</td></tr>
</table>

Reference		- Article 6 of the Enforcement Decree of the Building Act - Building design standards and commentary considering remodeling (Guidelines No. 1 in 2001), Ministry of Construction and Transportation - GBTool - BREEAM 98 for offices
Documents to be submitted	Preliminary certification	- Design documents and current status photos of existing buildings - Design documents for major structural parts (existing, after remodeling) for reuse and calculation data for reuse rate
	Certification	- Same as preliminary Certification

<table>
<tr><th colspan="2">Green Building Certification Criteria</th><th>Office Building</th></tr>
<tr><td>evaluation section</td><td colspan="2">4 materials and resources</td></tr>
<tr><td>evaluation category</td><td colspan="2">4.2 Recycling</td></tr>
<tr><td>Evaluation standard</td><td colspan="2">4.2.5 Reducing waste of materials and resources by reusing existing buildings</td></tr>
<tr><td colspan="3">■ Evaluation criteria</td></tr>
<tr><td>evaluation purpose</td><td colspan="2">Reduce the waste of materials and resources by increasing the reuse rate of existing buildings, and reduce environmental pollution caused by waste resources.</td></tr>
<tr><td>Assessment Methods</td><td colspan="2">Evaluate the reusability rate of non-bearing walls for a completely remodeled building.</td></tr>
<tr><td>points</td><td colspan="2">Bonus 2 points (countable item)</td></tr>
<tr><td>Calculation standard</td><td colspan="2">• Rating = (weight) × (points awarded)
<table>
<tr><th>division</th><th>Reusability of non-bearing walls</th><th>weight</th></tr>
<tr><td>1st grade</td><td>In case of full-scale remodeling of a building built on an existing site In case of reusing 70% or more of non-bearing walls (based on volume ratio)</td><td>1.0</td></tr>
<tr><td>2nd grade</td><td>In case of full-scale remodeling of a building built on the existing site In case of reusing more than 50% of non-bearing walls (based on volume ratio)</td><td>0.8</td></tr>
<tr><td>3rd grade</td><td>In case of full-scale remodeling of a building built on the existing site In case of reusing more than 30% of non-bearing walls (based on volume ratio)</td><td>0.6</td></tr>
</table></td></tr>
<tr><td colspan="3">■ Evaluation Calculation Basis and Documents to be Submitted</td></tr>
</table>

Reference		- Article 6 of the Enforcement Decree of the Building Act - Building design standards and commentary considering remodeling (Guidelines No. 1 in 2001), Ministry of Construction and Transportation - GBTool - BREEAM 98 for offices
Documents to be submitted	Preliminary certification	- Design documents and current status photos of existing buildings - Design documents and reuse rate calculation data including non-bearing walls for reuse (existing, after remodeling)
	Certification	- Same as preliminary Certification

<table>
<tr><th colspan="2">Green Building Certification Criteria</th><th>Office Building</th></tr>
<tr><td>evaluation section</td><td colspan="2">5 water resources</td></tr>
<tr><td>evaluation category</td><td colspan="2">5.1 Establishment of water resource system</td></tr>
<tr><td>Evaluation standard</td><td colspan="2">5.1.1 Relevance of Stormwater Load Reduction Measures</td></tr>
<tr><td colspan="3">■ Detailed evaluation criteria</td></tr>
<tr><td>evaluation purpose</td><td colspan="2">Reduction of rainwater load reduces the possibility of urban flooding during torrential rains, reduces construction and management costs for rainwater drainage facilities such as sewers, treatment plants and rainwater reservoirs, as well as maintains the soil ecosystem and secures the amount of water in rivers and underground water. can be obtained, so the purpose is to obtain such an effect.</td></tr>
<tr><td>Assessment Methods</td><td colspan="2">Evaluation according to the permeable pavement installation ratio for rainwater penetration</td></tr>
<tr><td>points</td><td colspan="2">3 points (evaluation items)</td></tr>
<tr><td>Calculation standard</td><td colspan="2">• Rating = (weight) × (points awarded)
<table>
<tr><th>division</th><th>Installation area ratio of permeable pavement</th><th>weight</th></tr>
<tr><td>1st grade</td><td>If permeable pavement is installed for 35% or more of the pavement area ratio</td><td>1.0</td></tr>
<tr><td>2nd grade</td><td>If permeable pavement is installed for 30% or more of the pavement area ratio</td><td>0.8</td></tr>
<tr><td>3rd grade</td><td>If permeable pavement is installed for 25% or more of the pavement area ratio</td><td>0.6</td></tr>
<tr><td>4th grade</td><td>If permeable pavement is installed for 20% or more of the pavement area ratio</td><td>0.4</td></tr>
<tr><td>5th grade</td><td>If permeable pavement is installed for 15% or more of the pavement area ratio</td><td>0.2</td></tr>
</table></td></tr>
</table>

		(interstitial void pavement area × 1) + (partial pavement area × 2) ※ - Permeability pavement area ratio = ——————————————————— ×100 (%) pavement area - Water permeable pavement type: 1) Interstitial Gap Pavement: Sidewalk blocks constructed on a sand or crushed stone base or floor brick pavement with gaps, etc. 2) Partial pavement: grass block or flagstone pavement on the grass, etc.
■ Evaluation reference materials and submission documents		
Reference		- Ministry of Construction and Transportation: Article 66 (Structure and Installation Standards for Public Spaces), Article 19 Paragraph 8 (Structure and Installation Standards for Pedestrian Roads), Article 21 (Structure and Installation Standards for Bicycle Roads), Article 53 (Structure and Installation Standards for Plazas) installation standards)
Documents to be submitted	Preliminary certification	- Structure diagram of permeable pavement - Calculation of Permeable Pavement Area Ratio
	Certification	- Same as preliminary Certification

<table>
<tr><th colspan="2">Green Building Certification Criteria</th><th>Office Building</th></tr>
<tr><td>evaluation section</td><td colspan="2">5 water resources</td></tr>
<tr><td>evaluation category</td><td colspan="2">5.2 saving water resources</td></tr>
<tr><td>Evaluation standard</td><td colspan="2">5.2.1 Feasibility of measures to reduce water supply for daily use</td></tr>
<tr><td colspan="3">■ Detailed evaluation criteria</td></tr>
<tr><td>evaluation purpose</td><td colspan="2">The increase in water demand due to the increase in the urban population causes problems such as deterioration of water quality and increased cost of urban sewage treatment. By evaluating the reduction rate of water consumption for living, it is possible to reduce energy, water supply, and facilities and costs for sewage treatment.</td></tr>
<tr><td>Assessment Methods</td><td colspan="2">Evaluated according to the application of products that have obtained eco-label certification</td></tr>
<tr><td>points</td><td colspan="2">4 points (evaluation items)</td></tr>
<tr><td>Calculation standard</td><td colspan="2">In the case of applying more than 80% of the eco-labeled products shown below to all standard layers, each
1 point awarded
<table>
<tr><th>environmental label Target product group</th><th>Application or water saving method</th><th>environmental label Target product group</th><th>Application or water saving method</th></tr>
<tr><td rowspan="3">for washing water saving type water tap</td><td>Instant index type (electronic response type, pedal and foot valve type)</td><td rowspan="3">shower head</td><td>Built-in water-saving showerhead</td></tr>
<tr><td>autism</td><td>Attachable water-saving shower head</td></tr>
<tr><td>quantitative exponential</td><td>Water-saving water-saving showerhead</td></tr>
</table></td></tr>
</table>

