ANNEX 4-A JTC DESIGN REQUIREMENTS

The following are Baseline Standards to be adhered with for the Tender. Visual references are provided only as examples of the minimum standard expected for each item. Tenderers are encouraged to provide beyond the minimum quality of these references, in service of the proposed concept(s) and theme(s).

It is mandatory to adhere to <u>all</u> Baseline Standards.

Without prejudice to the forgoing, the design concept proposal in a Tenderer's submission is for the purpose of evaluation of the Tenderer's design proposal for the Tender. JTC will review the architectural design elements submitted so as to achieve the objectives of the Tender and ensure compliance with the Baseline Standards. In this regard, JTC will require improvements to the Successful Tenderer's proposal for any Baseline Standards which are not adhered to. The Successful Tenderer is required to address comments from JTC and incorporate the necessary changes in the plans when the Successful Tenderer seeks JTC's prior written consent before commencing any Fitting Out Works.

Upon the completion of the Fitting Out Works, JTC will conduct site inspection(s) to verify if the Fitting Out Works have been carried out in accordance with the plans submitted by the Successful Tenderer and approved by JTC.

The Tenderer shall be fully bound by the contents of their proposal and shall not be entitled to amend or deviate from the proposal after submission, without the written approval of JTC.

1. **JTC Design Requirements**

- 1.1 The successful tenderer is to comply with the following design requirements:
 - There shall be no removal of mature trees on site due to one-north status as a Tree Conservation Area (TCA). Works that may possibly impact any trees on site shall consider any mitigation strategies (ie Tree Protection Zone) as stipulated by NPARKS. Any impact on trees shall also obtain necessary authority approval via submission by a certified QP/arborist.
 - Any services supporting F&B activities and uses shall be designed to minimize disamenities to members of the public.
 - All construction works are required to comply with Public sector GreenGov.SG requirements and JTC's Green Lease Policy/JTC's Green Building Obligations:
 - o Construction materials shall use green-labelled building products and furniture.
 - All fittings shall fulfil 3-ticks Water Efficiency Labelling Scheme (WELS).
 - All buildings installing new water-cooled chillers shall ensure that the new chillers use refrigerants with Global Warming Potential (GWP) ≤ 15.
 - All new office premises or those that undergo major renovation are to achieve at least a Gold rating under the Green Mark for Healthier Workplaces (GMHW) scheme.
 - All air-conditioned premises are to maintain the ambient indoor air temperature at 25°C or higher, as far as comfort level allows.
 - o Proposed Food & Beverage (F&B) establishments are required to segregate the food waste for treatment, either on-site or off-site.
 - Recycling programmes (e.g. for paper products, plastic containers and packaging, aluminium cans, e-waste, toner cartridges) shall be implemented with recycling bins placed within the premises.
 - Should there be major retrofitting works¹ involved, buildings are expected to attain Green Mark Platinum SLE standards or equivalent, in accordance with GreenGov.SG requirements. Subject to BCA consultation and consideration, certain buildings may be deemed to be a simple building type with limited occupation and simple facilities, which is then subjected to a set of simplified and essential requirements.

¹ Major retrofitting may include but is not limited to any of the following requirements:

a) replacement of chiller(s)

replacement/addition of >50% of all air-conditioning condenser units or if replacement/addition of airconditioning condenser units is >50% of current installed capacity

additional gross floor area of > 5,000m²

1.2 The successful tenderer is to incorporate the following rectification works as follows:

Baseline Standards (Building External)		ernal)
Item	Baseline Standard	Visual References
Façade Painting/ Green Wall	 Propose innovative designs/solutions to beautify building façade by providing either green wall or art mural wall to cover the full extent of the exterior wall fronting the traffic at Ayer Rajah Crescent and as viewed from Block 71 Ayer Rajah. It must complement the architectural design and characteristics of the whole building. Corporate brandings (e.g. for marketing purposes) are disallowed unless JTC approval is granted. 	(Sample image references)
		(Sample image reference)

PUDO point

- PUDO point shall have minimum 2 car lengths of lay-by.
- Usage of PUDO point by company's patrons shall not pose disruption or inconvenience to vehicular traffic in JTC's internal carpark.
- PUDO shall allow sufficient queue space so that traffic does not tailback to the carpark gantry or onto Ayer Rajah Crescent.
- PUDO shall provide safety bollards, accessible ramp, seating spaces for the safety and comfort of users
- Incorporation of canopy area with adequate depth to minimize wind driven rain is strongly encouraged.



