

Supplementary Guidelines for Pavilion Modules (Type B)



GL 4-9-2 1st edition : June 2023
2nd edition : January 2024 (Page 3 'Introduction' revised)

- Introduction

1, Floor, Wall for modular type

2, Ceiling Hanging for modular type



Total 4 buildings for modular type

- BC1 BC2 BC3、
- BE1 BE2 BE3 BE4 BE5、
- BE6 BE7 BE8、
- BS1 BS2 BS3 BS4 BS5 BS6

3, Floor, Wall for Building with Conventional Construction Method

4, Ceiling Hanging for Building with Conventional Construction Method

5, Ceiling height

6, Facade signage

7, Fire fighting, Disaster Prevention and Exhibition

8, Commercial Activities

9, Queuing Area in front of the pavilion

10, Mezzanine



The conventional method of construction for one building (B9 B10 B11)is different from the modular type for

- BC1 BC2 BC3、
- BE1 BE2 BE3 BE4 BE5、
- BE6 BE7 BE8、
- BS1 BS2 BS3 BS4 BS5 BS6

Introduction

The handover of the allocated Exhibition Space by the Organiser, as described in the Guidelines for Pavilion Modules (Type B), '1-2. Timeline', shall be as follows.

- As stated in the Guidelines for Pavilion Modules (Type B), '1-2. Timeline', 13 July 2024 is the date of handover to the participants.
- However, if the Participants plan to build a mezzanine, construction works related to the installation of the mezzanine can start after 13 September 2024, in order to apply for a temporary building permit and confirmation (extension). (Works on parts not related to the mezzanine installation can be carried out after 13 July 2024 and Permit for the commencement of works has been issued.)

1, Floor, Wall for modular type

(BC1 BC2 BC3, BE1 BE2 BE3 BE4 BE5, BE6 BE7 BE8, BS1 BS2 BS3 BS4 BS5 BS6)

■ Floor

Participants can anchor to the floor concrete.

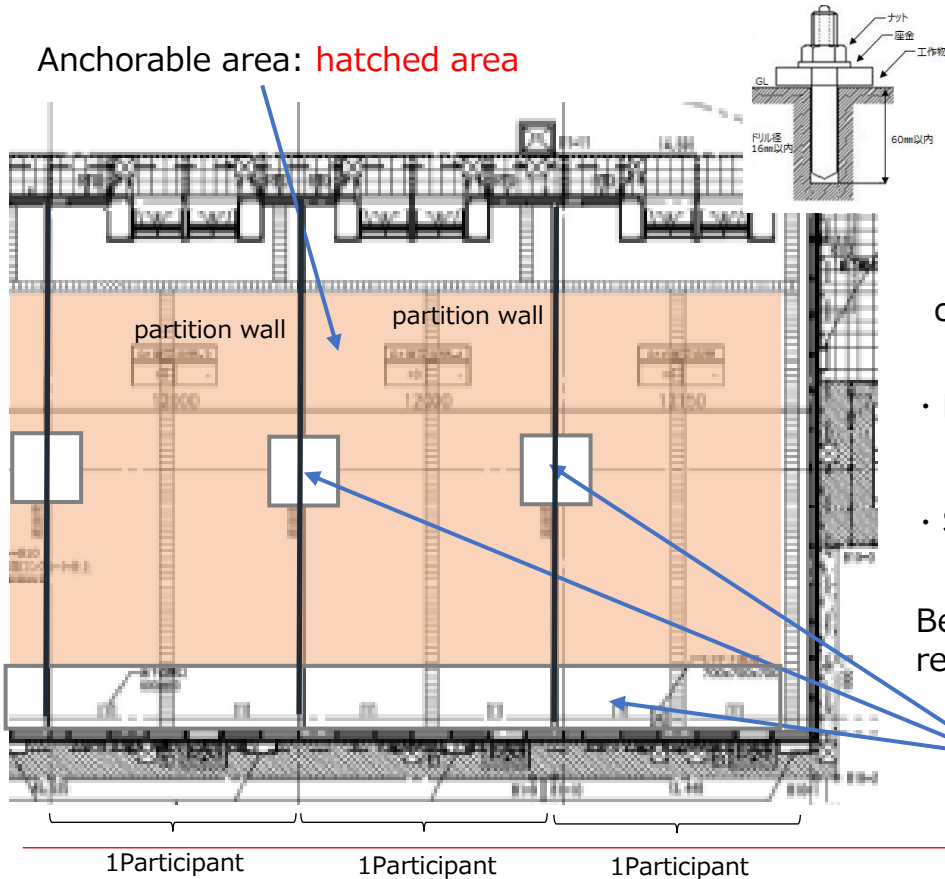
- The extent of anchor ability shall be confirmed on the structural drawings to be handed in separately.

■ Wall

Participants may install only lightweight materials on interior building walls and partition walls.

- Screws shall be fastened to the solid material for the base in the interior of the wall.
- It shall be prohibited to screw in place outside of the base, because of the possibility of falling.