<table>
<tr><td></td><td>
<table>
<tr><td></td><td></td><td></td><td>Other Water Saving Sourheads</td></tr>
<tr><td></td><td>Faucet water saving parts (for washing face only)</td><td>water-saving toilet</td><td>Water-saving toilet for bathroom</td></tr>
</table>
※ - 1 point is awarded when a pressure reducing valve is used to keep the water supply pressure constant for each floor, or when zoning is performed so that the water supply pressure is 2 kgf/ cm2 or less and the discharge rate is 30 ℓ /min.
- 1 point awarded for using an electronic induction urinal
- Grant up to 4 points</td></tr>
<tr><td colspan="3">■ Evaluation reference materials and submission documents</td></tr>
<tr><td colspan="2">Reference</td><td>- Relevant law: Waterworks Act Article 11-2 (Installation of water-saving equipment)
- Environmental Technology Development and Support Act
- Environmental product labeling system
- Eco-labeled products and certification standards (www.kela.or.kr)</td></tr>
<tr><td rowspan="2">Documents to be submitted</td><td>Preliminary certification</td><td>- Marks or documents that can prove the eco-label certification of the target product or,
- Confirmation of application plan</td></tr>
<tr><td>Certification</td><td>- Related design documents
- Marks or documents that can prove the eco-label certification of the target product</td></tr>
</table>

Green Building Certification Criteria	Office Building

evaluation section	5 water resources
evaluation category	5.2 conserve water resources
Evaluation standard	5.2.2 excellent use
■ Detailed evaluation criteria	
evaluation purpose	The use of rainwater suppresses the outflow of rainwater during rainfall, converts it into water resources and recycles it, so that effects such as reduction of water consumption and control of rainwater outflow can be expected, and it can lead to energy saving and reduction of the size of public facilities, so efficient use of water resources want to do
Assessment Methods	Evaluated according to the installation of facilities that use rainwater as water for sprinkling, landscaping, etc.
points	3 points (evaluation items)
Calculation standard	Points are awarded when rainwater is used as water for sprinkling, landscaping, toilet flushing, cleaning, etc. by installing a water storage tank or detention pond on the site or building to store rainwater. 1. "Water for sprinkling" refers to the water used for sprinkling in the case of road cleaning work or construction work. 2. "Landscaping water" refers to water used for artificial ponds, artificial waterfalls, artificial rivers and fountains in housing complexes, etc. However, in this evaluation item, irrigation water is included in landscaping water.
■ Evaluation reference materials and submission documents	

Reference		- Ministry of Environment: Article 11-3 of the Water Supply Act (matters concerning the installation of rainwater utilization facilities, amended on March 28, 2001) Article 4-3 of the Enforcement Rules of the Water Supply Act (facility standards for rainwater utilization facilities, etc.) - Ministry of Construction and Transportation: Urban Planning Facility Standards 120 and 122 Guidelines for installation and operation of detention facilities in urban parks
Documents to be submitted	Preliminary certification	- Drawings related to rainwater reservoirs or detention ponds
	Certification	- Same as preliminary Certification

Green Building Certification Criteria		Office Building
evaluation section	5 water resources	
evaluation category	5.2 conserve water resources	
Evaluation standard	5.2.3 gray water installation	
■ Evaluation criteria		
evaluation purpose	Water resources can be saved by recycling used tap water as living water, etc., and pollution load in public waters can be reduced and sewage treatment facility costs can be reduced.	
Assessment Methods	Evaluate the installation of facilities to utilize the gray water produced by the installation of gray water to treat used tap water as water for sprinkling, landscaping, etc.	
points	Bonus 4 points (countable item)	
Calculation standard	Points awarded when gray water facilities are installed in accordance with the gray water facility standards of the Water Supply Act	
■ Evaluation reference materials and submission documents		
Reference	– Ministry of Environment: Article 11 of the Water Supply Act (recycled water supply), Article 2 of the Enforcement Rule of the Water Supply Act (recycled water supply facility standards) Article 3 of the Enforcement Rules of the Waterworks Act (water quality standards for gray water), Article 4 of the Enforcement Rule of the Waterworks Act (support for installers of gray water supply)	
Docum	Preliminary certifi	– Gray water facility drawing – Heavy water specifications

ents to be submitted	cation	
	Certification	- Same as preliminary Certification

<table>
<tr><th colspan="2">Green Building Certification Criteria</th><th>Office Building</th></tr>
<tr><td>evaluation section</td><td colspan="2">6 Air pollution</td></tr>
<tr><td>evaluation category</td><td colspan="2">6.1 global warming prevention</td></tr>
<tr><td>Evaluation standard</td><td colspan="2">6.1.1 CO2 emission reduction</td></tr>
<tr><td colspan="3">■ Detailed evaluation criteria</td></tr>
<tr><td>evaluation purpose</td><td colspan="2">Since carbon dioxide is a representative greenhouse gas and a large amount is generated in the construction sector, it is intended to reduce environmental load by considering it from the planning stage of a building. To this end, technology applied to reduce carbon dioxide emissions in the design and operation stages and carbon dioxide emissions by energy source used are evaluated.</td></tr>
<tr><td>Assessment Methods</td><td colspan="2">Evaluate 20% or more of the heating load by using cogeneration heat or by calculating carbon dioxide emissions according to the energy source used</td></tr>
<tr><td>points</td><td colspan="2">3 points (evaluation items)</td></tr>
<tr><td>Calculation standard</td><td colspan="2">• Rating = (weight) × (points awarded)
<table><tr><th>CO2 emission reduction</th><th>weight</th></tr><tr><td>is covered by a system that can reduce carbon dioxide emissions *</td><td>1.0</td></tr><tr><td>2) In case of district heating system</td><td>0.7</td></tr><tr><td>3) In case the main heating fuel is city gas (LNG)</td><td>0.5</td></tr></table>* A system that can reduce carbon dioxide emissions
– Heating system using heat and power (CHP) or alternative energy system</td></tr>
<tr><td colspan="3">■ Evaluation reference materials and submission documents</td></tr>
</table>

Reference		- Comprehensive measures to respond to the Climate Change Convention, Office for Government Policy Coordination (1999) - IPCC carbon emission estimation, Korea Energy Economics Institute - Energy Use Rationalization Basic Plan, National Energy Saving Promotion Committee - Alternative Energy Development, Use and Distribution Promotion Act
Documents to be submitted	Preliminary certification	- Energy saving plan and related design documents that can confirm the fuel used
	Certification	- Energy saving plan and related design documents that can confirm the fuel used

