

HOW DOES THIS GUIDE WORK?



PURPOSE OF THIS GUIDE

This Retail Tenancy Guide (RTG) is intended to inform all tenants and their contractors relevant building details and to direct the Tenants' submission of design, drawings and construction through to the operation of their shop.

This Guide consists of 2 main parts to help you through:

- What you have to do
- What you need to know

The Appendices provide contact details, forms and guidance on how to complete your submissions.

Tenants are requested to reference this guide with the Lease Agreement. The Lease Agreement shall prevail in the event of any discrepancies between the said documents and this guide. Government regulations and building codes also take precedence over this guide.

YOUR RESPONSIBILITY

The Tenant is responsible for finding out what they and their team need to do to comply with Government regulations and building Codes as well as to obtain all required completion and approvals, including fire safety certification from the relevant Building Authorities for the fitting-out works in the tenancy premises.

All tenants, their representatives, designers and contractors are required to familiarize themselves with this document before design and roll out of shop fit out. Tenants must conform with the general safety, security and design intent by the Landlord.

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STATUS OF THESE GUIDES

The information contained in this document is correct at the time of publication. The landlord and its representatives reserve the right to make changes to the contents herein as may be required by the Authorities or as it deems fit without prior notice to the tenants.

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WHAT YOU HAVE TO DO:

FIT-OUT GUIDELINES

This section set out good practices, house rules and technical information for carrying out work in the Retail mall. Specific requirements are identified and highlighted by Retail Operations and/or Engineering team(s).

01 describes Preparations required & Mall's House rules for tenant to carry out a fit-out from Concept to Trade as well as handing back your unit.

01A describes Technical criteria and guidance such as M&E information & Specifications, Base building information, etc.

01B describes Sustainability Guide.



SUPPORTING INFORMATION:

APPENDICES

The Appendices provide contact information for our team that will help you to make the process smooth and all the forms required for our submissions with guidance.

Some information is provided re: submissions to Authorities, however you are responsible for checking it against latest Government guidance.

WHAT YOU NEED TO KNOW: RETAIL DESIGN GUIDELINES

These section consists of documents which set out Design rules and guidance for planning of retail tenancy units. Special requirements are identified and highlighted by Tenancy Design team.

02 describes what applies typically to all units.

03 describes special requirements for specific Retail/ F&B typology and/or clusters.



DESIGN & FIT-OUT GUIDE CONTENTS

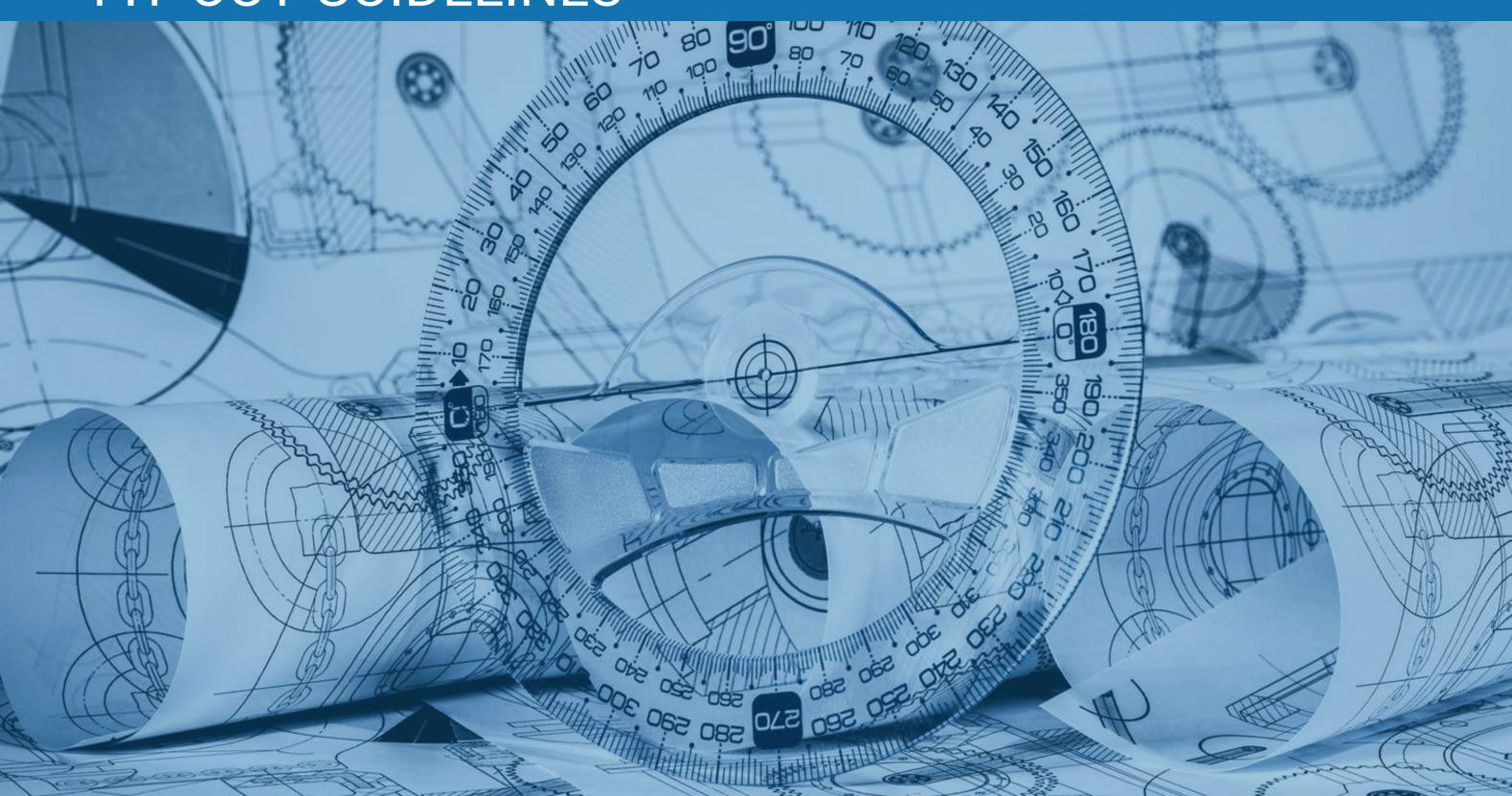


Fit-Out G	Fit-Out Guidelines UPDATE: 20250401		
01.0 01.1 01.2	INTRODUCTION PROCESS: DESIGN & FIT-OUT OVERVIEW PROCESS: DETAILED GUIDANCE STEP 01: GETTING STARTED STEP 02: DESIGN APPROVAL - FIT-OUT PROPOSAL SUBMISSION BASE CONSULTANTS & NSC STEP 03: BEFORE FIT-OUT - PTW FOD INSURANCE COVER TEMP SUPPLY WSH, HWP REQUIREMENTS HOARDING STEP 04: FIT-OUT - WORKING AT SITE STEP 05: BEFORE TRADE - PRE-OPERATION INSPECTION UTILITY SERVICES STEP 06: COMPLETION - AS-BUILT DOCUMENTS, REFUND PROCESS OVERVIEW: REINSTATEMENT STEPS R01 - R06: REINSTATEMENT		
01.4	GENERAL HOUSE RULES		
Technical	Guidelines		
01A-1	BASE BUILDING INFORMATION ☐ TYPICAL SHOP FRONT ELEMENTS ☐ COMMON AREA FINISHES		
01A-2	M&E GUIDELINES PLUMBING & SANITARY SERVICES ELECTRICAL SERVICES PA SPEAKERS & FIRE ALARM SYSTEM FIRE PROTECTION SYSTEM ABF MICRODUCT INFRASTRUCTURE AIR CONDITIONING SERVICES MV SERVICES FOR F&B SMOKE CONTROL		
	pility Guide	UPDATE: 20250401	
01B-1	GREEN BUILDING GUIDE MATERIAL SPECIFICATION		
01B-2	MATERIAL SPECIFICATION es to Fit-Out Guidelines	LIDDATE: 20250401	
01C-1 01C-2 01C-3 01C-5 01C-8	GLOSSARY OF TERMS & ABBREVIATIONS DESIGN & FIT-OUT: YOUR PROGRAMME SUBMISSION: DRAWING CHECKLISTS – ID & ARCHITECTURAL TECHNICAL CONTACT LIST: SUNTEC TEAM BASE CONSULTANTS NOMINATED SUBCONTRACTORS TEMPLATES & FORMS	UPDATE: 20250401	
Retail Des	sign Guidelines	ISSUE DATE: 20231222	
Refer to R	Retail Design Guidelines for general design principles and guidance. Design Guidelines Resign Guidelines Resign Guidelines will be issued where applicable to unit typology.		



01

FIT-OUT GUIDELINES



FIT-OUT GUIDELINES





INTRODUCTION: OUR TEAM | YOUR TEAM



YOUR TEAM

TENANT

You are responsible to appoint a personnel—in-charge, representative on your behalf and for ensuring **Your Team** especially your **Designer** and **Fit-Out Contractor** has the required experience:

- You should choose to work with and appoint a **Designer** who has previous experience of at least 3 other similar projects and best suited for the project to liaise with **TD**.
- Appoint suitable **Fit-Out Contractor & Specialists** to deliver the scope of works with expected quality finishing and provide timely co-ordination with **RO** to complete the site works within stipulated Fit-Out period.
- Appoint QP(s) to help you check and ensure applicable regulatory requirements have been considered;
- ☐ Ensure that your appointed team must familiarise themselves with our Design and Fit-Out Guidelines, to ensure an efficient and trouble-free process
- □ Confirm your own adherence to trade requirements, apply for and get ready relevant business licences and permits before trading.

YOUR DESIGNER

Their scope of work including and not be limited to:

- □ Design, plan and detail your unit for the best brand expression outcome for your business with sufficient information for your contractor to build;
- ☐ Liaise with Our Team RO/TD on design and technical requirements of your unit;
- ☐ Advise you on other specialists required, manage and coordinate input from them;
- ☐ Assist you with graphics, signage and material selection, etc.

YOUR QP (ARCHITECT, M&E/STRUCTURAL/CIVIL ENGINEER, ETC.)

Before commencing Fit Out Works, Tenants &/ Contractors are to appoint their own Qualified Person (QP) such as Architect and M&E / Civil Engineer, etc., for related scope of work including and not limited to:

- ☐ Vet Tenant's interior architectural & M&E design proposal;
- ☐ Ensure the Fit-Out Works comply to prevailing authority requirements and regulation;
- □ Check and certify that Tenant's Fit-Out is within stipulated ST loading and the integrity of base structural design is not compromised by any placement of heavy equipment, proposed slab opening / coring, etc.;
- ☐ Carry out the necessary submissions to all relevant authorities;
- ☐ Check and ensure that all temporary fire protection and safety measures during Fit-Out are in order & upon completion of fit out that all permanent measures are built according to the approved drawing.

YOUR FIT-OUT CONTRACTOR, LICENSED TRADESMEN

The **Fit-Out Contractor** must be competent and available for the works. **Your Contractor** must ensure **Your QP's** alternative fire protection and safety solution are implemented during their works on site, where applicable. They must adhere to the house rules and ensure their site works will not become a nuisance nor compromised safety of their workers, building and mall operations.

TENANT'S ACTION

Our Team is here to help You & Your Team to achieve success in your Fit-Out / Reinstatement of your Retail premises. In the interest of all, Our Team should be treated with respect and consideration. Please brief Your Team that hostility and abusive behaviour towards Our Team should be avoided as Our Team is obliged to implement the stipulated standards and rules as set out in these documents.

OUR TEAM

SUNTEC CITY MALL

ESR Real Estate Services Management Pte Ltd is both the property manager of Suntec City Mall and the managing agent of MCST Plan No. 2197. **Our Team,** made up of representatives and co-ordinators from the related departments. will assist **Your Team** in the Fit-Out process of your premises, so that your business may commence trading successfully at your premises.

RETAIL MARKETING TEAM (RM)

Retail Marketing and Lease Administration Department manages the leasing process and negotiates the commercial terms for the leased premises.

Upon firming up the terms and conditions, **Tenancy Design (TD)** and/or **Retail Operations (RO)** will take over to assist you on Design & Fit-Out respectively. Assigned coordinators will liaise and correspond with Tenants directly.

TENANCY DESIGN (TD)

Tenancy Design (TD) is Suntec City Mall's representative in all matters with regards to review of fit-out Design submissions for approval. **TD** shall brief tenants, provide feedback regarding design and will check that the design intent of all submitted and built on site is aligned with the Retail Design Guidelines.

For all retail tenancy design queries, emails may be directed to the group email for dissemination to the team/ personnel in-charge: ESR-TenancyDesign@esr-res.com

RETAIL OPERATIONS (RO)

Retail Operations (RO) will be Suntec City Mall's representative in all matters with regards to review of Fit-Out and Technical submissions. They are the point of contact to assist retail tenants and their appointed Team on all co-ordination for base building works and modifications during the process of shop fit out.

RO will ensure tenants' renovations and fit-out work comply with approved drawings and Technical Guides, Building, M&E and Sustainability information, process permits to work; monitor fit-out works on site; coordinate provision of required services and assess the readiness of your fit out progress for business commence through joint inspection(s) with your team.

For all retail technical &/ operations queries, emails may be directed to the group email for dissemination to the team / personnel in-charge: retailoperations@esr-res.com

Online PTW Portal: https://ptw.esr-res.com/

BASE CONSULTANTS & NOMINATED SUBCONTRACTORS

These are consultants and sub-contractors who are appointed to oversee and maintain base building services systems of Suntec City. You are to review the conditions for mandatory appointment and work with the respective consultant(s) and/or contractor(s).