Anchorable area: **hatched area**



Diameter within 16mm
Depth within 60mm
Anchor bolt with core rod strike

concrete floor depth
 $t = 200\text{mm}$

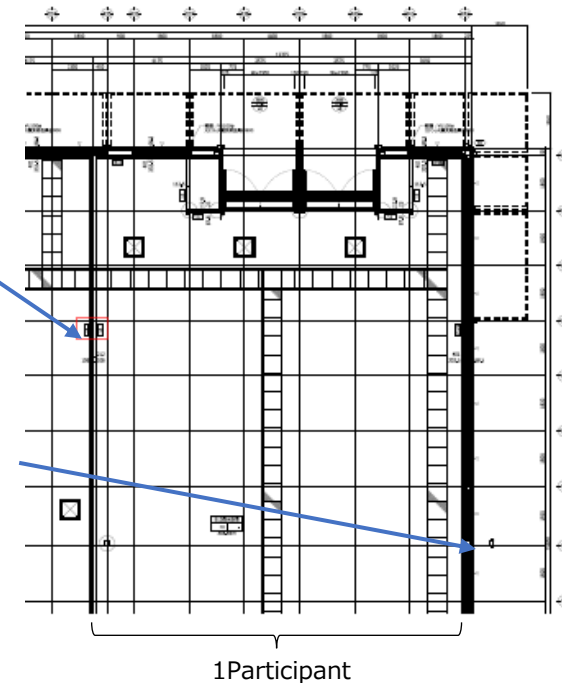
- Loading capacity:
9,800N/m² (for floor)
9,000N/m² (for frame)
- Seismic force 5,900N/m²

Be careful not to cut the steel reinforcement in the floor concrete.

Floating foundation cores shall not be anchored.

partition wall

Building Wall



Only lightweight objects such as paintings, posters, panels, etc. can be mounted.

TV monitors, audio equipment, etc. Heavy objects cannot be installed.

The base material capable of being screwed down (assigned in equal distance): Check the positions of the base materials to which the attached objects shall be fastened and fixed with screws on site.

Loads must be distributed so that they are not concentrated at one point on the floor.

2, Ceiling Hanging for modular type

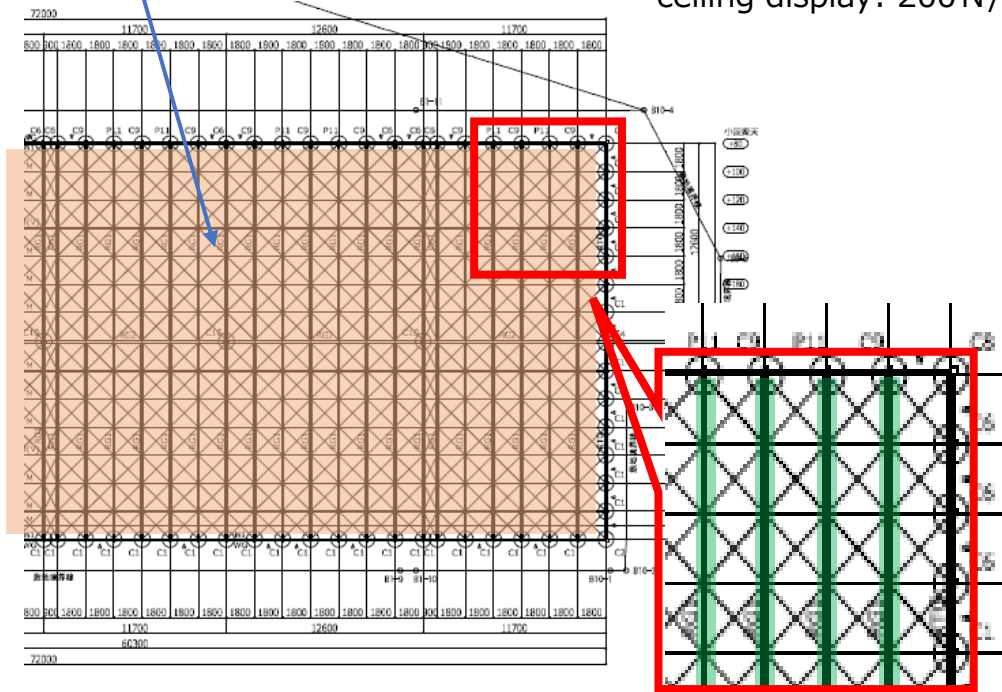
(BC1 BC2 BC3, BE1 BE2 BE3 BE4 BE5, BE6 BE7 BE8, BS1 BS2 BS3 BS4 BS5 BS6)

■ Ceiling

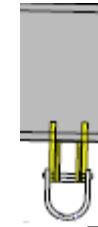
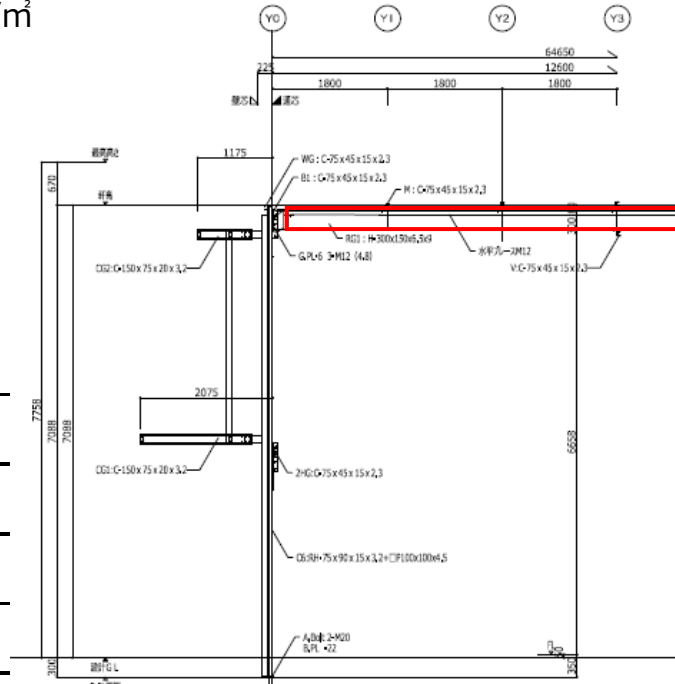
- Participants can install a hanging point in the ceiling structure (H-shaped steel).