<table>
<tr><th colspan="2">Green Building Certification Criteria</th><th>Office Building</th></tr>
<tr><td>evaluation section</td><td colspan="2">6 Air pollution</td></tr>
<tr><td>evaluation category</td><td colspan="2">6.1 global warming prevention</td></tr>
<tr><td>Evaluation standard</td><td colspan="2">6.1.2 Prohibiting the use of certain substances to protect the ozone layer</td></tr>
<tr><td colspan="3">■ Detailed evaluation criteria</td></tr>
<tr><td>evaluation purpose</td><td colspan="2">To prevent global warming, reduce the use and emission of ozone-depleting substances.</td></tr>
<tr><td>Assessment Methods</td><td colspan="2">Specify in the specifications not to use products/facility containing substances that destroy the ozone layer.</td></tr>
<tr><td>points</td><td colspan="2">3 points (evaluation item)</td></tr>
<tr><td>Calculation standard</td><td colspan="2">sum of each rating
<table>
<tr><th>Reduction of ozone-depleting substances</th><th>grade</th></tr>
<tr><td>In case the refrigerant of the refrigerator and air conditioning equipment does not contain ozone layer depleting substances (ODP) or the cooling facility is not installed</td><td>One</td></tr>
<tr><td>In the case of using more than 80% of the total amount of insulation without ozone layer depleting substances (ODP)</td><td>One</td></tr>
<tr><td>If using a fire extinguisher that does not contain halon</td><td>One</td></tr>
</table></td></tr>
<tr><td colspan="3">■ Evaluation reference materials and submission documents</td></tr>
</table>

Reference		- Article 25 of the Act on the Regulation of Manufacturing of Specific Substances for the Protection of the Ozone Layer and its Enforcement Decree Article 12 - Kyoto United Nations Framework Convention on Climate Change - Halon regulation measures under the Montreal Protocol - CFC (Chlorofluorocarbon): Refrigerant for air conditioning equipment such as various refrigeration, refrigeration, and air conditioners, Various insulation materials, foaming agents, various precision device parts (metal, non-metal), spray products Used for non-flammable injection propellants, etc. - Halon: Fire extinguisher and fire extinguisher for fire suppression in important facilities such as computer system room, etc. Used as a fire extinguishing agent in facilities - CCl4 (carbon tetrachloride): used for transformer insulation
Documents to be submitted	Preliminary certification	- Specifications of refrigerant used in refrigerators and air conditioning equipment - Type of insulation used - Fire Extinguisher Product Specification or, - Confirmation of application plan
	Certification	- Specifications of refrigerant used in refrigerators and air conditioning equipment - Type of insulation used - Fire Extinguisher Product Specification

<table>
<tr><th colspan="2">Green Building Certification Criteria</th><th>Office Building</th></tr>
<tr><td>evaluation section</td><td colspan="2">7 Maintenance</td></tr>
<tr><td>evaluation category</td><td colspan="2">7.1 Systematic on-site management</td></tr>
<tr><td>Evaluation standard</td><td colspan="2">7.1.1 Reasonability of site management plan considering the environment</td></tr>
<tr><td colspan="3">■ Detailed evaluation criteria</td></tr>
<tr><td>evaluation purpose</td><td colspan="2">Evaluate whether the construction company's organization and site organization are organized in a system that considers the environment, and confirm whether environment-first policies are adopted in construction guidelines and site operation guidelines to minimize environmental impacts from construction activities.</td></tr>
<tr><td>Assessment Methods</td><td colspan="2">Whether the construction company has obtained ISO14001 and the degree of adoption of environment-first policies in site operation guidelines</td></tr>
<tr><td>points</td><td colspan="2">Bonus 2 points (countable item)</td></tr>
<tr><td>Calculation standard</td><td colspan="2">■ Rating = (weight) × (point distribution)

<table>
<tr><th>division</th><th>Feasibility of site management plan focusing on the environment</th><th>weight</th></tr>
<tr><td>1st grade</td><td>If the construction company has acquired ISO 14001 and there is an environmental management organization based on ISO 14001 at the site</td><td>1.0</td></tr>
<tr><td>2nd grade</td><td>When the construction company has internal operating guidelines that prioritize the environment, and there is an organization in charge of the environment on site</td><td>0.7</td></tr>
<tr><td>3rd grade</td><td>When the construction site itself has an environmental management plan as a document and has an organization in charge of carrying out it</td><td>0.4</td></tr>
</table></td></tr>
<tr><td colspan="3">■ Evaluation reference materials and submission documents</td></tr>
</table>

Reference		-ISO 14000 - Environmental management plan
Documents to be submitted	Preliminary certification	- ISO14001 certificate - Documents that can identify the establishment of an in-house environmental management system - Documents that can identify the establishment of the on-site environmental management system - On-site environmental management plan - Field operation manual or, - Confirmation of application plan
	Certification	- Same as preliminary Certification

<table>
<tr><th colspan="2">Green Building Certification Criteria</th><th>Office Building</th></tr>
<tr><td>evaluation section</td><td colspan="2">7 Maintenance</td></tr>
<tr><td>evaluation category</td><td colspan="2">7.2 Efficient building management</td></tr>
<tr><td>Evaluation standard</td><td colspan="2">7.2.1 Adequacy of provision of operation/maintenance documents and instructions</td></tr>
<tr><td colspan="3">■ Detailed criteria for evaluation</td></tr>
<tr><td>evaluation purpose</td><td colspan="2">By preparing information on the operation method of various facilities and equipment of the building in advance, the building can demonstrate maximum efficiency according to the originally intended plan and at the same time ensure continuous maintenance.</td></tr>
<tr><td>Assessment Methods</td><td colspan="2">Evaluate whether manuals and guidelines for effective operation/maintenance of related equipment/facility are provided for building managers</td></tr>
<tr><td>points</td><td colspan="2">4 points (evaluation items)</td></tr>
<tr><td>Calculation standard</td><td colspan="2">• Rating = (weight) × (points awarded)
<table>
<tr><th>division</th><th>Provide operation/management documents and guidelines</th><th>weight</th></tr>
<tr><td>1st grade</td><td>If 5 or more of the following items are adopted</td><td>1.0</td></tr>
<tr><td>2nd grade</td><td>If three or more of the following items are adopted</td><td>0.5</td></tr>
</table></td></tr>
</table>

	.Provision of final construction drawings and specifications (including CD) .Provides inspection and repair methods for rooftop waterproofing .Provision of inspection methods for structures/non-bearing walls of buildings .Provision of operating/maintenance manuals for heating/cooling heat sources and hot water facilities .Provision of maintenance manuals for lighting equipment and lighting equipment .Provision of operation/maintenance manuals for various common facilities (elevators, lighting equipment, CCTV, parking facilities, etc.) .Provision of landscaping maintenance manual ※ Manuals and guidelines for building operation/maintenance include the following There should be. - for the sequence of adjustments of all major equipment and installations with start, stop, emergency and normal operation; Detailed, step-by-step instructions and checklists - Detailed and step-by-step procedures and inspection items for major maintenance and repair work - inspections derived from recommendations from manufacturers for critical equipment and systems; - Regular preventive maintenance activities based on filtering, maintenance for cleaning, and maintenance inspection cycle plan and form - Manufacturer's performance data and failure detection procedure - Specification list of standard Preliminary parts - Contact information for equipment and facility installers and maintenance personnel

■ Evaluation reference materials and submission documents

Reference		
Documents to be submitted	Preliminary certification	- Operation and maintenance manual for each item (guideline) or, - Confirmation of application plan
	Certification	- Operation and maintenance manual for each item (guideline)