(Existing Condition)

Façade windows

- Minimize modifications to existing façade windows and openings.
- JTC reserves the right to require the reinstatement of façade back to original condition at the end of the tenancy period.



(Existing Condition)

Mitigation zone

- The mitigation zone is an area between the outdoor and indoor public space of an individual parcel such as footpaths, building aprons and ORA.
- Within the mitigation zone, all platform levels shall match with the adjacent level of the public footpaths. This is to ensure seamless integration between the buildings and their external surroundings.
- Any differences between platform levels within mitigation zones shall be designed for barrier free access.



(Existing Condition)

Boundary perimeter treatment	 The use of fences or boundary walls shall not be allowed. Existing planting areas shall be retained as much as possible, with efforts to further improve and expand the planting areas if feasible. 	(Existing Condition)
Outdoor Refreshment Area (ORA)	ORA is not applicable as there are no available outdoor areas suitable for ORA activities within the master tenancy boundary.	NIL.
Bin Centre	 Upgrading of bin centre to meet NEA COPEH regulatory requirements. There shall be no permanent structures placed onto the service driveway and/or obstructing the bin centre access. 	(Existing Condition)
		(Existing Condition)
Service road for building substation and bin Centre	 Repair existing asphalt road surface with potholes or in poor condition and replace with new. There shall be no permanent structures placed onto the service driveway and/or obstructing the bin centre access. 	

		(Existing Condition)
Signage	All building façade signages proposal (design, location, size, material, color) shall be subjected to JTC's review and approval. Building façade signage shall comply to relevant Authorities' guidelines.	NIL
	Building signage shall be well-integrated with the building façade design, neatly arranged and aligned to façade elements i.e. door, window, etc.	
	Advertisements and billboards on the façade shall not be allowed.	

Baseline Standards (Building Internal)			
Item	Baseline Standard	Visual References	
Toilet zoning (Refer below for detailed baseline standards for toilet)	 Toilet entrances shall have intuitive navigation from the main public lobby/thoroughfare but shall be kept away from direct line of sight. Size and design to comply with NEA COPEH standards and BCA Approved Document and Accessibility Code. Where possible, toilet entrances can be designed with entrance maze (without doors) for better hygiene control and screening. Cubicles, urinals, and mirrors shall be placed away from the line of sight from the main entrance to maintain the privacy of users. Provision of handicapped and/or accessible toilet shall comply with BCA Approved Document and Accessibility Code. Toilet shall be designed to be well-ventilated and easy to maintain. Ironmongeries (fixtures, fasteners, etc) shall be of sufficient quality and durability to prevent corrosion or rust. The proposed design shall take reference to guidelines and specifications from JTC Building Design Requirement (BDR). Use of slip resistant (Minimally R10), homogenous floor tiles in toilet. 	Concerns and advanced and chalces a gray toward and chalces and advanced and advanc	

Common areas (Lobby/ Corridors)

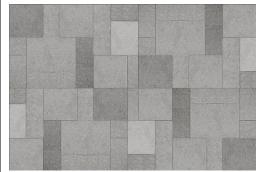
- Use of slip resistant (Minimally R10), homogenous floor tiles in publicly accessible areas with high pedestrian footfall.
- Floor tiles shall have variations in composition, colours, and textures, that matches the overall design of the premises.
- The use of clay tiles is not allowed.
- Use of drop-down panels or rain screens to reduce the impact of wind-driven rain is required.
- Interior finishes shall complement the overall design of the Premise.