Area where hanging to the ceiling is possible: Hatched area

Load of suspended ceiling display: 200 N/m^2



On the beam in the yellow-green marker area, hanging point can be installed.



Examples of Tightening

The hanging shall be tightened to the lower part of the H-shaped steel.

Tightening: by a way such as combination of hardware and bolting, the steel shall be sandwiched and this structure must be such that the hanging shall never fall.

Drilling of holes or welding the steel is not permitted.

Loads must be distributed so that they are not concentrated at one point on the floor.

3, Floor, Wall for Building with Conventional Construction Method (B9 B10 B11)

■ Floor

Participants can anchor bolts to the concrete floor.

- The scope of floor slab shall be confirmed on the structural drawings to be handed in separately.

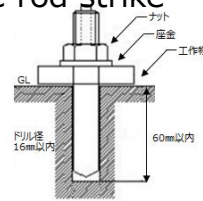
■ Wall

Participants can install only lightweight materials on interior building walls and partition walls.

- Screws shall be fastened to the base material inside the wall.
- It shall be prohibited to screw in place outside of the base material, because of the possibility of falling.

Area for anchor bolts:
Hatched area

Diameter within 16mm, Depth within 60mm
Anchor bolt with core rod strike



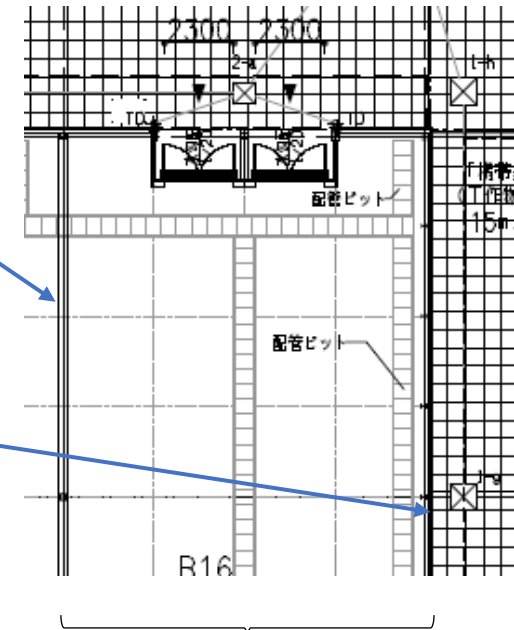
Depth of concrete floor
 $t = 200\text{mm}$

- Loading capacity:
9,800N/m² (for floor)
9,000N/m² (for frame)
- Seismic force 5,900N/m²

Be careful not to cut the steel reinforcement in the concrete floor.

partition wall

Building Wall



Only lightweight objects such as paintings, posters, panels, etc. can be mounted.

TV monitors, audio equipment, etc. Heavy objects cannot be installed.

The base material capable of being screwed down (assigned in equal distance):
Check the positions of the base materials to which the attached objects shall be fastened and fixed with screws on site.

Loads must be distributed so that they are not concentrated at one point on the floor.

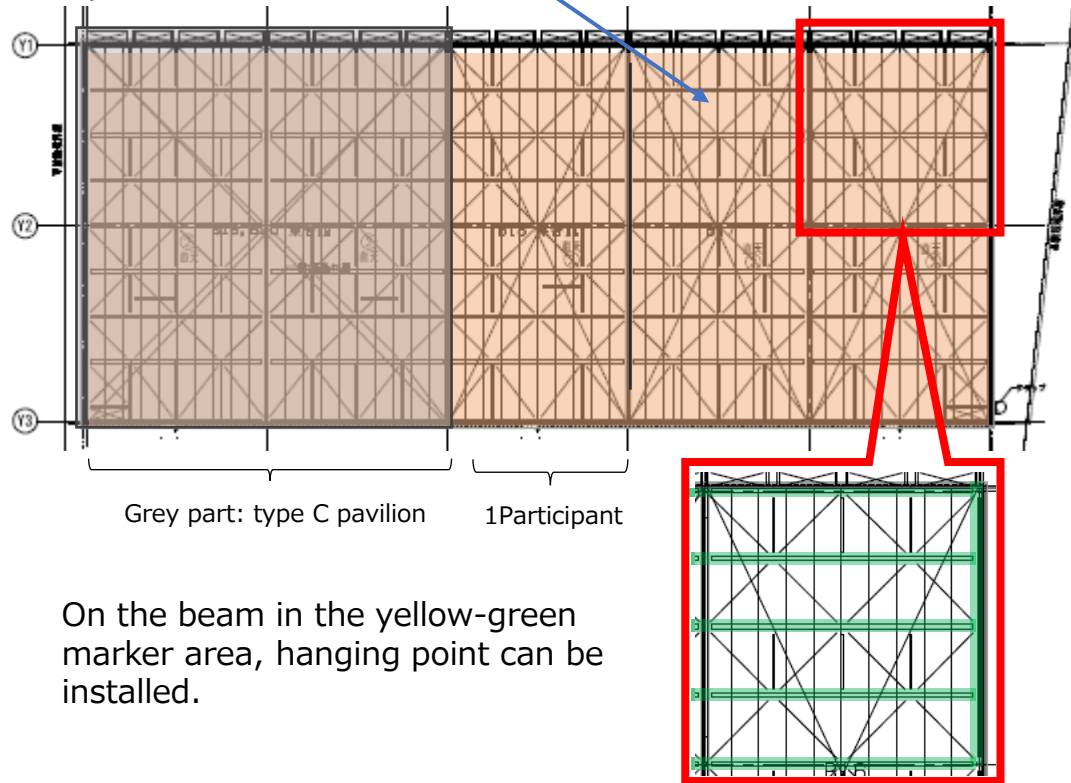
4, Ceiling Hanging for Building with Conventional Construction Method (B9 B10 B11)