<table>
<tr><th colspan="2">Green Building Certification Criteria</th><th>Office Building</th></tr>
<tr><td>evaluation section</td><td colspan="2">7 Maintenance</td></tr>
<tr><td>evaluation category</td><td colspan="2">7.3 Ease of system change</td></tr>
<tr><td>Evaluation standard</td><td colspan="2">7.3.1 Ease of space arrangement and system change in response to residents' needs</td></tr>
<tr><td colspan="3">■ Detailed evaluation criteria</td></tr>
<tr><td>evaluation purpose</td><td colspan="2">In response to the needs of residents, the flexibility of space arrangement and the variability of work space to respond to future changes are secured.</td></tr>
<tr><td>Assessment Methods</td><td colspan="2">Evaluate the ease of change in the technical aspect of the system installed in the indoor space</td></tr>
<tr><td>points</td><td colspan="2">Bonus 4 points (countable item)</td></tr>
<tr><td>Calculation standard</td><td colspan="2">• Rating = Sum of ratings × Applicable area ratio of work space on the standard floor
<table>
<tr><th>system configuration</th><th>grade</th></tr>
<tr><td>Adoption of a method to easily change the air conditioning circulation system in response to the needs of residents in the standard floor work space (Example: floor air conditioning system)</td><td>2 points</td></tr>
<tr><td>Floor configuration that facilitates installation and change of power/voice/communication wiring within the standard floor work space (eg: OA floor, access floor)</td><td>2 points</td></tr>
</table></td></tr>
<tr><td colspan="3">■ Evaluation reference materials and submission documents</td></tr>
</table>

Reference		- GBTool - USGBC LEED Green Building Rating System
Documents to be submitted	Preliminary certification	- Basic floor air conditioning system configuration - Plan and cross-section of the reference floor
	Certification	- Same as preliminary Certification

<table>
<tr><th colspan="2">Green Building Certification Criteria</th><th>Office Building</th></tr>
<tr><td>evaluation section</td><td colspan="2">8 ecological environment</td></tr>
<tr><td>evaluation category</td><td colspan="2">8.1 Creation of green spaces within the site</td></tr>
<tr><td>Evaluation standard</td><td colspan="2">8.1.1 Application of environmental greening techniques considering the ecological environment</td></tr>
<tr><td colspan="3">■ Detailed evaluation criteria</td></tr>
<tr><td>evaluation purpose</td><td colspan="2">Induce the application of various greening methods (rooftop/roof greening, facade greening, street greening, etc.) considering the ecological environment.</td></tr>
<tr><td>Assessment Methods</td><td colspan="2">For each construction method, a weight is calculated considering the area of application, etc., and reflected in the distribution of points.</td></tr>
<tr><td>points</td><td colspan="2">6 points (evaluation items)</td></tr>
<tr><td>Calculation standard</td><td colspan="2">Rating: Sum of ratings

▣ Types of applied construction methods

<table>
<tr><th>division</th><th>Applied method</th><th>formula</th><th>grade</th></tr>
<tr><td>artificial ground recording</td><td>roof greening /roof greening</td><td>When more than 10% of the rooftop and roof area is created (vegetation area not calculated as landscaping area)</td><td>2.0</td></tr>
<tr><td rowspan="2">Elevation recording</td><td>wall greening</td><td>Where more than 10% of the perimeter of one or more buildings is in contact with the ground</td><td>2.0</td></tr>
<tr><td>street recording</td><td>If more than 50% of the length of the main road in contact with the site is created as a continuous planting surface</td><td>2.0</td></tr>
</table>
</td></tr>
</table>

■ Evaluation reference materials and submission documents		
Reference		- Popular rooftop greening guidebook, Korea Institute of Civil Engineering and Building Technology, 1999 - Landscaping plan and design guidelines, Korea National Housing Corporation - Landscaping standards announced by the Ministry of Construction and Transportation, 2000 - Façade Greening Guidelines for Urban Buildings, Ministry of Environment, 1998 (http://www.me.go.kr)
Documents to be submitted	Preliminary certification	- Environmental greening technique application plan (specify the area to be created) - Landscaping planting plan
	Certification	- Same as preliminary Certification

Green Building Certification Criteria		Office Building
evaluation section	8 ecological environment	
evaluation category	8.1 Creation of green spaces within the site	
Evaluation standard	8.1.2 Landscaping area ratio	
■ Detailed evaluation criteria		
evaluation purpose	Induce the creation of more green spaces within the site by evaluating the landscaping area ratio	
Assessment Methods	Identification of landscaping area by drawing and floor plan	
points	7 points (evaluation items)	
Calculation standard	• Formula: Y= 1 + (X-2)/2 (Y: Rating, X: Percentage (%) of landscaping area in excess of the land area compared to the land area) - When the maximum is 14%: 7 points	
■ Evaluation reference materials and submission documents		

Reference		- Article 32 of the Building Act (landscape within the site) - Notice No. 2000-159 of the Ministry of Construction and Transportation (landscape standards) - Regulations on Housing Construction Standards, etc. Article 29 (landscape facilities, etc.)
Documents to be submitted	Preliminary certification	- Design document (landscape area calculation table)
	Certification	- Same as preliminary Certification

<table>
<tr><th colspan="2">Green Building Certification Criteria</th><th>Office Building</th></tr>
<tr><td>evaluation section</td><td colspan="2">8 ecological environment</td></tr>
<tr><td>evaluation category</td><td colspan="2">8.2 Creation of living space</td></tr>
<tr><td>Evaluation standard</td><td colspan="2">8.2.1 Aquatic Biotope Composition</td></tr>
<tr><td colspan="3">■ Detailed evaluation criteria</td></tr>
<tr><td>evaluation purpose</td><td colspan="2">The purpose is to improve the quality level of the ecological environment in the site by evaluating the composition area and composition technique of the aquatic biotope.</td></tr>
<tr><td>Assessment Methods</td><td colspan="2">Calculation formula and weights are calculated for the detailed items related to the area of construction and techniques to calculate the ratings, and the ratings are summed up.</td></tr>
<tr><td>points</td><td colspan="2">Bonus 3 points (countable item)</td></tr>
<tr><td>Calculation standard</td><td colspan="2">Aquatic biotope (3 points = 2 points for area of construction + 1 point for construction technique)

① Establishment area calculation criteria (2 points awarded)

<table>
<tr><th>Details</th><th>formula</th><th>maximum score</th><th>Biotope accreditation scope</th></tr>
<tr><td>Scores are given continuously according to the composition ratio compared to the site area (When created on the upper part of the natural ground)</td><td>Y=2X</td><td>2.0</td><td rowspan="2">- The minimum area is based on 30㎡
- Biotope in composition technique
Components, (vegetation, section, floor treatment)
If they are reflected
- Y: rating, X: composition ratio
X = (composition area ÷ site area) × 100 (%)</td></tr>
<tr><td>Scores are given continuously according to the composition ratio compared to the site area (When created on top of</td><td>Y=1.5X</td><td>1.5</td></tr>
</table></td></tr>
</table>

artificial ground)			