(Sample image reference)



(Sample image reference)



(Sample image reference)

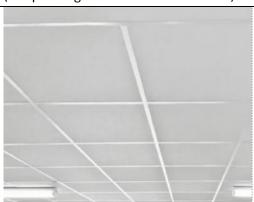


(Sample image reference of rain screen)

(Sample image reference of rain screen)

Common areas (False Ceiling)

- Minimize use of false ceiling in areas exposed to natural ventilation/strong winds.
- Allowed to propose no false ceiling design along external facing common corridors/ Back-of-house (BOH) spaces.
- Make good all existing ceiling to clean and tidy condition (if retained).
- Ceilings may be a continuous plasterboard ceiling or grid ceiling and finished with paint to match the overall ceiling colour.
- If ceiling condition cannot be made good, propose to replace with new panels or new ceiling design.
- Interior finishes shall complement the overall design of the Premise.



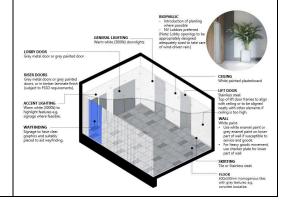
(Sample image reference)

Lifts lobby and circulation routes (Ramp, staircase, etc)

- Existing lobby shall be upgraded to comply with BCA Approved Document and Accessibility Code.
- Appropriate allocation of floor areas to serve the different functions of the lift lobby e.g. circulation, thresholds, waiting areas, etc.
- Interior finishes shall complement the overall design of the Premise.
- The proposed design shall take reference to guidelines and specifications from JTC Building Design Requirement (BDR).
- Incorporation of biophilic elements is strongly encouraged.



(Existing Condition)



(Extract from JTC Building Design Requirements)



(Sample image reference)



(Sample image reference)



(Sample image reference)

1st Storey main public lobby/ thoroughfare

- Pedestrian connection between Block 71 and open lawn shall be retained.
- Activity generating uses shall be proposed along the main public lobby/thoroughfare.
- Comfortable areas for seating shall be provided as part of the public lobby design with BOH services tucked away hidden from public line-of-sight.
- The proposed design shall take reference to guidelines and specifications from JTC Building Design Requirement (BDR).
- Incorporation of biophilic elements is strongly encouraged.



(Existing Condition)



(Extract from JTC Building Design Requirements)



(Sample image reference)



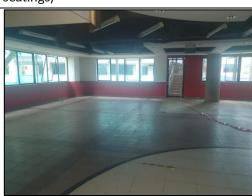
(Sample image reference for outdoor seatings)



(Sample image reference for outdoor seatings)

2nd Storey canteen/ other proposed uses (Refer below for detailed baseline standards for canteen)

- Ensure sufficient seating provisions in proportion to number of stalls proposed (if canteen is retained).
- Activity generating uses along the main thoroughfare between the link bridges to Blk67 & Blk71is strongly encouraged.
- Retain existing link bridges to Blk67 & Blk71 and propose suitable enhancements (flooring, railings etc) where appropriate, subject to JTC approval.
- Incorporation of biophilic elements is strongly encouraged.



(Existing Condition)

3rd Storey balcony

- Appoint professional engineer to conduct structural inspection and assess structural loading of roof.
- Physical structures, if any, shall have minimal impact to façade aesthetics and be subject to JTC approval.
- Proper screening and concealment from both elevational and top view, shall be provided for any exposed services, subject to JTC approval.
- Proposals shall not penetrate or impact rooftop waterproofing layer.
- Incorporation of green roof elements that helps contribute to green cover and green area replacement is strongly encouraged.



(Existing Condition)

Rooftop space

- Appoint professional engineer to conduct structural inspection and assess structural loading of roof.
- Physical structures, if any, shall have minimal impact to façade aesthetics and be subject to JTC approval.
- Proper screening and concealment from both elevational and top view, shall be provided for any exposed services subject to JTC approval.
- Proposals shall not penetrate or impact rooftop waterproofing layer.
- Incorporation of green roof elements that helps contribute to green cover and green area replacement is strongly encouraged.