■ Ceiling

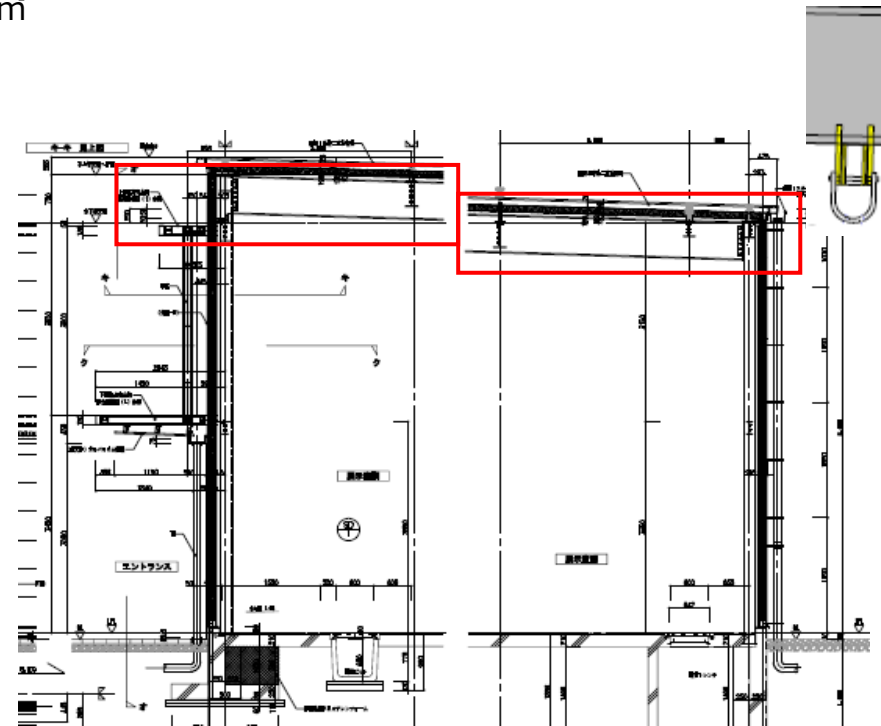
- Participants can install a hanging point in the ceiling structure (H-shaped steel).

Area where hanging to the ceiling is possible: Hatched area

Load of suspended ceiling display: 200 N/m^2



On the beam in the yellow-green marker area, hanging point can be installed.



Examples of Tightening

The hanging shall be tightened to the lower part of the H-shaped steel.

Tightening: by a way such as combination of hardware and bolting, the steel shall be sandwiched and this structure must be such that the hanging shall never fall.

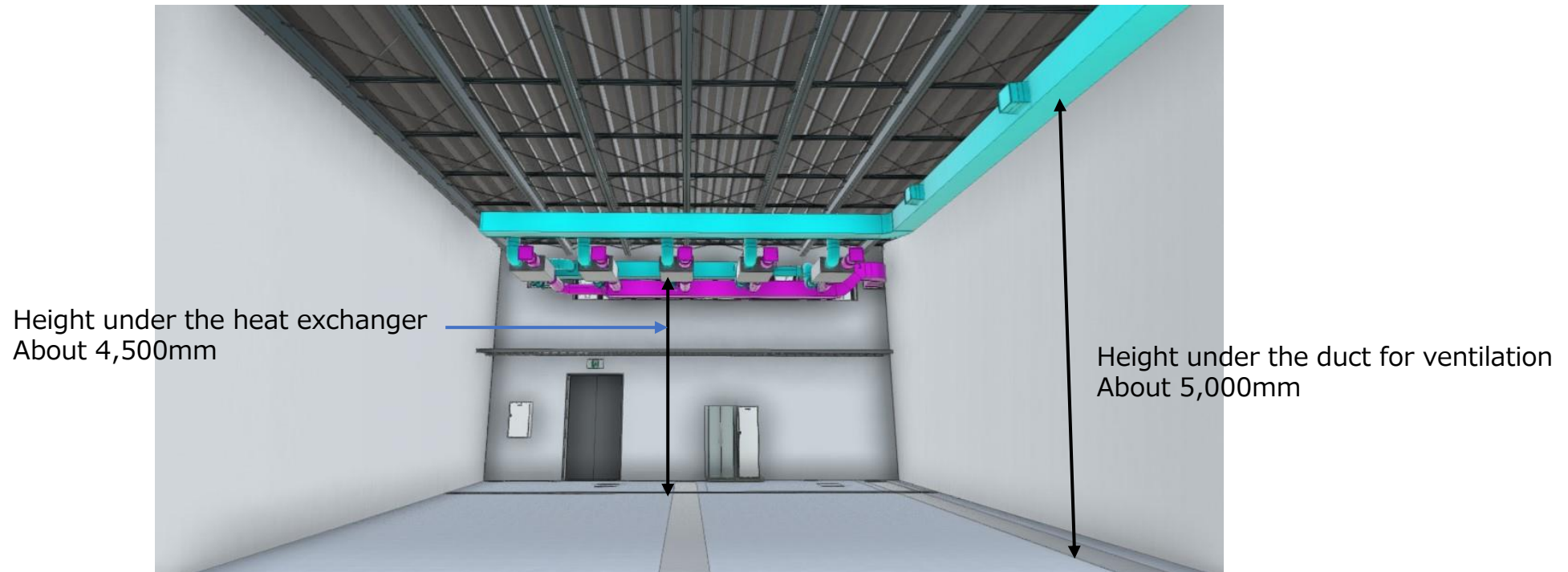
Drilling of holes or welding the steel is not permitted.