② Composition technique evaluation criteria (1 point awarded)

division	Details	weight	related elements
supply of water	Rainwater or heavy water use	0.2	Utilize rainwater storage tanks, sedimentation tanks, etc.
planting plan	Suitability of tree species selection	0.4	Dietary plants, aquatic plants, multi-layer planting wild plants, etc.
cross section structure	floor treatment	0.2	Possibility of living organisms
	revetment treatment	0.2	

■ Evaluation reference materials and submission documents

Reference		- Guidelines for creating an ecological pond to bring nature to the city, Ministry of Environment - Landscaping plan and design guidelines, Korea National Housing Corporation - Ecological city creation technology development project, National Environmental Research Institute, 1997
Documents to be submitted	Preliminary certification	- Water supply and drainage treatment plan (rainwater utilization plan)/ site plan/ design manual - Detailed biotope drawing (cross-sectional view) / Basis for biotope area calculation / Detailed planting plan drawing (size, quantity expression)
	Certification	- Same as preliminary Certification

<table>
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<tr><td>evaluation section</td><td colspan="2">8 ecological environment</td></tr>
<tr><td>evaluation category</td><td colspan="2">8.2 Creation of living space</td></tr>
<tr><td>Evaluation standard</td><td colspan="2">8.2.2 Formation of terrestrial biotope</td></tr>
<tr><td colspan="3">■ Evaluation criteria</td></tr>
<tr><td>evaluation purpose</td><td colspan="2">The purpose is to improve the quality level of the ecological environment within the site by evaluating the composition area and composition technique of the terrestrial biotope.</td></tr>
<tr><td>Assessment Methods</td><td colspan="2">Calculation formula and weights are calculated for the detailed items related to the area of construction and techniques to calculate the ratings, and the ratings are summed up.</td></tr>
<tr><td>points</td><td colspan="2">Bonus 3 points (countable item)</td></tr>
<tr><td>Calculation standard</td><td colspan="2">Terrestrial Biotope (3 points = 2 points for area of construction + 1 point for construction technique)

① Establishment area calculation criteria (2 points awarded)

<table>
<tr><th>Details</th><th>formula</th><th>maximum score</th><th>Biotope accreditation scope</th></tr>
<tr><td>Scores are given continuously according to the composition ratio compared to the site area (When created on the upper part of the natural ground)</td><td>Y=2X</td><td>2.0</td><td rowspan="2">- The minimum area is based on 50㎡
- Density according to local government ordinance
More than 1.5 times the planting density
- In case the components (vegetation structure, soil environment) are reflected
- Y: rating, X: composition ratio
X = (composition area ÷ site area) × 100 (%)</td></tr>
<tr><td>Scores are given continuously according to the composition ratio compared to the site area (When created on top of artificial ground)</td><td>Y=1.5X</td><td>1.5</td></tr>
</table></td></tr>
</table>

② Composition technique evaluation criteria (1 point awarded)

division	Details	weight	related elements
planting plan	Suitability of tree species selection	0.2	Dietary tree species, ground cover Multi-layer planting
	planting technique	0.2	
floor treatment	Possibility of biohabitability	0.4	soil ecology; Hardness, voids, high-quality soil, etc.
Etc	Linkage with aquatic biotope, etc.	0.2	

■ Evaluation reference materials and submission documents

Reference		- Guidelines for creating an ecological pond to bring nature to the city, Ministry of Environment - Landscaping plan and design guidelines, Korea National Housing Corporation - Ecological city creation technology development project, National Environmental Research Institute, 1997
Documents to be submitted	Preliminary certification	- Complex planning map/ Basis for terrestrial biotope area calculation - Design instructions (local government planting ordinance and target biotope planting density (planting quantity/ ㎡) indicated) - Planting detail drawing (size and quantity indication) / detailed plan drawing (section and sketch)
	Certification	- Same as preliminary Certification

<table>
<tr><th colspan="2">Green Building Certification Criteria</th><th>Office Building</th></tr>
<tr><td>evaluation section</td><td colspan="2">9 indoor environment</td></tr>
<tr><td>evaluation category</td><td colspan="2">9.1 air environment</td></tr>
<tr><td>Evaluation standard</td><td colspan="2">9.1.1 Use of materials with low emission of volatile organic compounds</td></tr>
<tr><td colspan="3">■ Detailed evaluation criteria</td></tr>
<tr><td>evaluation purpose</td><td colspan="2">The purpose is to induce the use of materials with low emission of formaldehyde and volatile organic compounds, which are emitted into the indoor air from finishing materials applied indoors and have a direct adverse effect on the health of residents.</td></tr>
<tr><td>Assessment Methods</td><td colspan="2">Evaluated for materials with low emission of volatile organic compounds</td></tr>
<tr><td>points</td><td colspan="2">6 points (evaluation items)</td></tr>
<tr><td>Calculation standard</td><td colspan="2">• Rating = (sum of ratings of final finishing materials + sum of ratings of other interior materials) × number of applied floors/total number of floors
<table>
<tr><th colspan="2">division</th><th>Areas where materials with low emission of volatile organic compounds are applied</th><th>grade</th></tr>
<tr><td rowspan="3">final finishing material</td><td>wall (Excluding outer walls)</td><td>Among the final finishing materials applied to the walls of the work space (including columns and movable partition walls), if the emission of formaldehyde and volatile organic compounds of the finishing materials that occupy the largest surface area meets the criteria for obtaining the environmental mark (mark)</td><td>One</td></tr>
<tr><td>ceiling</td><td>Among the final finishing materials applied to the ceiling surface of the work space, if the emission of formaldehyde and volatile organic compounds of the finishing material that occupies the largest surface area meets the criteria for obtaining the environmental mark (mark)</td><td>One</td></tr>
<tr><td>floor</td><td>If the amount of formaldehyde and volatile organic compounds emitted by the finishing materials that</td><td>One</td></tr>
</table></td></tr>
</table>

		occupy the largest surface area among the finishing materials applied to the floor of the work space meets the criteria for obtaining the environmental mark (mark)	
final finishing material other than Etc interior material	wall (Excluding outer walls)	If the formaldehyde and volatile organic compound emissions of the interior materials that occupy the largest surface area among the interior materials applied to the walls of the work space (including columns and movable partition walls) meet the standards for obtaining environmental marks (marks)	One
	ceiling	If the formaldehyde and volatile organic compound emissions of the interior materials that occupy the largest surface area among the interior materials applied to the ceiling of the work space meet the criteria for obtaining the environmental mark (mark)	One
	floor	If the emission of formaldehyde and volatile organic compounds of the interior materials that occupy the largest surface area among the interior materials applied to the floor of the work space meets the criteria for obtaining the environmental mark (mark)	One

※ - The maximum surface area of the material must be applied at least 10% of the surface area of the relevant part

- In the case of materials that do not emit volatile organic compounds, such as glass, natural stone and marble, ceramic tiles, materials with metallic surfaces, natural wood boards and squares, and natural blocks, they are deemed to meet the criteria for obtaining an eco-label (mark). .
- If the wall, ceiling, and floor are composed of a single material that meets the criteria for obtaining the eco-label, the corresponding score is given.

※ In the case of construction with a single finishing material without interior materials, scores for other interior materials other than the final finishing materials are recognized as earned.