PROCESS: DESIGN & FIT-OUT OVERVIEW



01GETTING STARTED

You accept Lease offer and RM introduces you to TD & RO.

RM issues consent letters for your utility account(s) & licence applications.

TD arranges Design briefing and provides you with:

- · Design Guidelines
- Base drawings

RO arranges Fit-Out briefing and provides you with

- Fit-Out Guide
- Technical Guide

You clarify all aspects of your Fitout scope, including:

- Trading name
- Retail / F&B product & service concept
- · General Merchandise Plan,
- Store design concept and operations flow, etc.

You appoint suitably qualified representatives, designer(s), QP and other specialists as required for proposed scope of works.

Your Team prepares the design proposal for submission.

Refer to following pages for further guidance.

02DESIGN APPROVAL

Your Team Representative &/
Designer revises and completes
Fit-Out proposal and makes
submission(s) in good time so
that TD & RO may provide
feedback for Your Team to follow
up with Authorities submissions.

You are to ensure the full design proposal is submitted to facilitate the review process.

Your Representative submits

- · Retail Design for TD's review
- M&E and Structural Design, etc. for RO's review
- If required as follow to feedback given, further revision and additional clarifications for review and approval.
- Appoints nominated base consultants

This review process is repeated till **TD / RO** confirms that both your Design and M&E proposal are approved.

Refer to following pages for further guidance.

03BEFORE FIT-OUT

Your Team Representative &/
Contractor mobilizes before taking
site possession to make
preparation & submit necessary
documentations to RO for the
renovation works to begin in good
time.

Your Representative takes action:

- Familiarises themselves with and Accepts building house rules governing Fit-Out works
- Conducts site survey
- Submits hoarding plan & visual artwork
- Prepares Permit to Work (PTW) documents and applies for PTW through the online portal.
- · Pays Fit-Out deposit
- Submits renovation fit-out schedule
- Applies and pays for use of temporary supply
- Appoints NSC for respective works
- Submits authority approvals /clearances and licence(s), etc.

RO reviews online PTW application. Any incomplete application will be queried before PTW is approved for Fit Out period.

Refer to following pages for further guidance.

04 FIT-OUT

Your Team Representative takes site possession.

Your Contractor & Fit-Out Team works towards completion of Fit-Out works within stipulated Fit-Out period.

Your Representative arranges a Joint inspection with RO from Our Team for handover administration.

Upon successful site takeover, Your Fit-out Team starts work on site with PTW approval, ensuring adequate Fire Safety provisions and Safety implementations for duration of fit our period.

RO follows up on handover issues, if any, to complete outstanding works, within agreed timeline.

Your Team contacts RO from Our Team whenever Fit-Out support assistance is required.

Refer to following pages for further guidance & Appendices for NSC contact details.

05BEFORE TRADE

Your Contractor & Fit-Out Team is about to complete fit out works on site.

And **Your Store Operations Team** is preparing for stocking and store opening.

Your Representative arranges a joint Pre-Operation Inspection (POI) with RO at least 3 days before anticipated opening day.

The site will be checked during POI to assess readiness:

- Store is fitted-out according to approved design.
- All authority approvals and trade license documentations are obtained and submitted.
- Utilities and services, e.g. electrical, water & gas supplies, ACMV systems, etc. are turned on, tested and in working order.
- Signage timer is set to stipulated duration.
- Safety implementations are in order

Your Team ensures store is ready prior to hoarding removal:

- Thorough cleaning done before stocking
- Visual merchandising

Refer to following pages for further guidance.

06COMPLETION

You have begun business operations in your newly fitted out unit.

You submit the as-built documentation according to refund checklist.

Your Team completes all site defects &/outstanding items identified during POI within agreed time.

RO reviews as-built submission, for Your Team's clarification and advise outstanding items, if any, to ensure completeness of asbuilt documentation set.

You & RO carry out a joint inspection to check against submission.

You rectify all outstanding items on site, if any, amend discrepancies and update the drawings / documents and resubmit documentation set.

Upon successful completion & RO confirms acceptance of the asbuilt documentation set.

RO will inform stakeholders to trigger refund of fit out deposit by Finance.

Refer to following pages for further guidance.

PROCESS: DESIGN & FIT-OUT OVERVIEW



RESPONSIBILITY

TENANT'S

The DESIGN & FIT-OUT MILESTONES chart on the right hand side shows the DESIGN & FIT-OUT OVERVIEW process stages against an indicative timeline for a typical Fit-Out of Retail Tenancy unit.

This timeline chart is meant to be a reference to guide Your Team to plan your own project programme timeline for your specific Fit-Out.

The Fit-Out period is determined according to the Lease agreement and therefore You are advised to take note of milestones to gauge Your Team's progress.

The responsibilities of Our Team and Your Team at each respective milestone are summarised here for quick reference.

The flow of the Review & Approval process depends greatly on the co-operation from Your Team to ensure timeliness of your submission in relation to the agreed Fit-Out period as well as completeness of information and drawings to enable review to be conducted.

Before approvals are issued for the Fit-Out Design & Technical proposal, re-submissions will be required for incomplete items and/or inadequate information / details, where necessary.

It is the responsibility of Your Team, i.e. Tenant, Your Designer, Contractor or any of the Tenant's other representatives to ensure that the works carried out are built according to approved design and in accordance with all relevant codes and other applicable industry standards and statutory requirements.

You shall be responsible to engage their own respective QP(s)/PE(s) to make the correct necessary relevant applications and documentations to submit for all required authority approvals prior to commencing business on site or before opening.

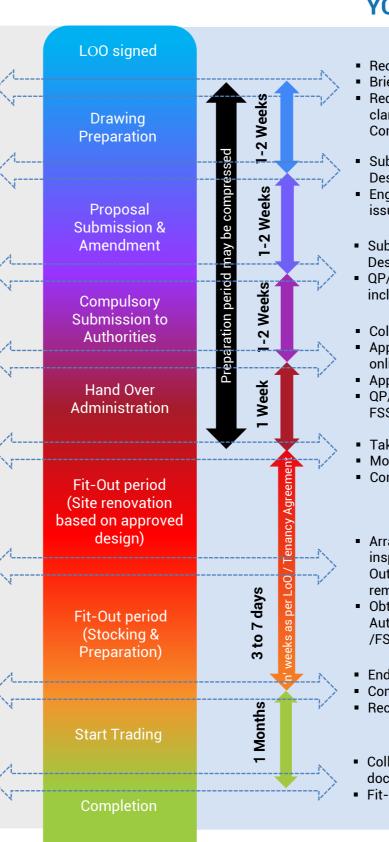
Refer to Appendices to do your own planning

01 **GETTING** TENANCY DESIGN (TD)'S RESPONSIBILITY **STARTED** 02 **DESIGN APPROVAL** 03 **BEFORE** FIT-OUT 04 RETAIL OPERATIONS (RO)'S **FIT-OUT** 05 **BEFORE** TRADE

06

COMPLETION

OUR TEAM ■ Issue Base Archi & M&E drawings ■ Issue Retail Tenancy Guide Review Design received TD Review Design received Approve or request resubmission & clarification RO Review Technical and M&E Design received Approve or request resubmission & clarification Joint site inspection to hand over premises Approve PTW Approve Temporary Supply RESPONSIBILIT application Joint Pre-Operation site inspection Assess Tenant's readiness of business Operation End of Fit-Out Period Post-Renovation Admin Fit-Out Refund Inspection Refund of Fit-Out Deposit



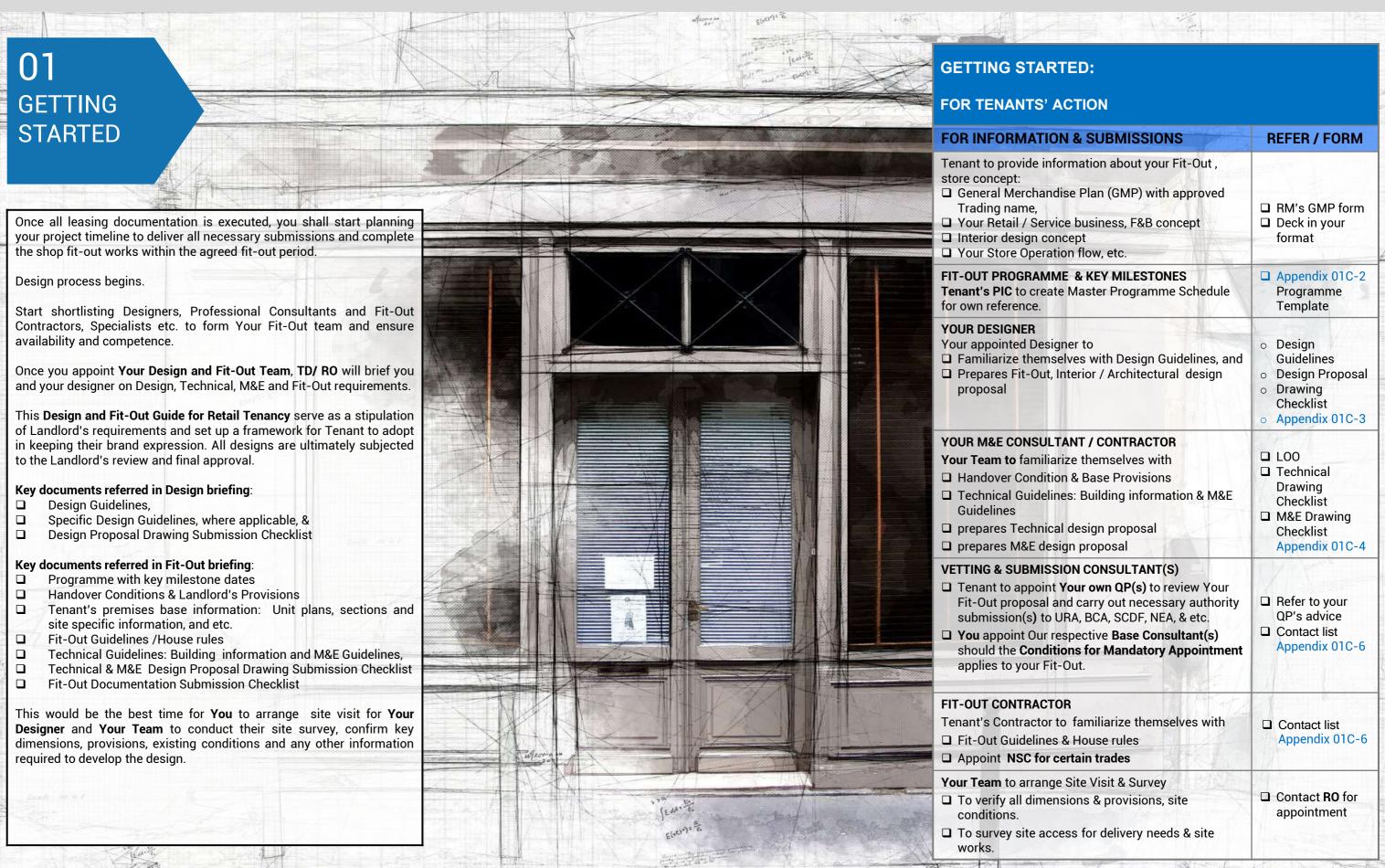
YOUR TEAM

- Receive all documents & files
- Brief Designer &/ Contractor
- Request for site visit/ measurement / clarification together with Designer &/ Contractor
- Submit First Drawing set of both Design & M&E proposals
- Engage QP/PE for vetting compliance issues
- Submit Final Drawing set of both Design & M&E proposals
- QP/PE prepare authority submission including FSSD, etc.
- Collate Fit-Out documents
- Apply for Permit to Work (PTW) on online portal
- Apply for Temporary Supply
- QP/PE submit to Authorities, including **FSSD**
- Take over premises
- Mobilization of contractors
- Commencement of Fit-Out period
- Arrange Pre-Operation joint inspection, upon Completion of Fit-Out works 3-7 days before hoarding removal
- Obtain Operational Licenses and Authority Approvals e.g. MAA /TFP /FSC /SFA, etc.
- End of Fit-Out Period
- Commence Trading
- Rectification & Touch up work, if any
- Collate and submit Fit-Out Refund documents & As Built drawings
- Fit-Out Refund Inspection

DESIGN & FIT-OUT MILESTONES CHART

PROCESS STEP 01: GETTING STARTED





PROCESS STEP 02: DESIGN APPROVAL FIT-OUT PROPOSAL SUBMISSION



O2 DESIGN APPROVAL (1 of 2)

To allow sufficient time for review and approval of your Fit-Out proposal, **Your Team** shall submit Your Fit-Out Proposal to **Our Team** in good time, and where possible, at least 4 weeks prior to commencement of work on site according to the programme.

Designs that deviate from the Design & Fit-Out Guide criteria shall be subjected to Landlord's review and approval and may require more time to evaluate.

SUBMISSION CRITERIA: CONCEPT APPROVAL

Design drawings submissions are mandatory and if deemed unsatisfactory, the Tenant / Tenant's designer will need to re-submit to Our Team for approval.

Tenant could structure their submission in 2 stages:

- ☐ Preliminary submission for Concept Tenants could submit a first round of drawings for approval of general shop design concept.
- ☐ Final submission.