Loads must be distributed so that they are not concentrated at one point on the floor.

5, Ceiling height

■ Ceiling height

- Heat exchanger and duct for ventilation will be installed at the ceiling.
- Please note that the detailed dimensions are different depending on the building. The detailed dimensions will be provided as soon as possible.



6, Facade signage 1

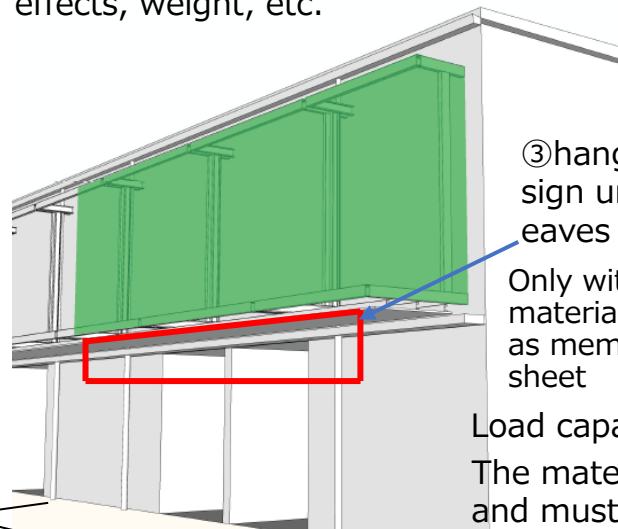
■ facade signage

①Facade sign ②Wall sign by the exit and entrance ③hanging sign under eaves can be installed as the Official Participant's construction .

①Facade sign

Range for decoration: Yellow-green part

It shall be designed and installed considering safety factors such as climatic effects, weight, etc.



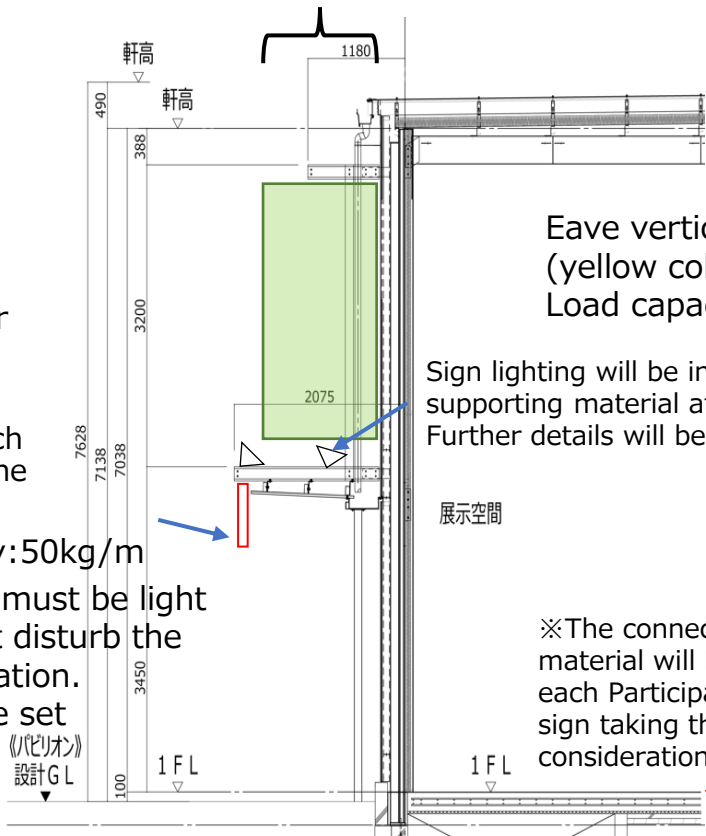
③hanging sign under eaves
Only with material such as membrane sheet

Load capacity:50kg/m
The material must be light and must not disturb the pavillon operation.
Height can be set voluntarily.

The sign can be decorated within the scope of its own exhibition frontage.

Range for installing facade Within 1800 mm, which is the width of the eave support material in the lower position.

Sign must be installed on eave supporting material. Drilling and welding are possible to eave supporting material. To wall surface (by finishing with siding board), only graphics treatment is possible. The material of sign must be light-weight panel and they must be attached onto the part of the wall base materials.

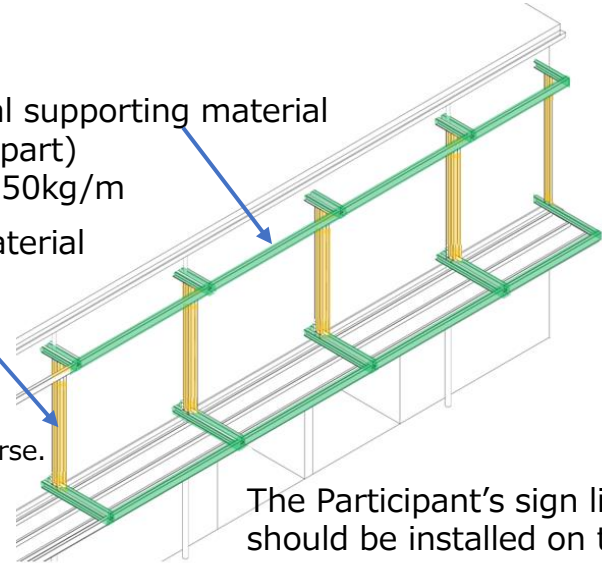


Eave horizontal supporting material (yellow-green part)
Load capacity:50kg/m

Eave vertical supporting material (yellow coloured part)
Load capacity:30kg/m

Sign lighting will be installed on the eave supporting material at 3 metre intervals. Further details will be provided in due course.