※ Floors where more than 50% of the floor area is used for underground parking lots, machine rooms, etc. are excluded from calculating the total number of floors.

■ Evaluation reference materials and submission documents

Reference		1. Environmental Technology Development and Support Act 2. Enforcement Rules of the Environmental Technology Development and Support Act 3. Ministry of Environment Notice No. 2002-96
Document	Preliminary certifi	- Finishing materials that have obtained the interior material deadline table and environmental mark Or, confirmation of application plan

s to be sub mitt ed	cation	
	Certifi cation	- Same as preliminary Certification

<table>
<tr><th colspan="2">Green Building Certification Criteria</th><th>Office Building</th></tr>
<tr><td>evaluation section</td><td colspan="2">9 indoor environment</td></tr>
<tr><td>evaluation category</td><td colspan="2">9.1 air environment</td></tr>
<tr><td>Evaluation standard</td><td colspan="2">9.1.2 Prevention of exposure of residents to smoking</td></tr>
<tr><td colspan="3">■ Detailed evaluation criteria</td></tr>
<tr><td>evaluation purpose</td><td colspan="2">It is intended to prevent indoor air from being polluted by cigarette smoke and to supply fresh air to the room to improve worker health, productivity and work efficiency.</td></tr>
<tr><td>Assessment Methods</td><td colspan="2">Whether there is a no-smoking policy in the building or in the workplace</td></tr>
<tr><td>points</td><td colspan="2">3 points (evaluation item)</td></tr>
<tr><td>Calculation standard</td><td colspan="2">• Rating = (weight) × (points awarded)
<table>
<tr><th>division</th><th>No smoking in the building or in the workplace</th><th>weight</th></tr>
<tr><td>1st grade</td><td>Completely non-smoking building: Where a non-smoking building designation policy is established by installing a non-smoking emblem in a prominent place such as the entrance of the building</td><td>1.0</td></tr>
<tr><td>2nd grade</td><td>Partially non-smoking building: In the case where the smoking space is completely separated from other spaces such as office space, and there is a separate air-conditioning compartment so that the indoor air can be completely exhausted.</td><td>0.7</td></tr>
</table></td></tr>
</table>

<table>
<tr><td colspan="2"></td><td>- In a completely non-smoking building, a location stand type or wall-mounted <non-smoking building> emblem is installed.
- Stand-type or wall-mounted type in buildings with separate non-smoking and smoking areas
Install an emblem for a non-smoking building with the expression <Designate a separate smoking area></td></tr>
<tr><td colspan="3">■ Evaluation reference materials and submission documents</td></tr>
<tr><td colspan="2">Reference</td><td>- National Health Promotion Act

- Examples of non-smoking building emblems

  </td></tr>
<tr><td rowspan="2">Documents to be submitted</td><td>Preliminary certification</td><td>- Confirmation of application plan</td></tr>
<tr><td>Certification</td><td>- Materials to prove the non-smoking building (design drawing including the non-smoking emblem and location of the non-smoking emblem)</td></tr>
</table>

<table>
<tr><th colspan="2">Green Building Certification Criteria</th><th>Office Building</th></tr>
<tr><td>evaluation section</td><td colspan="2">9 indoor environment</td></tr>
<tr><td>evaluation category</td><td colspan="2">9.1 air environment</td></tr>
<tr><td>Evaluation standard</td><td colspan="2">9.1.3 Design of outdoor air supply and exhaust</td></tr>
<tr><td colspan="3">■ Detailed evaluation criteria</td></tr>
<tr><td>evaluation purpose</td><td colspan="2">The health of the occupants is promoted through the design of the air conditioning supply and exhaust system to introduce fresh outdoor air.</td></tr>
<tr><td>Assessment Methods</td><td colspan="2">Confirmation of air conditioning supply and exhaust design drawings for introducing fresh outside air</td></tr>
<tr><td>points</td><td colspan="2">3 points (evaluation items)</td></tr>
<tr><td>Calculation standard</td><td colspan="2">• Sum of Ratings

<table><tr><th>Design of air conditioning supply and exhaust for introducing outside air</th><th>grade</th></tr><tr><td>If the outdoor airway inlet and exhaust outlet are installed at a distance of 10m or more from the road, etc., to remove external pollutants</td><td>1 point</td></tr><tr><td>If the outdoor airway inlet and exhaust outlet are placed at least 10m apart from each other to minimize recirculation</td><td>1 point</td></tr><tr><td>If the air conditioning system is designed to supply fresh air of 30% or more of the design air volume for outside air intake</td><td>1 point</td></tr></table></td></tr>
</table>

■ Evaluation reference materials and submission documents		
Reference		- BREEAM 98 for offices
Documents to be submitted	Preliminary certification	- A design document that includes the location and size of air conditioning system supply and exhaust outlets - Air-conditioning load calculation for calculating outdoor air intake
	Certification	- Same as preliminary Certification

Green Building Certification Criteria	Office Building
evaluation section	9 indoor environment
evaluation category	9.1 air environment
Evaluation standard	9.1.4 Air purification work carried out
■ Detailed evaluation criteria	
evaluation purpose	It promotes the health of occupants by reducing pollutants by removing polluted substances in interior finishing materials and ducts before moving in.
Assessment Methods	Removal of indoor pollutants through air purification work
points	2 points (evaluation item)
Calculation standard	• Sum of Ratings

	Air purification work carried out	grade
	In the case of carrying out work to reduce the concentration of pollutants generated in interior finishing materials and ducts according to the air purification work plan for at least two weeks before moving in	1 point
	If TAB or commissioning is performed	1 point

■ Evaluation reference materials and submission documents

Reference		- TAB (test, adjustment, evaluation) technical standard for air conditioning facilities - ASHRAE guideline : The HVAC Commissioning Process(1996)
Documents to be submitted	Preliminary certification	- Confirmation of application plan
	Certification	- Air purification work report - TAB or commissioning report

<table>
<tr><th colspan="2">Green Building Certification Criteria</th><th>Office Building</th></tr>
<tr><td>evaluation section</td><td colspan="2">9 indoor environment</td></tr>
<tr><td>evaluation category</td><td colspan="2">9.1 air environment</td></tr>
<tr><td>Evaluation standard</td><td colspan="2">9.1.5 Introduction of natural ventilation design and creation of a pleasant indoor air environment</td></tr>
<tr><td colspan="3">■ Detailed evaluation criteria</td></tr>
<tr><td>evaluation purpose</td><td colspan="2">It aims to provide controllable and fresh outside air to occupants.</td></tr>
<tr><td>Assessment Methods</td><td colspan="2">Evaluate the installation of adjustable ventilation windows/vents so that residents can directly introduce outside air.</td></tr>
<tr><td>points</td><td colspan="2">3 points (evaluation items)</td></tr>
<tr><td>Calculation standard</td><td colspan="2">• Rating = (weight) × (points awarded) × number of standard floors / total number of standard floors

<table>
<tr><th>division</th><th>Existence of ventilation openings or devices and degree of ventilation design</th><th>weight</th></tr>
<tr><td>1st grade</td><td>㎡ of the floor area of the outer perimeter in the work space on the standard floor where cooling or heating is performed, or if at least 10% of the window area on the standard floor is composed of openable windows</td><td>1.0</td></tr>
<tr><td>2nd grade</td><td>In the case of installing ventilation holes (including vent slots) per 20㎡ of floor area on the outer periphery in the work space on the standard floor where cooling or heating is performed</td><td>0.6</td></tr>
</table></td></tr>
</table>