All drawing and documentation approval are granted under 'DESIGN INTENT ONLY' and does not automatically confirm compliance with any statutory requirements.

It is the Tenant's, designer's and contractor's responsibility to ensure that works are built in accordance to all relevant codes, applicable industry standards and statutory requirements.

SUBMISSION FORMAT & HOW TO SUBMIT

Your Team need to submit complete packages with information comprehensive enough for **TD & RO** to understand Your Fit-Out proposal. Incomplete submissions from **Your Team** will lead to delay in review and approval. Refer to summary in Fit-out Proposal Submission Checklist.

All lease lines that have interfacing with the common areas such as ceiling, flooring, inter-tenancy walls and adjacent shop units must be clearly indicated on drawings. Drawings submitted must include dimensions and annotations. All dimensions and site provisions are to be verified on site by **Your Team**.

All drawings should be fully coloured in A3 sized drawn to either one of the following scales: 1:2 | 1:5 | 1:10 | 1:20 | 1:25 | 1:50 | 1:75 | 1:100 | 1:150 | 1:200 We accept e-submission of all drawings in soft copy high resolution PDF & CAD, which are to be submitted to respective person-in-charged:

DESIGN PROPOSAL SUBMISSION

- ☐ Submit via Group Email: ESR-TenancyDesign@esr-res.com
- ☐ Tenancy Design (TD) to review & approve:
- ☐ Interior Design/ Architectural Drawing Set annotated & with dimensions
- Artist Impression All drawings must be clear and in full colour with reasonable accuracy and realism for visualization purposes of the shop front and interior.
- ☐ Signage Details full specifications, impression and artwork of all signage, graphics and display used in the shop design
- ☐ <u>Finishes</u>, <u>Fittings & Furniture Schedule</u> consisting of Full specifications, model and image of finishes, fittings and furniture used in the shop design
- ☐ Sample board of proposed Materials A physical sample board with actual materials labelled and compiled on a durable back board to be submitted to the office reception. Sample board will be returned to tenants after review.

TECHNICAL & M&E PROPOSAL SUBMISSION

- ☐ Submit via Group Email: retailoperations@esr-res.com
- ☐ Retail Operations (RO) to review & approve:
- M&E Drawing Set
- ☐ Technical Drawing Set e.g. Structural drawing set
- Authority Submission drawing set for RO's preparation of consent letter, if required.

NOTES ON AUTHORITY SUBMISSION

Tenants must ensure that their works do not interfere with existing base services or affect base fire safety provisions, fire egress, etc.

You must ensure that Your Design, Technical and M&E Fit-Out proposal

- ☐ have been vetted by **Your QP(s)** for compliance and
- ☐ these are in compliance to the prevailing authority requirements.
- ☐ Prior to making applications to Authorities, consent and approval is required from the Landlord.
- ☐ You and Your contractor shall obtain all necessary Approvals or endorsements before commencing work on site.

WARNING

- ved on or off site until approval
- □ No Fit-Out works are allowed on or off site until approval has been given. The Landlord will not be responsible for any abortive or variation work incurred as a result of rejecting any unapproved items.
- ☐ It is the responsibility of the Tenant to find out what statutory approvals and licences are necessary for your business & operations concept and to obtain them in good time to start trading.
- Certain Submissions MUST be submitted by the Base Consultant(s) and site work for certain trades MUST be carried out by Nominated Sub-Contractor(s) no alternative contractor shall be permitted to carry out that scope of work.

FIT-OUT PROPOSAL SUBMISSION CHECKLIST:

	OR TENANTS' ACTION ist is not exhaustive)		
·	OR INFORMATION & SUBMISSIONS		REFER / FORM
DE se	SIGN SUBMISSION to include Interior / Architectural t:		Submit to TD
_ _ _	Design Concept & Store references Preliminary Drawing Set Rendering & Perspectives Full Design & Detail Drawing Set Sample board of proposed Material Catalogs of furniture and light fittings, etc.		Design Drawing Detail Checklist in Appendix 01C-3
res	RE SUBMISSION (to be accompanied with PE or spective Licenced Worker's endorsement), to include: Electrical services (listed below)		
	Air Conditioning, Mechanical Ventilation		Submit to RO
	Heat / Cooling Load & calculation Auxiliary Air Condition, FCU specification Plumbing & Sanitary, Gas Services Fire Protection (Sprinkler, Hose Reel & Fire Suppression)		Your QP's advice M&E Drawing Detail Checklist in Appendix 01C-4
	Fire Alarm System, PA, Heat Detectors Smoke Control		
	Routing of cables and piping, etc.		
To	be accompanied with PE and/or LEW endorsement Electrical loading & calculation Lighting Power Budget Lighting & Power Layout, Routing of cables and conduit layout SLD, etc.		Submit to RO and Building LEW
TE	CHNICAL SUBMISSION to include		
FII	RE SAFETY / WSH matters / STRUCTURAL matters:		Ordensite a DO and
	Material Test reports Details & Method of Statement for installation Tenant's PE's declaration that Tenant's installation does not affect the structural integrity of the base building.		Submit to RO and Structural Base Consultant Appendix 01C-4
	Proposed slab opening / coring details		
	Proposed Heavy equipment / raised floor Loading Calculation & PE endorsement, etc.		
\vdash	ITHORITY SUBMISSION(S)	\vdash	
	Tenant's QP to advise submission(s) required based on Fit-Out work scope, e.g. URA, BCA BP / ST / Signage, NEA, SCDF, etc. Tenant to provide your QP details and project title,		Submit to Authorities Your QP's advice

copy of submission drawing set

PROCESS STEP 02: DESIGN APPROVAL BASE CONSULTANTS & NSC



O2
DESIGN
APPROVAL
(2 of 2)

NOMINATED BASE CONSULTANTS & NOMINATED SUBCONTRCATORS

You are required to appoint, at Your own cost and expense, Nominated Base Consultants for vetting and to make the mandatory submissions required, where conditions apply to Tenant's Fit-Out.

You are also to engage the respective **Nominated Subcontractors (NSC)** to carry out the related site works of respective services as stipulated by **Our Team.**

Please refer for details of Conditions / Work scope for Mandatary Appointment

- Nominated Base Consultants
- Nominated Sub-Contractors for MEP Systems
- Nominated Sub-Contractors for Others

Refer to Appendix 01C-6 for contact details of the current appointed as Base Consultants and NSC.

NOMINATED BASE CONSULTANTS: FOR TENANTS' ACTION (Refer to Contact details in Appendix 01C-6)

(reserve contact dotaile in rippendix or o c)

NOMINATED BASE CONSULTANT	CONDITIONS FOR MANDATORY APPOINTMENT	TENANT'S ACTION
Building LEW	All Tenants must engage our Building LEW for following scope: Review and approve Tenant's proposed electrical drawings and installation. Review and approve all power upgrading request. Approval of Tenant's Form CS/3. Attendance to Installation of Electrical Meter, Power Turn-On of Demised Premises, and Annual EMA license agreement. Note: Tenants may continue to engage their own LEW for their own SLD drawing endorsement, load computation and endorsement of Certificate of Compliance Form.	
Smoke Control QP	Submissions for modifications to the existing smoke control system at the Retail Mall.	Mandatory where applicable
Submission of Tenant's works affecting the approved base building, including and not limited to the following: Change of Use Gross Floor Area or Building loading capacity (e.g. toilet, carpark, occupant load) Etc., to be advised.		Mandatory where applicable
Structural Engineer	 □ All Tenant's works that may affect the structural integrity of the building. □ Installation that is likely to exceed the floor loading capacity. Example: □ Filing Compactor, □ large scale aquarium, □ strong rooms, □ heavy machinery etc. □ Demolition and installation of structural components. Example: □ Interconnecting staircases, □ Opening & Coring of floor slab □ Removal/Addition of structural elements etc. □ All structural works submission to authorities for approval. 	where

NOMINATED SUB-CONTRACTOR FOR BASE MEP SYSTEMS:

FOR TENANTS' ACTION

(Refer to Contact details in Appendix 01C-6)

NOMINATED SUB- CONTRACTOR	WORKS SCOPE FOR MANDATORY APPOINTMENT	TENANT'S ACTION
Fire Protection System	Modification works to ☐ Fire Sprinkler system ☐ Installation of new hose reel and relocation of existing hose reel	Mandatory
Fire Alarm System Installation of music override control module & Testing Addition &/alteration works to Public Address (PA) Speakers, BMS link connection Smoke detectors, Fire signal link connection Fire Alarm bell & call point.		Mandatory
Smoke Curtain Contractor	Addition &/alteration of Smoke Curtain works	Mandatory where applicable
Fire Shutter Contractor	Addition &/alteration of Fire Shutter works	Mandatory where applicable
ABF Contractor	Addition &/alteration / Reinstatement to Air Blown Fibre (ABF) Microduct infrastructure	Mandatory where applicable

NOMINATED SUB-CONTRACTOR FOR OTHERS

FOR TENANTS' ACTION

(Refer to Contact details in Appendix 01C-6)

NOMINATED SERVICE VENDOR	WORKS SCOPE FOR MANDATORY APPOINTMENT	TENANT'S ACTION	
POS Interface	Tenants must engage Retail Marketing's appointed POS System Provider for their POS system connection. See 01.2.PS05	Mandatory	
Pest Control	Details to contact nominated Pest Control vendor for more details	Mandatory where applicable	
Sanitary Waste pipe Maintenance Vendor	Details to contact nominated Pest Control vendor for more details	Mandatory where applicable	

PROCESS STEP 03: BEFORE FIT-OUT PTW | FOD



03 BEFORE FIT-OUT (1 of 4)

At this stage, **Your Team** must make preparations to commence site works.

It is the responsibility of Tenant and Tenant's team to take care and comply with all Statutory regulations & requirements governing all aspects of Fit-Out scope of works and when carrying out the works.

WHEN TO APPLY FOR PERMIT TO WORK (PTW)

Your Team must make arrangement to apply for PTW **at least 7 working days before** commencement of Fit-Out / Renovation / Reinstatement works in the Retail mall.

FIT-OUT DEPOSIT

Tenants and/or their contractors must submit Fit-Out deposit, (exclusive of GST and free of interest) at least 7 working days before commencement of fit out works.

Complete & submit Fit-Out deposit (FOD) form together with FOD made payable to: MCST Plan no. 2197.

FOD amount (S\$) shall be based on the area of demised premises leased to the Tenant as per below Table.

FIT-OUT DEPOSIT (FOD) FOR RETAIL TENANCY			
\$\$ 3,000.00	Area less than or equal to 1,500 sq ft		
S\$ 6,000.00	Area of 1,501 to 3,000 sq ft		
S\$ 10,000.00	Area of 3,001 to 10,000 sq ft		
S\$ 20,000.00	Area above 10,000 sq ft		

FOD is refundable upon completion of Fit-Out / Reinstatement works and joint inspection of completed works. Refundable amount is subjected to full compliance of house rules.

Before any extension of PTW is approved, **RO** may request for the above deposit to be topped up should there is excessive administrative charges deducted for non-compliance of guidelines and/ or damages caused over the period of Fit-Out / Reinstatement works prior to the extension request.

HOW TO APPLY PERMIT TO WORK (PTW) ONLINE

Tenants and Contractors applying PTW's on tenants' behalf are to create their own login account by registering at: https://ptw.esr-res.com.

More information is available on the portal. Please contact **RO** for additional assistance:

- ☐ FAQ: https://ptw.esr-res.com/page/faq
- ☐ Step by Step Guide: https://ptw.esr-res.com/page/ptw-process

The following typical procedure applies:

- ☐ After login, select > Retail Mall > Tenanted Area > Details of Work
- □ enter your Retail Mall Unit no. to indicate the location of work, work scope, period & working hours.
- □ Upload relevant documents onto portal, Refer to Fit-out

 Documents Checklist & Appendices 01C for form templates.
 e.g. Risk Assessment, Worker name list, Letters of Indemnity /
 Forms, Insurance cover, Work at Heights (WAH), Hot Work
 permit (HWP), Fit-Out Deposit Receipt & Acceptance of House
 rules forms etc.

Applications which are incomplete or requiring amendment will be queried or rejected.

WORKERS NAME LIST

Workers' name list must be submitted together with PTW application and should include name and last 4 characters of work permit no./ identification no. in accordance with PDPA regulations.

NOTE:

- ☐ Refer to online FAQ for guidance on how to upload name list via excel template
- □ Only Workers included in the submitted list are permitted to exchange work pass at the Pass Exchange Counter.
- ☐ Work passes must be exchanged daily before commencing any work on site and returned before Worker leaves the mall for the day.
- ☐ Additional worker names may be added onto an approved PTW.

PTW VALIDITY

Approved PTW is only valid for the work scope, period and working hours as declared in the PTW application.

Some Fit-Out works require more than one PTW application. Refer to this guide, and RO's advice.

PTW EXTENSION

Should Tenants/contractors required to work beyond the period stated on the approved PTW, they are responsible for apply for a new work permit at least 5 working days prior to expiry of the current approved PTW.

PTW extension is to be accompanied by relevant documents & submissions e.g. FOD top up, revised insurance to cover the extended period, where applicable, etc. .