※The connection part of supporting material will be indicated later for each Participants. Please design the sign taking the connection part into consideration.

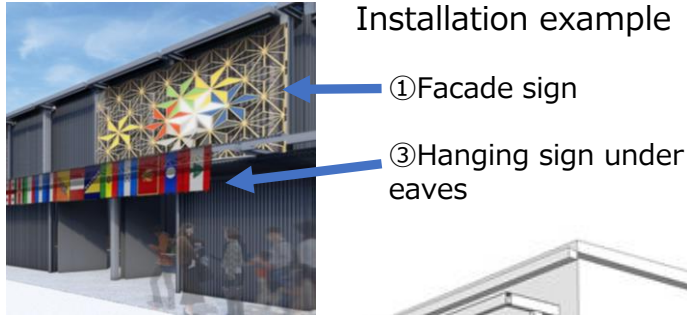


The Participant's sign lighting should be installed on the eave supporting material.

Retrieval positions of wiring for lighting will be located near the façade surface.

Loads must be distributed so that they are not concentrated at one point on the floor.

6, Facade signage 2



Installation example

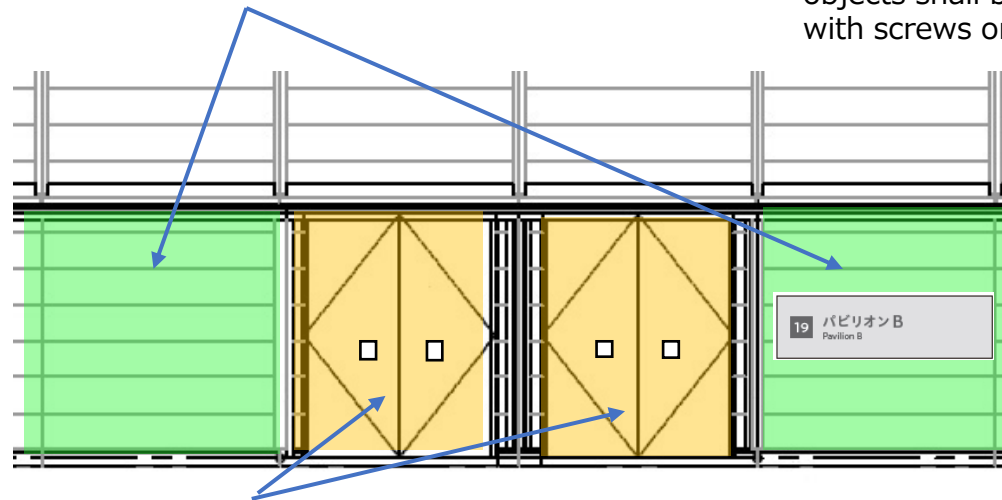
① Facade sign

③ Hanging sign under eaves

To wall surface (by finishing with siding board), only graphics treatment is possible. The material of wall sign by the exit and entrance must be light-weight panel and they must be attached onto the part of the wall base materials.

The steel capable of being screwed down (assigned in equal distance): Check the positions of the base materials to which the attached objects shall be fastened and fixed with screws on site.

② Wall sign by the exit and entrance



Entrance/exit (flush door) can be covered with wrapping sheet.

Pavilion name signage shall be placed at the entrance side in a unified format. Data of the format will be provided separately. (Horizontal and vertical writing)

The wall sign by the exit and entrance can be decorated within the scope of its own exhibition frontage.

The small breakable window (300 mm square) attached to the entrance door for firefighting to enter inside shall not be covered with a wrapping sheet or the like. Position and size will be announced later.

For the wall sign, methods, for example the following ways, are acceptable. Ex. Layout and print the sign on wrapping sheet, or install the sign with a separate panel

No exhibition decorations (including foundations) may be placed on the ground outside the building.

7, Fire fighting, Disaster Prevention and Exhibition

1 , Fire fighting and Disaster Prevention

(1) Fire fighting and Disaster prevention regulations for interiors

In accordance with the Act on Fire Service, rugs, curtains, exhibition plywood, fibreboard (compressed MDF chips), blackout curtains and floor coverings such as carpets must be fire retardant. However, this does not apply to the exhibits themselves or equipment.

(2) Facilities

Automated fire alarm equipment, emergency exit lights, emergency lighting equipment, emergency broadcasting equipment, indoor fire hydrants (substituted by outdoor hydrants) and fire extinguishers will be installed in the standard layout required by law.

If additional emergency facilities are required due to the participants' exhibits or structures blocking or covering the original emergency facilities, etc., such facilities shall be added by the **Participant's** construction work.

(3) Installation of exhibits

When placing exhibits, etc., participants should take care to secure the width of the evacuation passageway as specified in the ordinance.

(3) Hazardous items

It is strictly prohibited to bring hazardous materials.

2 , Exhibition

(1) Consideration of surroundings

If sound equipment is used in the exhibition, please be sure to keep the volume down so as not to disturb visitors, neighbouring pavilions and facilities.

(2) Consideration for standard layout equipment

Some equipment, such as ventilation equipment, may have already been installed by the Association, so participants are requested to take such equipment into consideration when installing exhibits and structures.