(Existing Condition)



(Existing Condition)

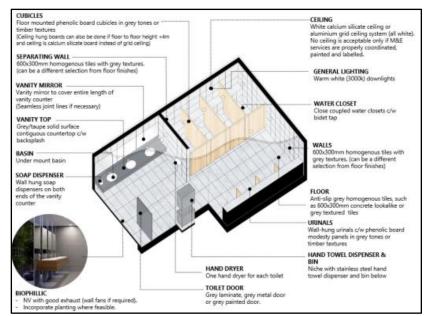


(Sample image reference for screening)

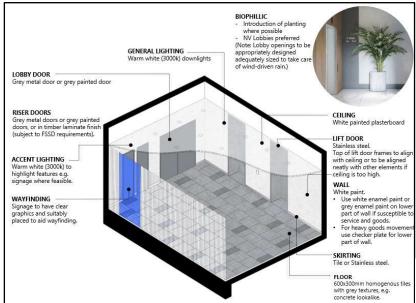
General

- Company is allowed to remove any non-structural interior finishes as part of the existing state of the building, subject to JTC's approval.
- Company is required to removal of all demolition waste or hacked materials upon completion of construction works.
- Final approval for proposed works shall be subject to assessment as part of JTC's EPIC submission and landowner consent.

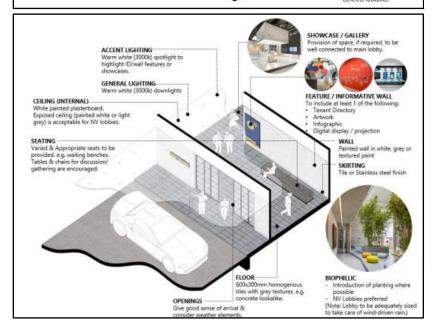
NIL



Extract from JTC Building Design Requirements for Common Toilet Design



Extract from JTC Building Design Requirements for Lift Lobby Design



Extract from JTC Building Design Requirements for Drop-off Lobby Design

Baseline Standards (Common Toilet and Canteen Toilet)		
Item	Baseline Standard	Visual References
Lighting	LED white lighting (colour temperature of 4,000K) with motion sensors. Minimum illuminance to be 100 lux.	(Sample image reference)
Ventilation	Installation of ceiling fans or wall mounted fans	(Sample image reference)

		(Sample image reference)
Ceiling	 Ceilings may be plasterboard, mineral fibre board, or wire mesh to conceal pipes and services and finished with paint to match the overall design of the toilet. All pipe works and above ceiling structures preferably to be concealed. 	(Sample image reference) (Sample image reference) (Sample image reference) (Sample image reference)

Flooring	Non-slip, homogenous tiles with variations in tile composition, colours, and textures.	(Sample image reference) (Sample image reference)
Wall	Homogenous tiles with variations in tile composition, colours, and textures.	

(Sample image reference)

(Sample image reference for entrance signage)

Toilet Entrance Door

- No requirements for toilet entrance door.
- Where possible, toilet entrances can be designed with entrance maze (without doors) for better hygiene control.



(Sample image reference for toilet entrance maze)

Cubicles

 Ceiling hung cubicles with floor mounted separating walls with matching moisture resistant laminated doors.



(Sample image reference)



(Sample image reference)

Toilet bowl

- Toilet bowls shall be provided for all cubicles.
- An accessible water closet compartment with clear internal dimension of 1500mm by 1750mm complying to chapter 5.3 of BCA Code of Accessibility for built environment 2019 shall be provided.
- All toilet bowls shall be provided with Auto-flush system.



(Sample image reference)

Other fittings per cubicle

- Provision of 1 handheld bidet spray.
- Provision of 1 jumbo toilet paper holder.
- Provision of 1 floor trap for drainage.



(Sample image reference)



(Sample image reference)

Urinal

- Wall hung urinals with modesty boards.
- Provision of Auto-flush system.