FIT-OUT DOCUMENTS CHECKLIST:

FOR TENANTS' ACTION

(Forms in Appendix 01C unless noted otherwise)

To be uploaded into online PTW Portal: https://ptw.esr-res.com

To be aproduced into offinite 1 111 1 offait. https://ptw.csi/les.com			
FIT-OUT DOCUMENTS SUBMISSION	FORMS		
Confirm against your lease agreement, the Landlord of your leased premises: Suntec REIT Harmony Convention Holding	Details needed for preparation of documents & insurance		
Fit-Out Deposit (FOD) made payable to MCST Plan no. 2197.	Via payment gateway in PTW Portal / PayNow/ Bank transfer		
☐ Fit-Out Deposit Receipt form☐ Violation of House Rules	Appendix 01C		
Letters of Indemnity Note: Tenants are required to furnish these letters of indemnity regardless of the take over condition agreed with Retail Marketing. ☐ Fit out / Reinstatement Renovation Works ☐ Tapping of Temporary Power and/or Water supply ☐ Plumbing & Sanitary Works, if applicable ☐ Tenant or Tenant's QP undertaking for compliance authority's regulations ☐ Waterproofing works if applicable ☐ Others, to be advised by RO, where applicable.	Appendix 01C (To select applicable)		
Insurance Cover Notes	Tenant's insurance		
Workers Name List (PDPA format)	Refer to PTW portal template		
Risk Assessment (5x5 Risk Matrix) / Fire Risk Assessment with endorsement & company stamp	MOM's template		
Fall Prevention plan or Work at Heights	Appendix 01C		
Temporary Electrical & Water Supply Application	Appendix 01C		
Project Work Schedule	Tenant's format		
Additional Separate documentation for specific works Hot work Permit Others	Appendix 01C RO's advice		

PROCESS 03: BEFORE FIT-OUT INSURANCE COVER | TEMP SUPPLY



03
BEFORE
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(2 of 4)

INSURANCE COVER

Tenants/Contractors are to take up the following insurance policies for their works and submit documents via portal at least 3 working days before commencing site works:

☐ A. Work Injury Compensation Insurance

- ☐ Policy cover note from each Sub-contractor will suffice.
- ☐ Tenant's main-contractor is to ensure that each of its subcontractors has bought necessary insurance to cover their own employees. Main contractor to compile & submit the cover note(s) on behalf of their sub-contractors.

☐ B. Contractor's All Risk with Public Liability Insurance

- □ Policy Cover to include all joint insured parties, according to the Leases under respective Strata Landlord as set out in table: Insured Parties
- □ Public Liability Coverage Insured Amount (S\$) for limit of indemnity for any one claim as set out in table: Public Liability Coverage

Before any extension of PTW is approved, **RO** may request for insurance coverage period to be extended prior to the extension request.

TEMPORARY POWER AND/OR WATER SUPPLY

Tenant/Contractor who requires the use of temporary power and/or water supply must submit an application to **RO at least 5 working days** before service is required.

Temporary electricity are charged according to duration needed and area of tenant's premises whereas temporary water supply charge is at a flat rate per month. Refer to Appendix 01C.

All temporary supply payment must be made together with application and are non-refundable. All non-F&B tenants are to use only the designated water points for Fit-Out, to advised by **RO**.

EXTENSION OF TEMPORARY SUPPLY

For any extension of temporary supply, application to be submitted with payment at least 5 working days prior to expiry of application.

When no extension of temporary supplies is received, upon expiry of the last approved application, the temporary supplies shall be turned off without additional notice.

INSURANCE COVER:

FOR TENANTS' ACTION

(Forms in Appendix 01C unless noted otherwise)

INSURED PARTIES: Leases under Suntec REIT: Occupant Contractor • HSBC Institutional Trust Services (Singapore) Confirm against your Limited as Trustee of Suntec REIT lease ESR Trust Management (Suntec) Limited ESR Real Estate Services Management Pte Ltd MCST Plan No. 2197 Leases under **Harmony Convention Holding Pte Ltd:** Occupant Confirm against your Contractor lease Harmony Convention Holding Pte Ltd ESR Real Estate Services Management Pte Ltd MCST Plan No. 2197

PUBLIC LIABILITY COVERAGE:		
Renovation Type And Cost	Limit Of Indemnity For Any One Claim	
For Retail and all F&B units with Renovation costs above S\$300,000	S\$ 3 Million	
For Retail units only with Renovation costs between S\$100,000 and S\$300,000	S\$ 2 Million	
For Retail only units with Renovation Costs below S\$100,000	S\$ 1 Million	

Useful links

More information on highlighted Topic

Work Injury Compensation Insurance

https://www.mom.gov.sg/workplace-safety-and-health/work-injury-compensation

TEMPORARY POWER / WATER SUPPLY:

FOR TENANTS' ACTION

(Forms in Appendix 01C unless noted otherwise)

All new or extension application must be submitted to RO at least 3 working days before service is required.

SUBMISSIONS FOR TEMPORARY SUPPLY	FORMS
Leases under <u>Suntec REIT</u> : ☐ Apply & Pay to MCST Plan no. 2197.	Confirm against your lease
Leases under <u>Harmony Convention Holding Pte Ltd</u> : ☐ Apply & Pay to <u>Harmony Convention Holding Pte Ltd</u>	Confirm against your lease
 □ Temporary Electrical & Water Supply Application form □ Request of temporary electricity supply form □ Undertaking by Tenant's LEW □ Electrical temporary DB SLD with LEW endorsement 	Appendix 01C
Temporary Supply Charges Payment (non-refundable) Rates Details in Application Form	Via Pay Now / Bank Transfer
Temporary Power supply turn on appointment It is compulsory for Tenant's LEW to attend	To arrange with RO

WARNING



- ☐ When no extension of temporary supplies is received, upon expiry of the last approved application, the temporary supplies shall be turned off without additional notice.
- □ Any temporary electrical supply works found to be tapped ILLEGALLY, and/or Contractor found carrying out dangerous electrical work e.g. with cable grounded to earth, with faulty Tenant's circuit, and/or equipment, etc. that result in tripping of the Landlord's Electrical Board and thereby some or all tenants supplied by this same board, an ADMINISTRATIVE CHARGE of S\$1,000 will be imposed on top of all damages, if any, caused to Mall and other Tenants' and/or their properties.
- □ ILLEGAL tapping from Hose reels or non-designated toilets or water points, an ADMINISTRATIVE CHARGE of S\$1,000 will be imposed on top of any damages caused to mall and other Tenants' properties.
- ☐ Tenant to provide precautions to avoid water seepage when Temporary Water Supply tap off point is within renovating unit:
- ☐ Curb with localised waterproofing to proposed wet area
- ☐ Container to be placed below tap

PROCESS 03: BEFORE FIT-OUT WSH, HWP REQUIREMENTS



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BEFORE
FIT-OUT
(3 of 4)

WSH (WORKPLACE SAFETY & HEALTH) POLICY

Tenants and Contractors are required by legislation to ensure appropriate reasonably practicable safety measures are in place to eliminate and minimise hazards for safety of workers carrying out work activities on site.

RISK ASSESSMENT

☐ WSH and Risk assessment with 5 x 5 risk matrix, according MOM's template, must be submitted together with the application of PTW.

FIRE RISK ASSESSMENT

- ☐ Tenants and Contractors are to include Fire Risk assessment and ensure Fire Safety measures are implemented when carrying work on site
- ☐ Tenants and Contractors shall consult their QP to get advice on appropriate temporary fire safety measures, where applicable, especially when mall's designated fire escape route is affected and relocation of base fire fighting system are involved, such as Hose reel etc.

Working at Height (WAH)

- ☐ Permit to Work at Heights is required for carrying out any work above 3m height, as stipulated by WSH (Scaffolds) Regulations & WSH (Work at Heights) Regulations.
- ☐ Tenants and Contractors are to take appropriate reasonably practicable safety measures to ensure safety of workers on site, e.g. PPE, harness, certified training to use MEWPs. For temporary structure (such as scaffolding) above stipulated height, PE approval must be included and Tenant's Safety officer must be present during the set up.
- ☐ You could submit your fall prevention plan or fill up the WAH form & RA, these to be included together in the main work permit application.

HOT WORK PERMIT (HWP)

- ☐ Hot Work Permit application is necessary for cutting, welding, bracing etc. and must be submitted daily at least 3 working days before commencing any hot works with the main work permit application.
- ☐ Hot Work Permit Form is to be submitted together with supporting document.
- ☐ Validity for HWP is maximum for 3 days period only.

- ☐ Contractors requiring a longer Hot Works period, may submit Hot Work work schedule and contact **RO** to make arrangement.
- ☐ Tenants and Contractors are to take appropriate safety measures and ensure due care during hot works to eliminate and minimise injury or damage to persons and/or properties.
- Method of statement and precautionary measures must be approved by RO
- ☐ Measures to be observed during Hot Works, include but not limited to:
 - ☐ All Hot works are to be carried out after mall operational hours only and/or as advised by our mall's Fire Safety Manager.
 - Work area to be cordoned off with safety hoarding, barricade, tape and temporary signage, where applicable.
 - ☐ Fire extinguishers.
 - ☐ Shield / Fire blanket esp. where welding near areas accessible by public.
 - ☐ Hoarding so that area of work is cordoned off, where applicable.

WORK REQUIRING SEPARATE PTW APPLICATIONS:

FOR TENANTS' ACTION

(Forms in Appendix 01C unless noted otherwise)

To make application & upload documents in online PTW Portal: https://ptw.esr-res.com

SUBMISSIONS	FORMS
Hot Works, refer to details under Hot Works Permit ☐ Hot Work Permit Application Form ☐ Risk Assessment for Hot works ☐ Welder Certificate ☐ Method of Statement ☐ Fire Watch Name list, where applicable	Appendix 01C MOM's format Your format Your format Your format
NSC works: Sprinkler & Hose Reel related works Charges applies for drainage and water borne fee.	Appendix 01C
NSC Works: PA, Smoke Detector, BMS related works	Appendix 01C
ABF Microduct related works	Appendix 01C
All Tenants' work in common area / risers, etc. outside of lease premises	Refer to 01.4 Working at Site / Cmmon Area
Skip Bin parking in carpark ☐ Note: Skip Bin is only permitted at designated lots and on first come first serve basis only ☐ Charges applies if parking longer than the stipulated daily period.	Refer to 01.4 Construction Debris / Waste Material Disposal

Useful Links More information on highlighted Topic			
WSH	MOM WSH legislation, codes of practices and Singapore Standards: https://www.mom.gov.sg/legislation/workplace-safety-and-health		
Risk Matrix	https://www.wshc.sg/files/wshc/upload/cms/file/RiskAssessmentForm.doc		
Fire Risk	MOM resource: https://www.mom.gov.sg/workplace-safety-and-health/safety-and-health-management-systems/risk-management National Fire And Emergency Preparedness Council (NFEC)'s Fire Risk Assessment Guide: http://www.nfec.org.sg/publication_fire_risk.html		
Hot Work Fire Risk assessment	NFEC's Guide: http://www.nfec.org.sg/publication_fire_risk.html		

PROCESS 03: BEFORE FIT-OUT **HOARDING**



REFER

Review by RO

Review by TD

03 **BEFORE FIT-OUT** (4 of 4)

No renovation will be permitted to proceed should there be no hoarding and /or hoarding visual installed. Tenants & their Contractor must consider the site set out arrangement to hoard up area of work.

TYPICAL HOARDING REQUIREMENTS FOR SHOP UNITS

- ☐ Generally Full height, based on site condition.
- ☐ Hoarding set out must adjust for site conditions, e.g.
 - ☐ May extend typically 600mm from the lease boundary
 - Access Door to finish flush on exterior elevation: door to open inwards, door frame, closer & number padlock
 - ☐ Interface with Ceiling and floor
 - ☐ specific amenities e.g. supply air grilles, smoke curtains, sprinklers, CCTV, etc.
- ☐ Structurally stable installation with PE endorsement
- ☐ Hoarding material (non-combustible) :
 - ☐ Indoor: gypsum / calcium silicate board
 - ☐ Outdoor: Metal, bondex or equivalent
- ☐ Finishes:
 - ☐ Base Paint Nippon Matex Cloud BS00A01 and
 - ☐ Hoarding Artwork vinyl sticker

ADDITIONAL REQUIREMENTS RE: HOARDING FOR KIOSK UNITS

- ☐ 1600mm height, subject to RO's advice based on site condition
- ☐ Shared inter-tenancy wall: hoarding to be erected also along adjoining
- ☐ Dust Cover: White canvas vertically when working, laid down horizontally as covers during mall operating hours.
- ☐ Other conditions advised by **RO**

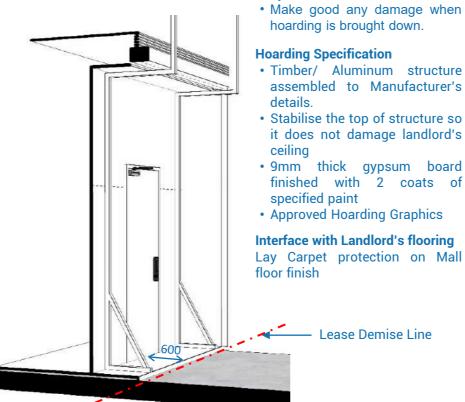
REQUIREMENTS FOR SHOP UNITS WITH EXTERNAL FAÇADE

- ☐ Requirement for Outdoor type hoarding typically applies.
- ☐ Otherwise, for units with existing glass façade suitable outdoor use vinyl sticker may be installed onto glass panels, to be removed upon completion of Fit-Out.