8, Commercial Activities

[Exhibition area(for commercial activities)accessible to the public inside a pavilion to provide food and beverages and to sell goods (excluding areas not accessible to visitors such as kitchens, storage rooms, refrigerators, staff offices, etc.) shall not exceed 20% of the total exhibition area accessible to the public inside a pavilion.]

- When setting up food and beverage restaurants and kitchens, permits and approvals under the Food Sanitation Act, as well as consultations with government offices on the Building Standards Act and Act on Fire Service, shall be carried out before construction.
- The kitchen heat source should be based on electricity. If LPG is used as the kitchen heat source, additional fire-rated compartments and fire ventilation equipment, etc., and consultation on fire service related laws and regulations regarding separation distances from fire sources and gas use plans are required.
→ For other consultation procedures, refer to the 'List of notifications to respective government bodies' at the end of the Guidelines for Pavilion Modules.

Permits and approvals regarding Food Sanitation act

1, License for restaurant

Anyone who plans to conduct in the Expo site commercial activities stipulated under the Food Sanitation Act as the categories which require business license shall obtain license from the Osaka City mayor.

2, Standards for commercial facilities

Licensed commercial facilities at the site shall meet standards of facilities specified in Osaka Prefectural Ordinance on the Enforcement of the Food Sanitation Act.

3, Sanitation requirements for commercial facilities

The entities who engage on site in commercial activity shall establish and comply with the necessary measures for public health in accordance with the standards set out in the regulations for enforcement of the Food Sanitation Act.

The Organizer and authorities concerned of license will establish rules and requirements in more detail, taking into consideration a large number of visitors who come to the Expo site and the necessity to prevent occurrence of any harm caused by food.

Law: Food Sanitation Act

Ordinance: Ordinance on Standards for Business related with food sanitation (Osaka Municipal Ordinance on the Enforcement of the Food Sanitation Act).

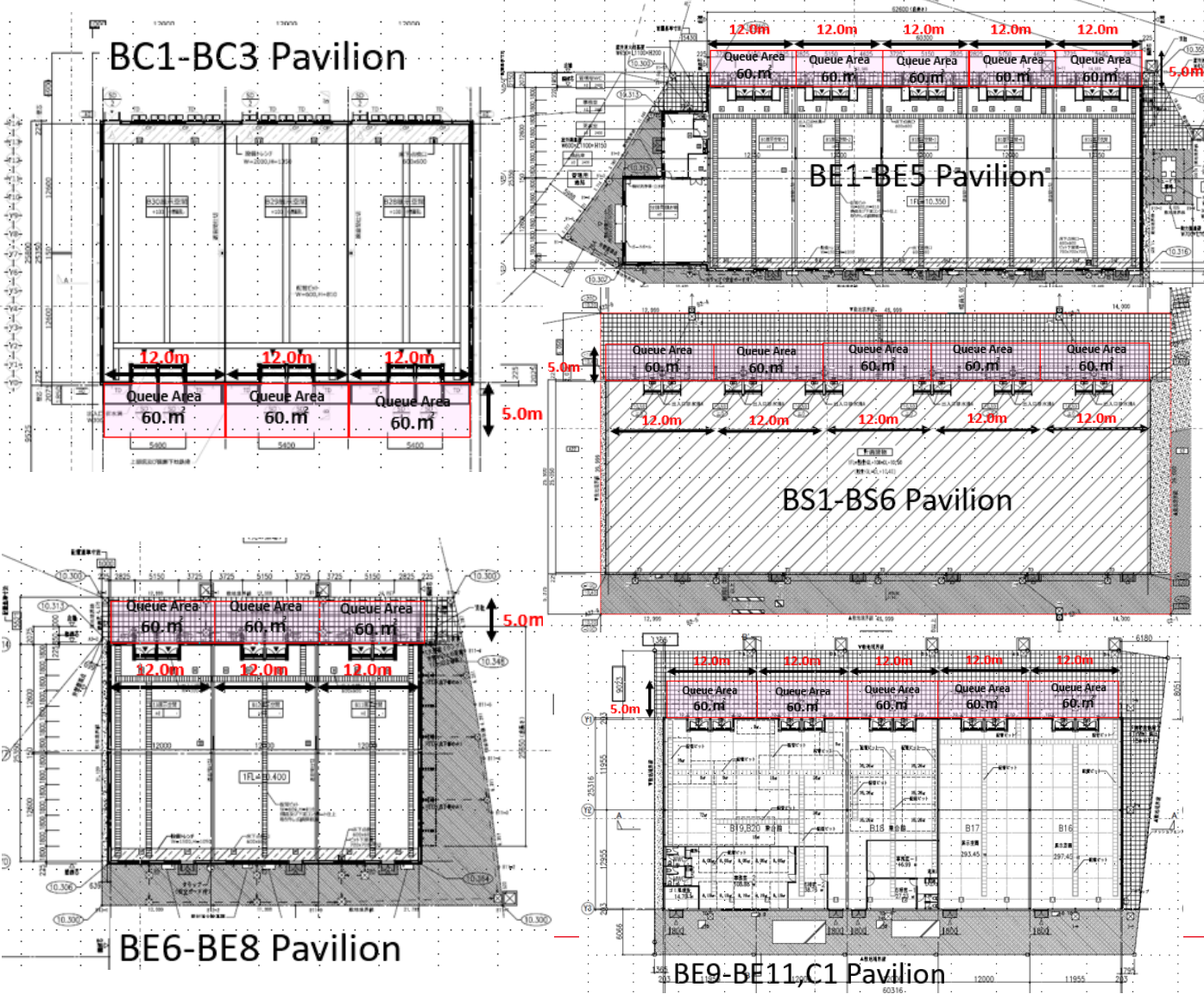
- The Participant is to bear all additional expenses incurred in cost of consultation and construction.
- The participants shall take necessary measures to prevent fire outbreak in operation using fire during the Expo opening period.
- The participant shall have an emergency contact system in place.
- If the Organiser requests a correction regarding relevant equipment and operation, the Participant shall respond to the consultation with the Organiser.