(Sample image reference)



(Sample image reference)

Basin, Vanity Mirror, and Hand soap Dispenser

- Either wall-hung basins or bathroom vanity top with either top-mounted or under-mounted basins.
- Single piece of mirror (seamless joint lines) or individual pieces of mirror for each basin.
- Wall-mounted soap dispensers of proportionate sizing and matching design to be provided.



(Sample image reference)



(Sample image reference)



(Sample image reference)

Hand dryer

• One hand dryer for each toilet (be it wall mounted box or floor standing type).



(Sample image reference)

Other fittings • To provide sufficient water points and socket points for toilet cleaning. Socket points to be provided with splash proof covers.

(Sample image reference)

	Baseline Standards (Canteen related	l works)
Item	Baseline Standard	Visual References
Canteen signage (If canteen is retained/ proposed)	 There shall be clear display of canteen logo and trade name. The signage must be of high quality, well-designed and complementary to the Fitting Out Works. Signage must be backlit and turned on after dark. No inclusion of sponsor brands on the signage. 	ONE CENTRE (Sample image reference)
Stall signage (If canteen is retained/ proposed)	 The design of the stall signage board frame shall be standardised and consistent across all stalls. Graphic design shall be simple, clear. and elegant, where trading names and supporting logos are the primary identifiers. Hand-drawn, non-professional signage or advertisements will not be permitted. Menu offerings are to be displayed within a standardized box below the signage. 	BUNSZBUNS S BY SANS-FACON LUCKYS (Sample image reference)

• Each tenant will be allowed one main horizontal signage on the façade.



(Sample image reference)

Flooring of Stall Frontage (If canteen is retained/ proposed)

- Scupper drain covers fronting each stall shall be tiled and match the flooring of the dining area.
- The area in front of the stalls shall be sufficiently wide (minimally 1.2m wide)



(Sample image reference)



(Sample image reference)



(Sample image reference)

Servery counter (If canteen is retained/ proposed)

- Homogenous design and colour with tray storage compartment.
- Metal servery is not allowed.



(Sample image reference)

LEGATO 4AM

(Sample image reference)

Canteen seats and tables (If canteen is retained/ proposed)

- Non-mounted flexible tables and chairs.
- Tables and chairs with modern design and colours that demonstrate individuality and complement the overall design.
- Tables and chairs with corporate brandings (e.g. for marketing purposes) are disallowed. It is preferred to have different sizes of tables to meet different needs of the patrons.
- There shall be adequate space between tables and chairs in the dining area for people to move around.



(Existing Condition)



(Sample image reference)



(Sample image reference)



(Sample image reference)



(Sample image reference)

Handwashing area (If canteen is retained/ proposed)

- Provision of wash basin within the dining area.
- Propose the handwashing area to be sited alongside with the tray return corner. For the avoidance of doubt, tray return racks are to be provided by the Successful Tenderer.



(Sample image reference)



(Sample image reference)

Tray return station (If canteen is retained/ proposed)	Placement of manual tray return racks.	(Sample image reference) (Sample image reference)
Vending machine layout (if any)	 Vending machine layouts shall ensure adequate space to surrounding fixtures in the dining area for people to move around. There shall be no obstruction of main circulation paths and fire escape routes. 	NIL
Digital ordering kiosks (if any)	Digital ordering kiosks shall be positioned in a way to ensure adequate queuing space without bringing inconvenience and obstruction for people to move around.	NIL

Baseline Standards (Services)		
Item	Baseline Standard	Visual References
Electrical load + Gas piping + Sewer output provisions	 Ensure electrical load falls within SPPG and JTC allowable limits for the building. To check with JTC M&E if there are min. requirements or max. loads to be met. 	NIL
Exhaust vents	 To show proposed outlet location as part of JTC's EPIC submission for approval. 	NIL

	To minimize directing exhaust vents to open lawn area and towards public frontage at Ayer Rajah Crescent.	
Lighting	To ensure lighting of sufficient lux levels are provided especially in publicly accessible areas at night.	NIL
	Night lighting proposal and use of sensor lighting shall be subjected to JTC's review and approval.	