HOARDING ARTWORK

Criteria for graphic visual artwork:

- ☐ Extent: to cover the entire hoarding panels : Full height (top to bottom), & full width including the left and right side panels
- Branding and lifestyle presentations are strongly encouraged. Hard sell content is not allowed.
- Indicate shop opening date / period
- Avoid dark background graphics/pictures



Hoarding Typical Section

Door and door frame

- Open inwards
- Single-leaf
- Self Closing
- Number padlock
- PTW displayed with clear plastic on the hoarding interior
- Width of door to comply with existing



Hoarding Access Door

FOR TENANTS' ACTION **SUBMISSIONS**

□ Plan showing door(s) Elevation, showing door(s)

Approved Trading name.

projected date of opening and

More information on highlighted Topic

☐ Lifestyle / branding images

HOARDING CHECKLIST:

☐ Section, showing material & installation details

Hoarding layout with dimensions & annotations

□ PE endorsement

Hoarding Artwork to must include following details: ☐ Artwork Size: Full height x full width

Lay Carpet protection on Mall

Interface with Landlord's Ceiling Maximum gap of 25mm

Opening for air vents if required

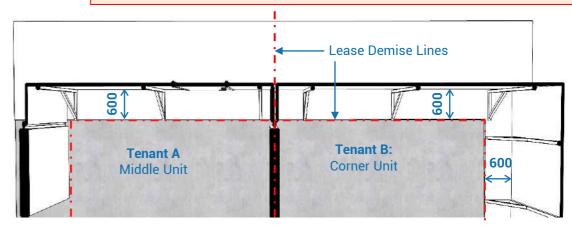
SCDF hoarding Guideline:

https://www.corenet.gov.sg/media/1849891/circular-managing-fire-safetyfor-use-of-hoardings-and-safety-nets.pdf

WARNING

Useful Links

- ☐ It is the responsibility of the Tenant / Tenant's Contractor to ensure that their hoarding is structurally stable, always maintained in a good and presentable condition.
- ☐ If the hoarding structure and artwork are not maintained as required, RO can request Tenant to re-install a new hoarding structure or artwork, rectify the fault(s), with all costs incurred to be borne by the Tenant.



Typical Hoarding Plan

PROCESS 04: FIT-OUT WORKING AT SITE



04 FIT-OUT

At this Stage, You have taken site possession and commence your site works.

SECURITY PASS STATION FOR DAILY CHANGING OF CONTRACTOR PASSES Contractors are to commence work at site only with approved work permit and carry out works which are indicated in the application during the stipulated working hours for the scope & location.

- □ Workers are to exchange valid passes daily before starting work on site for the day by presenting a screenshot or copy of the approved work permit, to register and exchange temporary pass at the following locations:
 - ☐ Atrium (T1/T2) Basement 2 Loading Bay (Car park G entrance): For All tenants (Retail & Office Towers)
 - ☐ Atrium (Convention Centre) Level 2 Loading Bay:
 For Retail tenants located at Atrium (Convention Centre)

Refer to maps in Appendix 01C for these Pass Exchange Counter locations. Refer to table: Working Hours.

WORK SAFETY HEALTH COMPLIANCE

Tenant and contractor are to take appropriate reasonably practicable measures, to observe safety work procedures as per requirement under MOM's Workplace Health & Safety Act.

These procedures include

- □ Tool box meeting, PPE , WSH, WAH, HW and Fire Safety, applying for factory licence where applicable, etc.
- ☐ The presence of a Competent Supervisor is necessary to supervise critical works like hacking of flooring and wall, and hot work.
- ☐ Due care must be taken so as not to cause damage or injury to persons or properties.

FIRE SAFETY COMPLIANCE DURING CONSTRUCTION

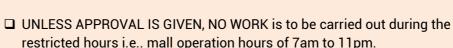
Both Tenants and Contractors must play their part to ensure fire safety measures are implemented at their job site at all times.

Due care must be taken to prevent risk of fire so as not to cause damage or injury to persons or property. These includes:

☐ No smoking within job site and shopping mall.

- ☐ Good housekeeping of job site to provide clear fire escape route within premises
- ☐ Standby appropriate fire fighting equipment e.g. fire extinguisher and any additional equipment especially during more risky work such as hot works
- ☐ Provide fire watch during hot woks.
- □ No obstruction to fire escape routes and base fire fighting facilities, e.g. sprinklers, FAP, Hose reel, Alarm call bell, strobe light, etc.
- ☐ Any work affecting sprinkler coverage and base facilities to be undertaken by appointed NSC and to proceed upon QP's advice.
- ☐ To ensure that temporary fire protection and safety measures are in place during fitting out. To ensure that QP's alternative fire protection and safety solution are implemented during any Fit Out or renovation works, where applicable.

WARNING



- Workers and/or Contractor/ Vendor companies who consistently and flagrantly flout their own safety RA & Fire Safety measures, WSH and SCDF regulations may face the following:
 - ☐ administrative charge imposed via deductions from their Fit-Out Deposit / Reinstatement Deposit,
 - be blacklisted and
 - ☐ Refused all future access into site.

WORKING HOURS:

FOR TENANTS' ACTION

Note:

All working hours are to be stated in PTW and subject to review.

Pass exchange will only proceed as per worker name list accompanying the approved PTW according to the approved working hours.

Type / Location of Works	Permitted Hours	
General works and all noisy, dusty and smelly works.	Night works 11pm to 7 am	
Only non-noisy, non-dusty and non-smelly works behind full height hoardings.	Day works 7am to 11pm	
Work near operating tenants with extended hours (e.g. Cinema) or early operating hours (e.g. cafes).	Different restrictions apply, RO to confirm arrangements upon PTW application.	
Delivery of construction materials / fittings & fixtures / bulk furniture .	Night works 11pm to 7am	
Work at Common Area & Car Park Area.	Night works 11pm to 6am	
Skip Bin may park at designated lots after 11pm and leave carpark before 7am.	Night works 11pm to 7am	

	Useful Links to MOM legislation & Codes of Practice More information on highlighted Topic		
WSH	https://www.mom.gov.sg/legislation/workplace-safety-and- health		
WSH	The Code of Practice on WSH Risk Management may also be found under Resources at https://www.wshc.sg		
Risk Management	https://www.mom.gov.sg/workplace-safety-and-health/safety-and-health-management-systems/risk-management		
Fire Risk	National Fire And Emergency Preparedness Council (NFEC)'s Fire Risk Assessment Guide: http://www.nfec.org.sg/publication_fire_risk.html		

PROCESS 05: BEFORE TRADE PRE-OPERATION INSPECTION



05 **BEFORE TRADE** 1 of 2

Tenants are responsible for management of their project timeline and to ensure they are operationally ready in all aspects before they commence trading.

PRE-OPERATION INSPECTION

The Pre-Operation inspection is a milestone for TD, RO and Your Team to assess the completeness of your Fit Out renovation and your readiness for business operation.

Before business commencement, you are to organise and furnish a copy of the documents listed in table: Pre-Operation checklist to respective persons-in-

The given list is not exhaustive and may include other documents relevant to tenant's specific trade, and/or as required in your respective tenancy lease agreement.

WHEN TO ARRANGE FOR PRE-OPERATION INSPECTION

Tenants are to arrange the Pre-Operation inspection with RO at least 3 to 7 days before removing hoarding and start trading.

TENANT SIGNAGE FOR UNIT NO. & OPERATION HOURS AT SHOP FRONT

Tenant shall install designated unit no. at right / left hand side of their shop front. The typical font recommended is Gotham Book at 30mm height, to be in contrasting colour for legibility.

Tenant shall adhere to typical mall operation hours between 10am to 10pm daily or according to their respective Tenancy lease agreement. Tenant shall display signage indicating their operation hours at their shop front as information to shoppers.

AUTHORITY APPROVALS: FIRE SAFETY CERTIFICATE (FSC) / MINOR **ADDITIONS & ALTERATIONS (MAA), ETC.**

Tenants are responsible to consult and engage their own respective Qualified Persons (QP) to carry out all necessary submission to the relevant governing Authority Agencies and obtain all necessary clearances prior to trading.

These Authorities	may include	and are not	limited to	the following:
	,			

- ☐ URA,
- ☐ BCA BP / ST / CPBU,
- NEA
- ☐ SFA.
- ☐ LTA,
- ☐ SCDF FSSD, etc.

In particular, Tenants are to obtain FSC or MAA from SCDF, whichever is applicable, before business commencement. Refer to your QP for advice &/ SCDF link given here for details.

OPERATIONAL TRADE LICENCE(S) / PERMIT(S)

Tenants are responsible for application of and obtaining licences from the necessary respective governing agencies where applicable, before shop opening e.g.

- ☐ Food Shop Licence,
- ☐ Liquor Licence;
- ☐ Public Entertainment Licence.
- Massage Licence,
- □ Halal certification, etc.

OPERATIONAL INSURANCE

- ☐ Operating Tenants are to have in place suitable operational insurance covering items such as public liability, shop front glass damage, etc. as per their Tenancy Lease agreement requirements.
- ☐ Tenants may refer to their representative from Retail Marketing (RM) for clarification and more details.

POINT OF SALE (POS) INTERFACE

- ☐ For any enquiries on POS interface system, contact directly RM's POS vendor &/ RM.
- ☐ There is no POS or data point provided within tenancy premises. Tenant shall provide their own internet connection to upload their Gross Turnover (GTO) report.
- ☐ Tenant must contact our POS System Provider and start applying for their POS system connection prior to their operation of their business.
- ☐ The ePOS Interface Option form would have been issued to the Tenant during confirmation of Tenancy Lease Agreement.

DISMANTLING OF HOARDING

Hoardings are to be removed only after the pre-operation inspection, and only upon completion of fitting out works and setting up of merchandise and displays.

Removal of hoarding is strictly to be carried out at night after mall operating hours. Contractors are responsible to remove the hoarding stains on our common area floor tiles and ceiling after dismantling the hoarding. Such touch up works are to be carried out immediately after removal of hoarding.

WARNING

- If any part of the Fit-Out and critical items are observed not to be ready, RO reserves the right to turn down tenant's request to commence business trading until compliance &/or rectification is completed.
- ☐ Do note that trading for business without any FSC or MAA in place is a serious offense under the Fire Safety Act.

PRE-OPERATION CHECKLIST:

FOR TENANTS' ACTION

(Form in Appendix 01C unless noted otherwise)

Prior to commencement of business and operations, Tenants are to furnish a copy of all authority approval, especially FSC or MAA, & relevant trade licence(s) / permit(s) to RO: retailoperations@ers-res.com.sg

SITE READINESS

- ☐ Fit-Out on site is according to approval design & Approved authority submission
- ☐ Safety measures in place
- ☐ Install at shop front unit no.
- ☐ Install at shop front operation hour sign
- ☐ Ensure timer is installed for Signage & DCA
- ☐ All loose furniture is set up
- ☐ Ensure site is cleaned
- ☐ Ensure display, stocking up in progress
- ☐ Confirm Hoarding removal date (night works only)
- ☐ Confirm Trading date

AUTHORITY / LICENCE STATUS

- ☐ Submit SCDF FSC / MAA
- ☐ Submit all other applicable Authority Approvals
- ☐ Submit all Trade operation licences / permits

OPERATION READINESS	APPLY TO
Ensure relevant utility accounts are opened and services turned on: □ Electrical □ Water □ Gas □ Air Condition turned on &	Refer to next page Your action
AC air-balancing reportMV Testing & Commissioning	Your action
☐ Submit POS form &☐ Arrange for POS installation / system link up	Contact RM's POS vendor
 □ Request & collect letterbox keys, if required □ Submit form and collect Tenant Security Pass for operational access to Bin Centre 	Apply to RO
☐ Submit Operational Insurance	_

- ☐ Submit Pest Control Services Policy & Schedule
- ☐ Submit Sanitary &/ Exhaust Systems Service Schedule
- ☐ Others, as required that by RO

Useful Links

More information on highlighted Topic

SCDF FSC/MAA

https://www.scdf.gov.sg/home/fire-safety/plans-andconsultations/minor-addition-alteration-works

PROCESS 05: BEFORE TRADE UTILITY SERVICES



05 BEFORE TRADE 2 of 2

LETTER BOX FACILITY

- ☐ The letter boxes are under MCST's management and are located in various mail rooms in the mall and assigned according to zone and unit no.
- ☐ Tenant may contact **RO** to request use of letter box facility, if required. Tenants can collect the keys from MCST's office once they are ready.
- ☐ Upon lease expiry, Tenant to clear letter boxes and duly returned keys in working condition. Tenant is to provide one to one replacement of any missing letter box keys at Tenant's own cost.

TENANT'S BIN CENTRE ACCESS RT CARD

- ☐ Bin Centre Access RT Card(s) are issued to Retail Tenants' operational staff to access B2 Bin Centre for disposal of refuse from daily business operations.
- ☐ Tenant may contact **RO**, nominate their operational staff PIC by filling up an online form for this application.
- □ Charges are applicable for each replacement pass in the event of any loss / damage.
- ☐ Upon lease expiry, passes are to be duly returned to MCST before refund of deposit(s).

WARNING



- ☐ Construction waste & debris from Fit-Out or Reinstatement works are not to be disposed at the B2 Bin Centre.
- ☐ Refer to Fit-Out House rules and Housekeeping.