		※ - Outer periphery: Floor area up to 5m from the inside end of the outer wall - Controllable window/ventilation: A device or device that is installed on a wall, window frame, or window glass facing the outside air and can introduce the required amount of outside air without opening the window . Must be automatically opened and closed by
■ Evaluation reference materials and submission documents		
Reference		- BREEAM 98 for offices
Documents to be submitted	Preliminary certification	- Window detail drawing, openable window area ratio calculation sheet (standard floor floor area calculation sheet) - Relevant blueprints and system diagrams, product manuals
	Certification	- Same as preliminary Certification

<table>
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<tr><td>evaluation section</td><td colspan="2">9 indoor environment</td></tr>
<tr><td>evaluation category</td><td colspan="2">9.1 air environment</td></tr>
<tr><td>Evaluation standard</td><td colspan="2">9.1.6 Control of other harmful substances emitted from building materials</td></tr>
<tr><td colspan="3">■ Detailed evaluation criteria</td></tr>
<tr><td>evaluation purpose</td><td colspan="2">It suppresses harmful substances emitted from building materials and blocks the spread of harmful substances that can occur during the renovation and dismantling of buildings.</td></tr>
<tr><td>Assessment Methods</td><td colspan="2">Evaluate whether materials containing asbestos are used in buildings.</td></tr>
<tr><td>points</td><td colspan="2">1 point (evaluation item)</td></tr>
<tr><td>Calculation standard</td><td colspan="2"><table><tr><th>Use of materials containing asbestos</th><th>grade</th></tr><tr><td>. Materials used in structures, equipment spaces including ceilings, vertical duct spaces, partition walls, etc. in buildings shall be recorded in specifications so that asbestos-containing materials are not used.</td><td>1 point</td></tr></table></td></tr>
<tr><td colspan="3">■ Evaluation reference materials and submission documents</td></tr>
</table>

Reference		- BREEAM 98 for offices - USGBC LEED Green Building Rating System - Energy saving design standard (2001)
Documents to be submitted	Preliminary certification	- Specifications (the part where the relevant contents are specified)
	Certification	- Same as preliminary Certification

<table>
<tr><th colspan="2">Green Building Certification Criteria</th><th>Office Building</th></tr>
<tr><td>evaluation section</td><td colspan="2">9 indoor environment</td></tr>
<tr><td>evaluation category</td><td colspan="2">9.2 thermal environment</td></tr>
<tr><td>Evaluation standard</td><td colspan="2">9.2.1 Adoption of indoor thermostat</td></tr>
<tr><td colspan="3">■ Evaluation criteria</td></tr>
<tr><td>evaluation purpose</td><td colspan="2">The purpose is to create a pleasant indoor heating environment and save energy by evaluating whether or not to adopt an automatic temperature control device for each room or zone.</td></tr>
<tr><td>Assessment Methods</td><td colspan="2">Room automatic thermostat application rate</td></tr>
<tr><td>points</td><td colspan="2">2 points</td></tr>
<tr><td>Calculation standard</td><td colspan="2">• Rating = (weight)×(points awarded)

※ Room automatic temperature control system application rate (V) = X ÷ Y × 100
X: Number of indoor thermostats installed
Y: Cooling and heating space area (㎡) / 200 (㎡)
<table>
<tr><th>division</th><th>Room automatic thermostat application rate</th><th>weight</th></tr>
<tr><td>1st grade</td><td>100 ≤ V</td><td>1.0</td></tr>
<tr><td>2nd grade</td><td>80% ≤ V < 100%</td><td>0.8</td></tr>
<tr><td>3rd grade</td><td>60% ≤ V < 80%</td><td>0.6</td></tr>
<tr><td>4th grade</td><td>40% ≤ V < 60%</td><td>0.4</td></tr>
<tr><td>5th grade</td><td>20% ≤ V < 40%</td><td>0.2</td></tr>
</table></td></tr>
</table>

<table>
<tr><td colspan="2"></td><td>- In the case of installing a separate indoor temperature controller for each room or zone, and
All cases where a temperature sensor is installed in each room and an integrated thermostat is installed in a specific room
admit
- Judgment based on the number of indoor thermostats installed in the entire building</td></tr>
<tr><td colspan="3">■ Evaluation reference materials and submission documents</td></tr>
<tr><td colspan="2">Reference</td><td>- Building energy saving design standards (Notice No. 2001-118 of the Ministry of Construction and Transportation)</td></tr>
<tr><td rowspan="2">Documents to be submitted</td><td>Preliminary certification</td><td>- Diagram of automatic temperature controller control system for each room or zone
- Calculation of application rate</td></tr>
<tr><td>Certification</td><td>- Same as preliminary Certification</td></tr>
</table>

<table>
<tr><th colspan="2">Green Building Certification Criteria</th><th>Office Building</th></tr>
<tr><td colspan="2">evaluation section</td><td>9 indoor environment</td></tr>
<tr><td colspan="2">evaluation category</td><td>9.3 sound environment</td></tr>
<tr><td colspan="2">Evaluation standard</td><td>9.3.1 Allowable indoor noise for external noise</td></tr>
<tr><td colspan="3">■ Detailed evaluation criteria</td></tr>
<tr><td colspan="2">evaluation purpose</td><td>Evaluate the degree of establishment of sound insulation measures against external noise in order to secure minimum comfort in the workplace, as there is a risk of reduced work efficiency due to the influence of external noise such as road traffic noise.</td></tr>
<tr><td colspan="2">Assessment Methods</td><td>External noise level measurement results, sound insulation performance measurement results of windows (including curtain walls) according to KS F 2808, indoor noise ratings in living rooms on the lowest, middle and top floors calculated by considering indoor sound absorption capacity (according to the Architectural Institute of Japan's Building Internal Noise noise level curve) or indoor noise level (dB(A)) predicted or measured.</td></tr>
<tr><td colspan="2">points</td><td>Bonus 2 points (countable item)</td></tr>
<tr><td colspan="2">Calculation standard</td><td>• Rating = (weight)×(points awarded)<table><tr><th>division</th><th>Room noise level (N) or room noise level L (dB)</th><th>weight</th></tr><tr><td>1st grade</td><td>N ≤ 35 or L ≤ 35 dB</td><td>1.0</td></tr><tr><td>2nd grade</td><td>35 < N ≤ 40 or 35 dB < L ≤ 40 dB</td><td>0.75</td></tr><tr><td>level 3</td><td>40< N ≤ 45 or 40 dB < L ≤ 45 dB</td><td>0.5</td></tr></table></td></tr>
<tr><td colspan="3">■ Evaluation reference materials and submission documents</td></tr>
<tr><td colspan="2">Reference</td><td>- KS F 2808-2001 (Laboratory measurement method for air transmission noise blocking performance of building members)
- Research on the sound quality of objects (Second edition)
- 遮音設計のため現場における外婦騒音の測定方法(Japan's pre-existing school community)
- How to find out the real world of objects</td></tr>
<tr><td>Doc</td><td>Preliminary</td><td>- Design drawing: layout plan, unit household floor plan and section, exterior wall (including window) detail drawing</td></tr>
</table>