Individual air conditioning and ventilation for kitchen and other installations

If separate installation of air-conditioning piping or ventilation airways for air supply and exhaust is desired, the location of the air-conditioning piping or ventilation airways should be considered based on the design documents separately to be provided by the Organiser, after checking "2. Design Requirements" in the Guidelines for Pavilion Modules.

9, Queuing Area in front of the pavilion

For queues of visitors in front of the pavilions, the front area can be used within the width of each frontage and the depth of 5m from the entrance.



It is recommended that participants should design a queue area based on the level-of-service D defined by J. J. Fruin. In addition, the Participant should design to minimise queues as much as possible with the Pavilion reservation system for visitors to be provided from the Organiser. Please take into consideration not only queues but also the flow of people coming out of the pavilion, and make plans so that people would not stay in front of the pavilion or in the vicinity of the pavilion.

	A	B	C	D	E	F
Level of Service						
Space (m ² /pedestrian)	More than 3.2	2.3 ~ 3.2	1.4 ~ 2.3	0.9 ~ 1.4	0.5 ~ 0.9	Less than 0.5
Free flow of pedestrians	Free flowing	Minor conflicts	Some restrictions to speed	Restricted movement for most	Restricted movement for all	Shuffling movement for all

Figure: A level-of-service concept by J. J. Fruin

10, Mezzanine

If you wish to install a mezzanine in a Type B pavilion exhibit construction, it is required to understand well the following points, as installation of a mezzanine is regarded as a building alteration that requires a building permit.

【Prerequisite】

- The surface of a mezzanine shall not exceed 50% of the allocated space. It can be used as a exhibition area for visitors and in this case it shall comply with the Universal Design Guidelines for Facility Implementation.

【Considerations for Building Structure】

The total load weight including the mezzanine shall be designed less than the floor loading capacity. The structure of the mezzanine shall be as follows, and if necessary, the Participant will be required to consult with the inspection and review organisation, and to obtain the necessary permits and approvals.

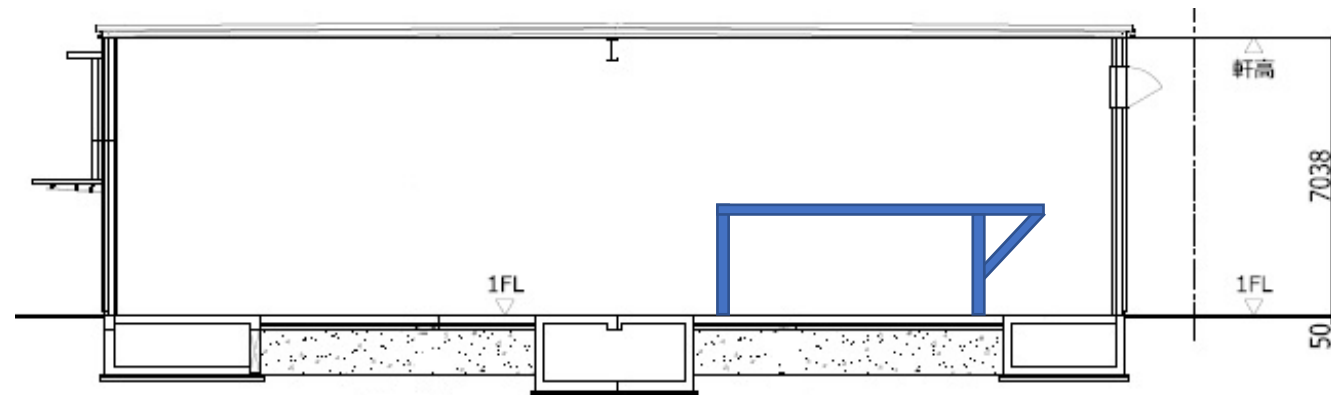
- The structure shall be designed with no risk of collapse and significant deformation.
- The floor above the pits shall not be subjected to any load.
- To avoid the concentration of load on a single point, reinforcement materials (e.g., steel plates with 16 mm thick) shall be installed.
- Reinforcing materials shall be installed close to the existing pits (with range of about 200 mm from the edge of each pit).
- The only area where floor anchor bolts can be installed is the floor concrete. *Check the structural drawing for possible anchor positions.

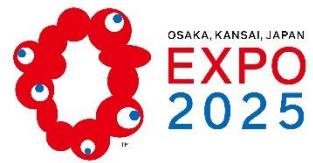
【 Considerations for Fire fighting/disaster prevention 】

A mezzanine shall not block and separate a room, because the external fittings at the back rear of each room are smoke ventilation duct for the entire room.

【Application】

- If the Participant wishes to build a mezzanine, the Participant shall submit a request by January 17, 2024 for an application for temporary building alteration permit and for an extension on the building permit application.
- The Participant shall cooperate in the preparation of documents necessary for the alteration procedure.
(Necessary documents)Floor plans, structural drawings (including those showing loads weight), area calculation drawings, and other drawings required by the Organiser.
- The costs of the alteration procedure shall be borne by the Participant. When there are two or more Participants who install their own mezzanine in one building, the cost for application of procedure will be divided equally by the number of the Participants concerned.





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