UTILITY ACCOUNTS & VENDORS:

FOR TENANTS' ACTION

(Refer to Forms / details in Appendix 01C)

Tenant to confirm against your lease before application.		
LEASES UND	APPLY TO	
ELECTRICITY SI ☐ Open Account ☐ Pay to MCST ☐ Billing agent ☐ Payment via	Apply to RO	
WATER ☐ Open Accour ☐ Pay to Singa	Apply to SP	
LEASES UND	APPLY TO	
■ Open accour ■ Pay to Harm ■ Payment via	Apply to RO	
WATER SUPPLY ☐ Open Private meter account under Harmony Convention Holding Pte Ltd ☐ Pay to Harmony Convention Holding Pte Ltd		Apply to RO
FOR ALL LEA	APPLY TO	
GAS SUPPLY Open account with <u>City Gas</u> Pay to <u>City Gas via Singapore Power Services (SP)</u>		Apply to SP
NOMINATED SERVICE VENDOR	WORKS SCOPE FOR MANDATORY APPOINTMENT	TENANT'S ACTION
POS Interface	Tenants must engage our mall's POS	Mandatory

SUBMISSIONS

WATER SERVICES

Application should be accompanied by:

☐ Letter of account opening issued by RM

connection.

- ☐ Drawing of installation cold water supply endorsed by Licensed Plumber
- ☐ Drawing of installation of plumbing & sanitary system endorsed by licensed Plumber

System Provider for their POS system

RO will issue the no objection for meter installation, where required.

GAS SERVICES

Application should be accompanied by:

- ☐ Letter of account opening for gas meter issued by RM.
- ☐ Installation drawing with LGW endorsement is received.
- □ RO will issue the no objection for installation, where required

UTILITY SERVICES SUBMISSION:

FOR TENANTS' ACTION

(Refer to Forms / details in Appendix 01C)

Refer to relevant forms + process flow chart + fee schedule for more details.

SUBMISSIONS

AIR BLOWN FIBRE (ABF) MICRODUCT INFRASTRUCTURE USAGE

Tenant and/or their appointed Telco contractor to submit documents via PTW portal:

- Customer Information recording form
- ☐ ABF infrastructure Application form
- ☐ Proposed routing layout plan and
- Proposed ABF Microduct servicing port number stated in Tenant Unit / Telecom Riser / MDF Room

PERMANENT ELECRTICITY ACCOUNT OPENING PROCEDURE

ELECTRICITY SERVICES

- ☐ Suntec City Mall is a contestable consumer with EMA with appointed electricity retailer.
- ☐ Letter of account of opening electricity will be issued by RM.

Step 1:

Tenant/Tenant's LEW submits the following documents directly to our **Building's LEW (DRPL Corporation Pte Ltd)** for Endorsement:

- Customer Information recording form.
- ☐ CS3 form completed with address of the electrical installation, name of customer and the applied load. (see attached).
- ☐ Single Line Diagram (SLD) for the tenant's main switchboard all the DBs, and load calculation list endorsed by tenant's LEW (for capacity > 45kVA) and electricity letter (s/n 6).
- ☐ Certificate of Compliance on Electricity endorsed by tenant's LEW.

Step 2:

Tenant/Tenant's LEW submits the endorsed CS3 form, Tuas Power electricity account opening form and the following documents to **RO** for endorsement:

- ☐ Electricity account application letter issued by RM
- ☐ Request for Electricity Supply by Tenant (See Form 1)
- Request for New Meter Installation (See Form 2) with endorsed CS3 and electrical SLD
- ☐ Photo record of installed external CT (if require 3 phase CT meter)
- ☐ Cheque payment for the electricity security deposit (See Table 1).
- ☐ Original copy Electricity bill GIRO form (see attached).
- Original endorsed CS3 form and electrical SLD to Landlord for endorsement.

Step 3:

- Tenant submit above documents to RO/Flor Energy.
- Once Tuas Power has confirmed receipt, they will schedule a date / time with your LEW for meter installation

Step 4

☐ Tenant's LEW may then contact our Building's LEW to arrange for permanent power turn on

PROCESS 06: COMPLETION AS-BUILT DOCUMENTS, REFUND



06 COMPLETION

Once You commence trading, Tenant is expected to put in measures to maintain their premises in good state and submit relevant monthly Service reports.

PEST CONTROL POLICY AND MONTHLY SERVICE REPORTS, WHERE APPLICABLE

- ☐ Tenants operating businesses such as F&B, Food Retail, childcare, etc. are to engage an experienced Pest Control vendor at the Tenants' own costs and expense, and put in place suitable Pest Control Policy and maintenance contract for their operations.
- ☐ Regular Pest Control Service reports to be submitted to **RO**.

SANITARY (KWP) &/ EXHAUST SYSTEMS SERVICE SCHEDULE & REPORTS, WHERE APPLICABLE

Tenants operating F&B outlets and Food Kiosks, and/or who have such installations within their premises are to engage their own vendor and provide their Schedule and regular Service reports to **RO** the following:

☐ Sanitary (KWP) Service Report -

to includes all pipeline serving tenant's unit

■ Exhaust Systems Service Report –

to include all exhaust hood & ductwork serving tenant's unit

Upon lease expiry, Tenants are to service / clean both Sanitary (KWP) & Exhaust and submit the respective last maintenance reports.

REFUND OF FIT-OUT DEPOSIT

PROCEDURE AND TERMS & CONDITIONS

- □ Upon completion of the Fit-Out works and commencement of business, Tenants &/ Contractors are required to submit all as-built drawings/ documents together with the Appendix 01C Fit-Out deposit Refund Checklist Form.
- □ Should assistance be required, Tenants may schedule an appointment with RO at least 3 working days in advance. Unscheduled walk-ins will not be entertained.

WHEN TO ARRANGE REFUND INSPECTION

- □ A joint inspection with **your team** will be arranged by **RO** after receipt of the full set of drawings and documents. **RO** will confirm in writing that the collation of final as built documents & drawings is completed before the refund will be processed.
- ☐ After this initial inspection, Tenant shall amend drawings with discrepancy, rectify all defects &/or complete any outstanding items highlighted by RO, if any. A second inspection may be arranged, if required.

WARNING



- ☐ Refund process is recommended to be completed within 2 months from business commencement.
- ☐ The refund of Fit-Out deposit, less any administrative charges imposed during the Fit-out period, will be processed only upon tenant fulfilling the following:
 - ☐ completion of all drawing amendment and /or
 - □ rectification work on site, if any.
- MCST reserves the right to forfeit the Fit-Out deposit should the document & drawing collation and full refund process is not completed by Tenant.

SERVICE VENDORS:

FOR TENANTS' ACTION

(Refer to Contact details in Appendix 01C-6)

NOMINATED SERVICE VENDOR	WORKS SCOPE FOR MANDATORY APPOINTMENT	TENANT'S ACTION
Pest Control	Tenants shall engage our nominated vendor, so that the pest control plan is seamlessly executed on site.	
P&S / Kitchen Exhaust Maintenance Vendor	Tenants may engage our nominated vendor.	Submit service reports to RO

REFUND OF FIT-OUT DEPOSIT:

FOR TENANTS' ACTION

(Refer to Forms / details in Appendix 01C)

Refer to Refund checklist forms for more details.

Tenants are required to send the full set of soft copy and CAD drawings (scale of 1:50) and documents to **RO**: retailoperations@esr-res.com.sg

SUBMISSIONS

REFUND DOCUMENTATIONS

- □ Refund Checklist Form
- $\hfill \square$ Bank Statement Header reflects Company Name & account number

FIT-OUT DCOUMENTS & DRAWINGS with relevant endorsements

- ☐ Design Drawing Set
- M&E Drawing Set
- ☐ Technical Drawing Set, e.g. Structure, etc.
- ☐ Authority Approval & Approved Plans

M&E ITEMS & REPORTS

- ☐ AC Air balancing report
- ☐ Electrical SOTO, COC, etc.
- ☐ Sanitary &/ Exhaust Systems Service Schedule
- ☐ Engraved Tags at electrical boards

OTHERS

- ☐ Approved operational trading licence(s) & permit(s)
- ☐ Pest Control Policy And Monthly Service Reports, etc.

PROCESS: REINSTATEMENT OVERVIEW



R01 GETTING STARTED

RM issues letter of non-renewal, confirms with **Your Team** the lease end date and takeover condition.

Your Team Representative contacts RO for support needed.

RO provides you with

- Fit Out & Technical Guidelines
- Base drawings
- Arranges briefing session with you

You confirm your last trading date and the reinstatement scope and period according to the terms & conditions set out in the lease agreement, any variation is subject to RM's review and approval.

You appoint suitably qualified representatives, contractor(s), QP and other specialists as required for proposed scope of works.

R02 BEFORE SITE WORKS

Your Team Representative &/ contractor mobilizes to make preparation in good time for the reinstatement works before lease end date.

Your Representative takes action:

- Conducts site survey
- Familiarises themselves with and accepts building house rules governing fit out works
- Submits reinstatement work schedule
- Submits hoarding plan & visual artwork
- Prepares Permit to Work (PTW) documents and applies for PTW at online portal
- · Pays Reinstatement deposit
- Applies and pay for use of temporary supply, if required, during reinstatement period.
- Applies and pay applicable charges for skip bin PTW for disposal of reinstatement debris.
- Appoints NSC for respective work, where applicable.
- Submits authority approvals /clearances and etc., as required.

RO review PTW documents for the approved PTW for Fit Out period.

R03 LAST TRADING DAY

After trading hours on your last trading day, **Your team** starts packing after mall operation hours.

Your Contractor

- Ensure all PTW for moving out and reinstatement works has been approved.
- Put up approved hoarding layout & visual artwork after mall hours of last trading day.

Your Team continues moving out:

- Pack up stock and belongings behind hoarding,
- Arrange moving out your stock, fixtures and furniture only after mall operation hours.
- Clear out your letterbox, to replace lockset if the keys are missing
- Retain key(s) to premises, where applicable, letter box key(s), Tenant Bin Centre Security access RT card for returning to RO during takeover inspection.

R04 REINSTATEMENT

Your contractor starts reinstatement on site and works towards completion od site works before lease end date.

Your Contractor Team starts work on site when PTW is approved

- reinstate premises to bare or stipulated takeover condition as agreed and confirmed with RM
- ensure adequate fire safety provisions for duration of fit our period.

Your Team contacts RO from Our Team whenever reinstatement support assistance is required.

R05BEFORE TAKEOVER

Your team is about to complete reinstatement works on site and is preparing for return of premises.

Your representative arranges for a pre-takeover inspection at least 3 days before anticipated return of premises which must be no later than the lease end day.

Your Team returns & submits the following, where applicable,

- Key(s) to premises,
- Letterbox key(s),
- Tenant Bin Centre Security access RT card
- According to takeover & refund checklist; FT flushing, MV system servicing reports & documentations, Other Fire Alarm system reports, e.g., Smoke detector & PA speaker, Hose reel, & etc.
- General cleaning of premises & housekeeping with all rubbish disposed.

Your Team completes site defects &/outstanding items identified during inspection by lease end date and terminates all utility account(s).

R06 COMPLETION

You arrange for a Joint inspection for the return of premises on or before the lease end date.

Upon successful takeover of premises, and receipt of outstanding documents, if any, RO confirms acceptance of service reports.

RO will inform stakeholders to trigger refund of reinstatement deposit by Finance.

Refer Appendix 01C for NSC contact details

PROCESS STEPS R01 - R06: REINSTATEMENT



R01 -R06

All the Fit-Out submissions and house rules shall apply to Reinstatement works, whether tenant is carrying out partial or full reinstatement works.

REINSTATEMENT PROCEDURE

- ☐ Tenants shall reinstate their premises to the stipulated handover condition as confirmed with their Retail Marketing representative according to their Tenancy Lease Agreement.
- Tenant may contact RO to arrange for briefing and clarifications, if required.
 Tenants are responsible for management of their project timeline to ensure the premises is in satisfactory condition, ready to be returned to Landlord on or before the Lease expiry date.

REINSTATEMENT TO BARE CONDITION

- ☐ Typical scope of works for full reinstatement is summarized in **table**: Reinstatement Site Work.
- ☐ As the list is not exhaustive, Tenants are to abide with advice given by **RO** during briefing and / or pre-takeover inspection.

WHEN TO ARRANGE PRE-TAKEOVER INSPECTION

to be disposed at the B2 Bin Centre.

Tenants are to arrange with **RO** a Pre-takeover inspection <u>at least 3 to 7 days</u> to assess readiness of premises and remaining works before the agreed takeover date.

WARNING

- ☐ Construction waste & debris from Fit-Out or Reinstatement works are not
- ☐ The Refund of Reinstatement deposit, less any administrative charges imposed during the renovation period, will be processed only upon tenant fulfilling the following:
 - ☐ Successful takeover of premises by Landlord
 - ☐ Completion, amendment and rectification of all outstanding items by tenant, if any
 - ☐ Completion of drawing and/or reports, documentation, if any
 - ☐ Finance's confirmation that no other monies are owed by Tenant to Landlord/ MCST.
- ☐ MCST reserves the right to forfeit the Reinstatement deposit, should the required works are not completed and outstanding documents & drawings are not submitted by Tenant.

REINSTATEMENT SITE WORK:

FOR TENANTS' ACTION

(Form in Appendix 01C unless noted otherwise)

Prior to commencement of Reinstatement Works, Tenants are to confirm the scope of reinstatement works with **RO** against their Lease Agreement.

CHECKLIST BASED ON FULL REINSTATEMENT

Hoarding

☐ Hoarding plan, elevation & Details w PE endorsement.