ument s to be submitted	certification	– Prediction of indoor noise in living rooms on the lowest, middle, and top floors calculated by considering external noise level measurement results, sound insulation performance of envelope structures (windows or curtain walls), indoor sound absorption, etc., or confirmation of application plan – The external noise level is conducted in accordance with the standard method of external noise detection (Japan Institute of Technology and Standards), and reports issued by KOLAS (Technical Standards Agency) or quality inspection agencies (Ministry of Construction and Transportation) submission – Measurement results of sound insulation performance of windows according to KS F 2808 (laboratory) (KOLAS testing agency (Korean Agency for Technology and Standards) or quality inspection agency (Ministry of Construction and Transportation))
	Certification	– Design drawing: layout plan, unit household floor plan and section, exterior wall (including window) detail drawing – Measurement results of indoor noise in living rooms on the lowest, middle, and top floors – Measurement of indoor noise level is carried out according to the standard method for measuring indoor noise levels, and a report issued by KOLAS (Korean Agency for Technology and Standards) or a quality inspection agency (Ministry of Construction and Transportation) is submitted.

<table>
<tr><th colspan="2">Green Building Certification Criteria</th><th>Office Building</th></tr>
<tr><td>evaluation section</td><td colspan="2">9 indoor environment</td></tr>
<tr><td>evaluation category</td><td colspan="2">9.4 Creating a pleasant indoor environment</td></tr>
<tr><td>Evaluation standard</td><td colspan="2">9.4.1 Providing space for residents to rest and recharge in the building</td></tr>
<tr><td colspan="3">■ Detailed evaluation criteria</td></tr>
<tr><td>evaluation purpose</td><td colspan="2">It seeks to improve work efficiency by securing a space for residents to rest and recharge.</td></tr>
<tr><td>Assessment Methods</td><td colspan="2">Evaluate whether there is a dedicated rest area for residents to rest and recharge</td></tr>
<tr><td>points</td><td colspan="2">4 points (evaluation items)</td></tr>
<tr><td>Calculation standard</td><td colspan="2">• Rating = (weight) × (points awarded)

<table>
<tr><th>division</th><th>Whether to create a dedicated rest area</th><th>weight</th></tr>
<tr><td>1st grade</td><td>In case a dedicated resting space (15㎡ or more) is divided and provided for rest and recharging in the building, and a water space or planting space (15㎡ or more) is created</td><td>1.0</td></tr>
<tr><td>2nd grade</td><td>a dedicated resting space (15㎡ or more) is divided and provided or a water space or planting space (15 ㎡) is created for rest and recharging in the building</td><td>0.5</td></tr>
</table>
※ However, the smoking area is excluded from the exclusive resting area.</td></tr>
<tr><td colspan="3">■ Evaluation reference materials and submission documents</td></tr>
</table>

Reference		
Documents to be submitted	Preliminary certification	- Design documents including resting space or water/planting space
	Certification	- Same as preliminary Certification

<table>
<tr><th colspan="2">Green Building Certification Criteria</th><th>Office Building</th></tr>
<tr><td>evaluation section</td><td colspan="2">9 indoor environment</td></tr>
<tr><td>evaluation category</td><td colspan="2">9.4 Creating a pleasant indoor environment</td></tr>
<tr><td>Evaluation standard</td><td colspan="2">9.4.2 Creating a pleasant indoor environment for residents</td></tr>
<tr><td colspan="3">■ Detailed evaluation criteria</td></tr>
<tr><td>evaluation purpose</td><td colspan="2">Create a pleasant indoor environment to improve energy efficiency and work efficiency.</td></tr>
<tr><td>Assessment Methods</td><td colspan="2">It is evaluated through whether or not the indoor environment control method is provided to the residents.</td></tr>
<tr><td>points</td><td colspan="2">Bonus 4 points (countable item)</td></tr>
<tr><td>Calculation standard</td><td colspan="2">• Rating = (weight) × (points awarded) × number of standard floors / total number of standard floors
<table>
<tr><th>division</th><th>Indoor environment control method</th><th>weight</th></tr>
<tr><td>1st grade</td><td>In more than 50% of the standard floor work space, residents can individually adjust two or more of the temperature, ventilation, air volume, and lighting to provide an environment suitable for each individual.</td><td>1.0</td></tr>
<tr><td>2nd grade</td><td>In cases where residents individually adjust one of the temperature, ventilation, air volume, and lighting in more than 50% of the work space on the standard floor to provide an environment suitable for each individual</td><td>0.5</td></tr>
</table>
※ The area of the individually controlled unit space is considered to be within 20㎡</td></tr>
<tr><td colspan="3">■ Evaluation reference materials and submission documents</td></tr>
</table>

Reference		- USGBC LEED Green Building Rating System
Documents to be submitted	Preliminary certification	- Reference layer control system diagram
	Certification	- Same as preliminary Certification

Green Building Certification Criteria	Office Building

evaluation section	9 indoor environment
evaluation category	9.5 caring for the elderly
Evaluation standard	9.5.1 Adequacy of care for the elderly and the disabled
■ Detailed evaluation criteria	
evaluation purpose	Evaluate the degree to which barrier-free design is reflected so that the disabled, the elderly, pregnant women, etc. can safely and conveniently use the facility without the help of others.
Assessment Methods	Evaluated according to the design level considering the elderly and disabled
points	Bonus 1 point (countable item)
Calculation standard	• If all facilities for the elderly/disabled are installed with 3 or more of the examples below ▶ 1 point ※ Examples of techniques for caring for the elderly/disabled - Securing the effective width of common corridors (more than 1.4 meters) - Continuous handrails (handrails must be provided on both sides of the stairs, and at this time, the handrail handles must be extended at least 30cm in the horizontal direction without stopping midway or ending abruptly, so that they are continuous without breaking even at common stair landings.) - Elimination of step differences (building entrance-entrance and exterior are at the same level, internal threshold-20mm or less) - Securing the effective width of the elevator (more than 1.1 meters in width, more than 1.4 meters in depth, and more than 0.9 meters in effective passage width of the door) - Securing the effective width of the door (more than 0.9m, horizontal stop surface of 1.5×1.5m before and after the door) - Securing space for public stair landings (more than 1.5m)

※ Mark the above example in the design application evaluation table below and submit it along with related design documents.

■ Design application evaluation table (example)

Application items	whether to apply	Application contents	Applicable part
Common corridor effective width			corridor
continuous railing			common stairs
Elimination of gaps			main entrance
Elevator Effective Width		Eye Size: Width: Depth:	elevator
effective width of door		Effective width: Horizontal stop surface:	main entrance
Common stair landing space			common stairs

■ Evaluation reference materials and submission documents

Reference		- Ministry of Health and Welfare: Enforcement Rules of the Act on Convenience Enhancement Guarantee for the Disabled, Elderly, and Pregnant Women
Documents to be submitted	Preliminary certification	- Floor plans/details to explain the barrier-free design of the building - Product manual/specification that can explain facility functions for the elderly - Design application evaluation table
	Certification	- Same as preliminary Certification