2. JTC Technical Requirements

Whilst every care and attention has been taken in the compilation and preparation of all information, JTC does not warrant that the contents herein represent all the conditions and requirements of the relevant public authorities/Public Utility Licensees in respect of the proposed Fitting Out Works at the Premises or that they are free from errors or omissions whatsoever. The contents herein are subject to changes by the relevant public authorities/Public Utility Licensees concerned.

A summary of the initial services requirements of the relevant public authorities/Public Utility Licensees is set out herein serves only as an indication of the possible work involved with regards to the scope of services requirements and is by no means exhaustive or final.

Mechanical and Electrical (M&E) Systems

2.1 Conformity with Regulation, Codes, Standards and Specifications

2.1.1. All proposed Fitting Out Works shall comply with the relevant codes of practices, standards and regulations stipulated by the relevant authorities of Singapore.

2.2 Diversion and Provision of Utilities Services (if applicable)

- 2.2.1. The Successful Tenderer shall ensure that the following requirements are complied with:
 - 2.2.1.1. Consult and liaise directly with the relevant public authorities/Public Utility Licensees regarding the actual locations of all service mains within the Premises and on the requirements and conditions for services diversion and provision, if any, prior to the commencement of Fitting Out Works. All necessary precautions shall be taken by the Successful Tenderer to safeguard the service mains before they are diverted.
 - 2.2.1.2. Ensure that all service mains that do not need to be diverted are identified and provided with protection, if necessary, during the Fitting Out Works of the Premises. The cost of repairs to any damaged service main as a result of work carried out by the Successful Tenderer shall be borne by the Successful Tenderer.
 - 2.2.1.3. Arrange with the relevant public authorities/Public Utility Licensees and pay for the cost of any diversion and/or "capping off" of existing services, provision of service mains and connection fees if any, in connection with the proposed Fitting Out Works at the Premises.
 - 2.2.1.4. Consult and liaise directly with the relevant public authorities/Public Utility Licensees to provide all the internal distribution for water, electricity, gas, drainage and sanitary discharge for the proposed Fitting Out Works at the Premises.
- 2.2.2. The Successful Tenderer shall comply with all the necessary requirements as stipulated by the relevant public authorities/Public Utility Licensees.

- 2.2.3. The Successful Tenderer shall at its own cost and expense install separate utility meters and pay for consumption of utility direct to the Public Utilities Board (PUB), SP Services Ltd and SP PowerGrid Ltd.
- 2.2.4. The Successful Tenderer shall at its own cost and expense make its own arrangements with the relevant service Departments or public authorities and shall pay for its own service connection including any diversion and provision of service mains. The Successful Tenderer shall also provide for its own internal distribution for water, electricity and sanitary discharge including sewer line, construction of substation or transformer in connection with the proposed usage. Any new service lines serving the Premises shall be contained within the boundary of the Premises.
- 2.2.5. The Successful Tenderer shall also comply with the requirements of the relevant Departments or public authorities in relation to his service requirements such as provision of an electrical substation or transformer room etc. if required by SP PowerGrid Ltd.
- 2.2.6. The Successful Tenderer shall liaise with the Telecommunication System Licensee pursuant the provisions of the Telecommunications Act, for the telecommunication supply at the Premises.
- 2.2.7. If necessary, the Successful Tenderer shall provide the facilities for telecommunication services, such as Telecom riser ducts, lead-in pipes and manholes etc., within the Premises. All Telecom facilities shall be provided according to the prevailing Infocommunications Media Development Authority (IMDA) of Singapore's "Code of Practice for Info-communications Facilities in Buildings".
- 2.2.8. The Successful Tenderer is advised to approach the Telecommunication Facility Coordination Committee (TFCC) and StarHub Cable Vision Ltd (SCV) early during the planning stage for consultation on the location and diversion of existing Telecom services with the Telecommunication System Licensees, proposed connection and design of Telecom facilities. The detailed Telecom facilities shall be submitted and duly verified by TFCC and SCV, and approved by IMDA of Singapore prior to commencement of works.