INTERIOR FINISHING, FIXTURES & FURNITURE

- ☐ Remove, dismantle & dispose all tenant's loose and built-in fixtures
- ☐ Strip bare all floor finishing and remove all stains / glue marks
- ☐ Hack to one bare concrete level, removing all floor screed, waterproofing water & waste pipes / electrical conduits
- Provide cement stumps to hold in place stainless steel floor inlay, if required
- ☐ Make good and replace all damaged common tile finishes, if required
- ☐ Remove all tenant's shop front finishes, enclosure, internal partitions and wall finishes, box up's, wallpaper, if any.
- ☐ Make good Landlord's finishing at shop front, demising fins, common ceiling, columns & inter-tenancy walls / façade glass,
- $\hfill \square$ Make good door finish, lockset and ironmongery, where applicable
- ☐ Paint all walls with 2 coats of approved white emulsion paint.

M&E SYSTEMS

- □ Remove all 2nd layer sprinklers installed and any 1st layer modified by tenant
- ☐ Remove all ACMV ducting & diffusers, MV fans installed by tenant to tap off point at FCU/ KED/ FAD, reinstate NRD, if any. Cover up &/ install temporary filter to the return air intake opening of FCU, where applicable.
- ☐ Remove all piping & to install vacuum plug to cover the floor traps.
- ☐ Remove all other tenant's M&E installations including light fitting/ electrical conduits, CCTV, music speakers etc.
- ☐ Reinstate and make good all services to the original finish with labeling esp. if they were painted over
- ☐ Reinstate electrical isolator & Tel BT to 1400mm height AFL, and all M&E services according to Landlord's base provisions & plans
- ☐ Remove fibre from ABF microduct between Riser and unit
- □ Reinstate ABF Microduct coiled 5m to original location (entrance of unit above false ceiling)

STRUCTURAL

☐ Make good any damaged vermiculite coating with 2-hour fire rating as per PE's advice c/w PE endorsement

GENERAL CLEANING BEFORE HANDING OVER

- Arrange for skip bin, where applicable.
- Clear and dispose all rubbish off site.
- ☐ Clean premises, façade glass (if any) and
- ☐ All affected common areas, etc.

REFUND OF REINSTATEMENT DEPOSIT:

FOR TENANTS' ACTION

(Refer to Forms / details in Appendix 01C)

Refer to Refund checklist forms for more details.

Tenants are required to send the full set of soft copy and CAD drawings (scale of 1:50) and documents to **RO**: retailoperations@esr-res.com.sg

SUBMISSIONS BEFORE REINSTATEMENT

ADMINISTRATIVE

- ☐ Confirm Hoarding installation date (night works only)
- ☐ Confirm Last Trading date
- ☐ Safety measures in place
- ☐ Reinstatement Work Programme Schedule
- ☐ Make PTW applications, as necessary

SUBMISSIONS AFTER REINSTATEMENT

REFUND DOCUMENTATIONS

- ☐ Refund Checklist Form
- ☐ Bank Statement Header reflects Company Name & account number

DCOUMENTS & DRAWINGS with relevant endorsements

☐ Authority Approval & Approved Plans, where applicable

M&E REPORTS

- ☐ Sanitary Systems Flushing Service report
- ☐ Exhaust Systems: KEF, FAF, EAC, Hood & ducting, etc. last Service report
- ☐ Test report from NSC(s) that smoke detectors, PA speakers, hose reel & fire alarm system are in good state and working condition.

Terminate all utility accounts, e.g.

- ☐ Electrical, Refer: Electrical Termination form
- Water.
- ☐ Gas &
- ☐ Telco

OTHERS

- ☐ Last Pest Control Service Report
- ☐ Return Keys to premises, if any
- ☐ Return letterbox keys, if required
- ☐ Return Tenant Security Pass for operational access to Bin Centre

HOUSE RULES OF MCST 2197 (1 of 2)



VALID PERMITS. APPROVALS & CERTIFICATES

- ☐ The Tenant's contractor must not commence work till all permits (including Permit to Work), approvals and endorsements have been submitted, reviewed and approved by RO.
- ☐ A copy of the approved work permit must be displayed in a clear plastic pocket on the front of hoarding (beside the hoarding door) before commencing site work.

WORKING HOURS

- ☐ Generally, all work to be carried out at night after mall operating hours, between 11pm and 7am.
- ☐ Details Refer to 01.2 table: Working Hours.

WORKINGAT SITE / AT COMMON AREAS

- Work in common areas where agreed with RO shall be cordoned off with warning signs as directed by RO or its agents.
- ☐ Working hours to adhere to RO's advice.

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- □ No storing of material and equipment outside of agreed work area or hoarding as appropriate.
- ☐ MCST and/or the Landlord will not be responsible for loss of equipment, tools, material, fittings, fixtures, etc.
- ☐ No loud music is permitted.
- ☐ Appropriate PPE must be deployed during site works: helmets, hazard vests, shoes, etc. to comply with safety regulations.

PROTECTION OF OTHER TENANTS'/LANDLORD FIT-OUT AND COMMON AREAS

The Fit-Out Contractor shall take all due care not to damage common area, Landlord's or neighboring tenants' flooring, walls, ceilings, fittings, fixtures and fit-out due to their works.

- ☐ During delivery of heavy goods, the contractor shall ensure the floors are adequately protected and all trolleys used are fitted with rubber wheels with bumpers to minimise damage.
- ☐ They shall be responsible for any damage, action, claims or liabilities arising from the execution of their works.
- MCST and/or the Landlord reserves the right to take all necessary remedial actions at its discretion and charge all costs and expenses incurred against the Fit-Out / Reinstatement Deposit should the remedial work not be carried out in accordance with direction from RO or its agents and charge all costs and expenses incurred against the Fit-Out / Reinstatement Deposit from responsible parties where more than one contractor is involved.

FIRE SAFETY COMPLIANCE

- ☐ Tenant's or Tenant's contractor must engage their own QP, who shall confirm all temporary fire protection and safety measures during fit-out are compliant to regulations.
- ☐ The appointed QP will be required to check on site regularly to ensure compliance by your contractor at every stage of the fit-out.
- ☐ For Hot Works, The tenant's contractor shall follow all safety requirements set out in their permit approval and any all statutory rules.

SECURITY CAMERAS, SMOKE DETECTORS, HOSE REELS & FIRE ALARMS

- ☐ The tenant's contractor shall ensure that security cameras, smoke detectors and/or fire alarms are not obstructed as far as practicable.
- ☐ The tenant or their contractor shall apply at least 24 hours before for

isolation of alarms or cameras where works are likely to generate dust, smoke or fumes that may set off alarms or affect their operation in any way

☐ Access to Hose reels must not be obstructed at all times.

DELIVERY ROUTES

- ☐ Fit-Out Contractors are to confirm delivery routes and timing with RO and our officers before commencing any work.
- ☐ Contractors are to use only designated routes & service lifts for transportation of materials and furniture.
- ☐ The Contractor must ensure that the load does not exceed the permissible load capability of the lifts. No delivery or material handling is allowed via the escalators and passengers lifts.
- ☐ Trolleys or other equipment used for the delivery and handling of materials, from point of unloading through to the point of entry to the unit, must be fitted with rubber castors. Canvas and 5mm thick plywood is to be used to protect the common area flooring and walls (with minimum 1.2 meter height or higher as required by Tenancy Care).
- ☐ Tenants with specific delivery request may liaise with RO for review and approval of alternative delivery routes.

SMOKING POLICY

- ☐ Smoking shall only be permitted in designated areas and not be permitted on the site area or any part of the mall, including escape stairwells.
- ☐ The Tenant's contractor to ensure all their workers are aware and act responsibly.

CLEANING & HOUSEKEEPING

Tenants & Contractors are to practice good housekeeping and exercise good pest management to the satisfaction of Landlord during their site works. They are required to carry out cleaning to all common areas affected by their Fit-Out Work and of their own work site, implementing measures including the following:

- ☐ Proper dust control measures such as carpets, white canvas sheets are to be in place to ensure the common areas are kept clean.
- Maintain a floor mat mat and damp mop at all times on site to clean up dust and dirty foot prints when necessary.
- ☐ Carry out periodic cleaning to all affected common areas which includes corridors, ceiling, storerooms lobbies, walkways, toilets etc. to the satisfaction of RO.
- ☐ Hoarding door is to be closed when dusty works are in progress. Protect all voids below the ceiling with canvas or plastic sheet.
- Pre-filters to be installed at FCU's / AHU's and Fresh Air vents to prevent dust trapping.
- Keep all building materials and equipment away from public areas. No building materials or renovation debris are to obstruct the corridors and passageways. These areas form part of the escape route in the event of building emergencies.

Below are indicative rates of housekeeping and administrative charge, to be determined by RO's discretion based on severity and urgency of incident:

- ☐ Clearing general waste due to illegal dumping by Tenant / Contractor \$200 one-time charge per occasion
- ☐ Clearing furniture due to illegal dumping by Tenant / Contractor \$500 one-time charge per occasion
- ☐ General cleaning due to failure by Tenant / Contractor to maintain cleanliness at affected common areas varies from \$200 to \$500 depending on size of affected area.

USAGE OF TOILETS DURING RENOVATION

- ☐ Tenants and contractors are to exercise reasonable care when using all toilet and washing facilities without damaging the washing closet, water tap, basin, floor traps etc.
- ☐ There should be strictly no washing up or bathing in common toilets. All mess and spills must be cleaned up before mall operating hours on the next day.
- □ RO reserves the right to withdraw permission to use facility. Any Contractor or workmen found urinating and / or defecating in any area other than the designated toilet will be barred from the site.

HOUSE RULES:		
FOR TENANTS' REFERENCE		
FOR MORE INFORMATION ON: REFER:		
1.	Permits, approvals, certs	01.2 tables & checklists
2.	Working Hours	01.2 table: Working Hours
3.	Cleaning & Housekeeping	01.04 House Rules
4.	Protection to and Rectification of damage to common area	01.4 House Rules
5.	Breach of House rules resulting in Administrative charges	01.4 House Rules

WARNING



- □ All occupiers, tenants and their contractors shall at all times observe and comply with house rules of the Management Corporation Strata Title 2197 (MCST 2197) and all other applicable legislation at their own cost.
- MCST and/or the Landlord reserves the right to take all necessary remedial or removal actions at its discretion and charge all costs and expenses incurred against the Fit-Out / Reinstatement Deposit should the remedial work not be carried out in accordance with direction from RO or its agents and charge all costs and expenses incurred against the Fit-Out / Reinstatement Deposit from responsible parties where more than one contractor is involved.
- ☐ Under such circumstances, MCST and / or Landlord shall not be held responsible for any losses or damages of material, tools and equipment, and merchandise etc. while carrying out such remedial or removal works.

HOUSE RULES OF MCST 2197 (2 of 2)



PEST CONTROL

- □ Where required, Tenant must engage a qualified pest control company to carry out weekly inspection and treatment against rodent, cockroaches, mosquitoes, flies, ants and other insects during the works, to protect not only the unit(s) but also its surrounding areas and submit the inspection report to the RO. The type and timing of the treatment shall be coordinated with the RO.
- ☐ Fumigation is strictly prohibited in the Building.
- ☐ The Tenant shall be responsible for any Stop Work Order issued by NEA as a result of any pest breeding ground found within the unit.
- ☐ Where possible, the fit-out design shall also eliminate any pest harborage site and entry point into the premises.
- ☐ Should the Tenant and/or Tenant's Contractors not comply with the above, MCST and/or the Landlord reserves the right to engage its service provider to carry out such works and charge the cost with administrative fee (to be determined by the RO) to the Tenant or charge the cost against Tenant's Fit-Out deposit.

CONSTRUCTION DEBRIS/ WASTE MATERIAL DISPOSAL

- ☐ The Tenant shall ensure that their appointed Contractor(s) do not dispose debris and surplus materials at the common areas including inside the Bin Centre and dumping waste into floor traps, sinks, toilets, gullies and drains is strictly prohibited. The Tenant is to maintain the cleanliness of their premises and common area at all times.
- □ Unless otherwise stated, the Tenant shall instruct their Contractor(s) to remove all construction debris from site daily. Skip tanks / Open Top Container (OTC) are not permitted to be parked overnight in the car park. All debris shall be stored at units and arranged to cart away from unit to car park and/or loading & unloading bay only when transportation vehicles have arrived.
- □ Should the Tenant not comply with the above, MCST and/or the Landlord reserves the right to engage its debris removal services provider to carry out such works and charge the cost and administrative fee (to be determined by RO), to the Tenant or charge the cost against Tenant Fit-Out deposit. Under such circumstances, MCST and / or Landlord shall not be held responsible for any losses or damages of material, tools and equipment, and merchandise etc. while carrying out such removal works.

WATER PROOFING FOR ALL SERVICE RETAIL WITH WET AREAS AND F&B TENANTS

- ☐ Tenants shall indemnify Landlord, MCST and/or neighbour against any damage for water seepage arising from their premises and waterproof all wet areas within their premises at their own cost. Extent of area shall depend on Tenant's layout and site conditions, to be advised by RO. Waterproofing shall have upturn height of at least 300mm with 1200mm at sink areas and 1800mm at shower areas.
- □ Tenants and Contractors are to conduct waterproofing test(s) during weekdays. Contractors are to furnish RO with photos BEFORE and AFTER the test (minimum 24 HRS observation) so as to observe if there is any drop in water level. A tile (vertically upright) shall be placed indicating shop name & unit no. with a marking of water level at the start of the ponding test. Only when there is no drop in water level after 24 hours, the Contractor may then proceed to continue with the floor screed and piping works.
- ☐ Tenants and Contractors are to keep and submit records of the waterproofing material specification, method of installation and Warranty before refund of fit-out deposit.

DUSTY, NOISY AND SMELLY WORKS

- □ All noisy, dusty and smelly works must be carried out when the mall and adjacent tenants are not operating. Where nearby operating tenants' hours are extended or start early, all such work must start after and stop before their operating hours.
- ☐ Smoke alarms must be isolated prior to commencing such work.
- ☐ Tenants' Fit-Out / Reinstatement works shall be undertaken in such a way that a satisfactory indoor environment is maintained.
- ☐ It is the Tenant and/or Tenant's Contractor responsibility to take all necessary measures to minimize excessive noise, dust, dirt and odour emitting from the premises.
- ☐ The Tenant and/or Tenant's Contractors are required to ensure that the activities and processes should be scheduled such that they have the lowest possible emissions.
- ☐ In the event where the activities and processes which pollute the air is inevitable, Contractors should as far as possible, encapsulate the area, provided with local extraction, carried out in areas with direct exhaust to the exterior, or limited to after building operating hours when few people are exposed.
- ☐ For instance, all work such as spray painting, gluing of carpet or varnishing and those that create noise, smoke and dust nuisance must be avoided and to be done only outside normal working hours.
- □ All ventilation ducts, grilles, ACMV equipment and wall openings must be properly sealed. Interior paints, varnishes, sealants and adhesives are to be low volatile organic compounds (VOC) using natural and water- based products where possible.

MATERIAL, HEAVY MACHINERY AND EQUIPMENT

- ☐ The Tenant and Tenant's Contractors must ensure that the building materials, tools, equipment, machinery and merchandise are kept within the premises with the necessary precautions to prevent pilferage.
- ☐ The Tenant and Tenant's contractor must inform MCST and the Landlord via RO in advance of any heavy electrical equipment or machines that are to be brought to the site. If approved, the assembly of machinery shall be completed before they are brought to site.
- ☐ Use of combustible materials for internal partitions, ceiling, and finishes are not permitted unless approved by relevant Authorities. Building materials that contain toxic substances which could pose a hazard to health when used in the building must be avoided.
- ☐ The Tenant shall obtain prior written approval from RO should there be storage of any combustible or dangerous building materials such as combustible paints, gas cylinders etc. These items shall be kept in designated locations with all the necessary precautionary measures taken. Any Statutory Licenses required for the storage of such items shall be obtained by the Tenant.
- □ Placement of building materials and/or heavy machinery on the Base Building structure shall only be allowed with the endorsement of the Base Building Structural Engineer and approval of the Landlord.
- ☐ MCST and/or the Landlord reserves the right to remove and dispose all items placed in the common area, especially those obstructing the corridors and fire escape routes and charge the expenses against the Tenant's Fit Out deposit. Under such circumstances, Landlord will not be responsible for any loss or damage to the items removed.

ADMINISTRATIVE CHARGES FOR VIOLATIONS OF HOUSE RULES:

Contractors are to abide by all advice and instructions from RO and our duty officers.

The following table sets out typical violations and administrative charges **per occurrence** that will be imposed.

No.	Description	Admin Charge
		(Subject to prevailing GST)
1.	Commencement of works without valid Work Permit	\$500
2.	Failure to display Work Permit	\$500
3.	Failure to obtain valid passes for workers	\$500
4.	Failure to put up proper protection or take protective measures (E.g. Hoarding, dust screen)	\$500
5.	Worker found smoking in Premises or within restricted areas or Cigarette butts found within the Premises	\$500
6.	Poor housekeeping and pest control	\$500
7.	Placement of items or working at common areas	\$500
8.	Illegal dumping of debris and waste material	\$500 + disposal cost
9.	Damage to common property	\$500 + reinstatement cost
10.	Dusty, noisy and smelly works during restricted hours	\$1,000
11.	Obstruction to evacuation routes or fire protection system	\$1,000
12.	Disruption to building services (E.g. False fire alarm activation, power failure, water leaks among others)	\$1,000 + responder(s) & initial rectification cost
13.	Failure to comply to WSH / Fire Safety regulations and/or duty officer's instructions.	TBA based on Severity by RO



01A

TECHNICAL GUIDELINES

CONTENT

01A-1 BASE BUILDING INFORMATION

TYPICAL SHOP FRONT ELEMENTS

COMMON AREA FINISHES

01A-2 M&E GUIDELINES

PLUMBING & SANITARY SERVICES

ELECTRICAL SERVICES

PA SPEAKERS & FIRE ALARM SYSTEM

FIRE PROTECTION SYSTEM

ABF MICRODUCT INFRASTRUCTURE

AIR CONDITIONING SERVICES

MV SERVICES FOR F&B

SMOKE CONTROL



BASE BUILDING: TYPICAL SHOP FRONT ELEMENTS



This section provides information on the existing building's base material, finishes and typical architectural detail.

TYPICAL HANDOVER CONDITIONS

Typical handover conditions of a Retail shop unit include following:

- ☐ Shop Unit interior in bare condition.
- ☐ Shop Unit demise walls with demise fins.
- ☐ Shop front with Lease line defined by stainless steel floor inlay.
- ☐ Typical Landlord's finishes are the adjacent finishes outside the lease line shop front & common area.
- ☐ External Façade, where applicable.

Handover conditions of other Unit Typologies are according to tenancy lease agreement. Tenants can reach out to RO should more details are required.

TYPICAL SHOP FRONT & UNIT ELEMENTS

Tenant shall provide proper termination details for a better interface with the mall's common area elements. All Landlord's air condition supply vents, firefighting provisions and any access panels shall not be blocked always.

Refer to Design Guidelines for design guidance.

□ Demise Walls:

- ☐ Unit boundary walls are typically non-load bearing construction, i.e.. noncombustible dry partition board or masonry wall in white emulsion paint finish.
- ☐ Strictly no alterations or fixing to the existing demising wall, intertenancy wall/ partition edge treatments.

□ Demising Fin:

- ☐ Typically, the demises walls come with a full height stainless steel demise fin at the shop front.
- ☐ Tenants are to finish and terminate their shop front finishes to the side of the fins, behind the lease line.
- ☐ Removal and/ or modification to the demising fin is strictly prohibited.
- ☐ Typical variations of inter-tenancy demise fin & column cladding details are shown in the following pages.

☐ Floor:

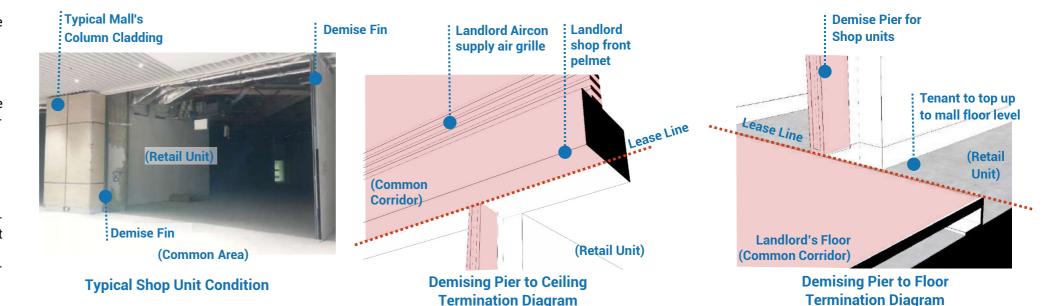
- ☐ Typical Unit handover condition is bare concrete.
- ☐ Within their unit, Tenants are to top up screed with their floor finishes finished to match mall floor level.
- ☐ Removal and/or modification to the existing stainless steel inlay is strictly prohibited.

□ Ceiling:

- ☐ Tenants are to finish shopfront finishes to the underside of shopfront pelmet or to be flushed with the mall ceiling level, whichever is applicable
- ☐ Removal and/or modification to the existing ceiling edge and/or pelmet is strictly prohibited.
- ☐ The following details are in the following pages:
- ☐ Common ceiling details at Level 1.
- ☐ Common ceiling details at Basement 1, Level 2 and Level 3.

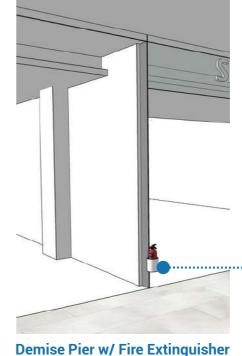
■ External Façade:

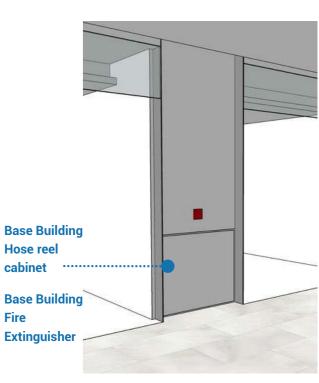
- ☐ There is no standard details for external façade. Please enquire for more information.
- ☐ Tenants are to provide ceiling upturn finishing to their interior false ceiling with a setback allowance of minimum 200mm from the box ceiling to the glass facade.
- ☐ Once the shop unit is handed over, Tenants are responsible to take care of the glass façade maintenance within their demised premises. In the event of any damages, tenant is responsible to reinstate to landlord's specification at their own cost.



Base Building Common Corridor Ceiling Signage Zone **Demise Wall Demise Fin Base Building Common Corridor**

Demise Pier w/ Mall's Column





Floor

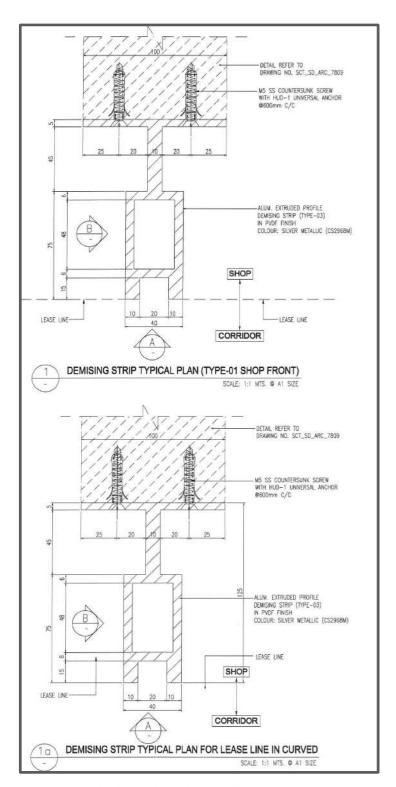
Demise Pier w/ Hose Reel

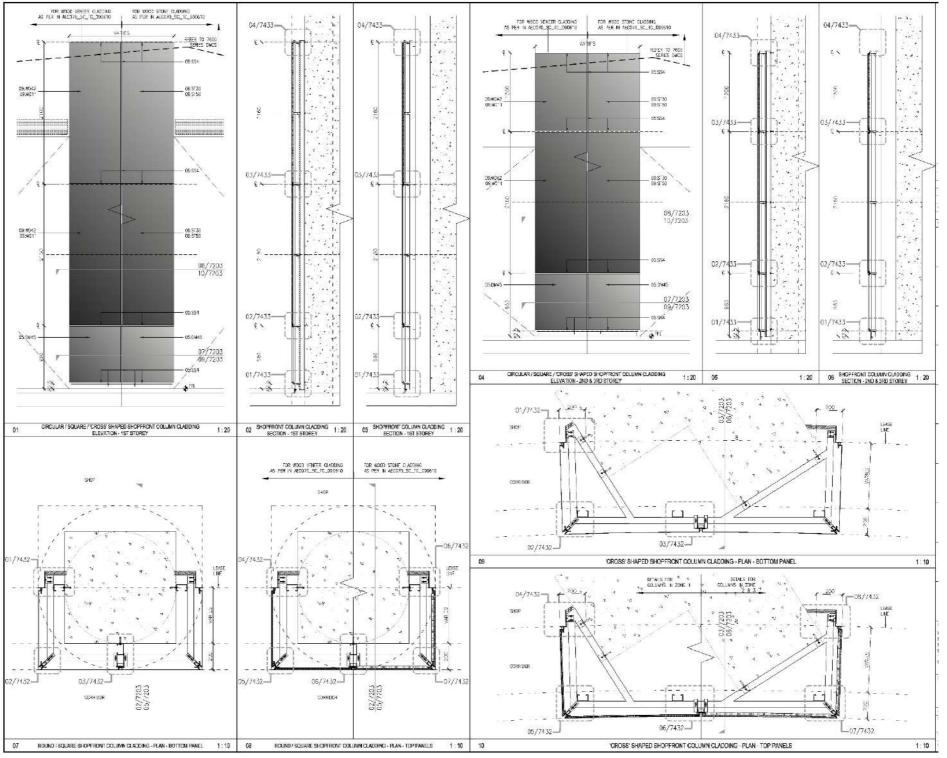
BASE BUILDING: TYPICAL SHOP FRONT ELEMENTS



TYPICAL COLUMN FINISHES BASED ON LOCATIONS:

LOCATION	FINISHES
Atrium (Convention Centre)	Marble finish
Atrium (T1 & T2) & Atrium (T3 & T4)	Oak veneer finish





Typical Demise Fin Detail

Typical L1 Shop front Column Cladding Elevation Detail

BASE BUILDING: TYPICAL SHOP FRONT ELEMENTS



TYPICAL SHOPFRONT AND CEILING HEIGHTS BASED ON LOCATIONS:

Level 1

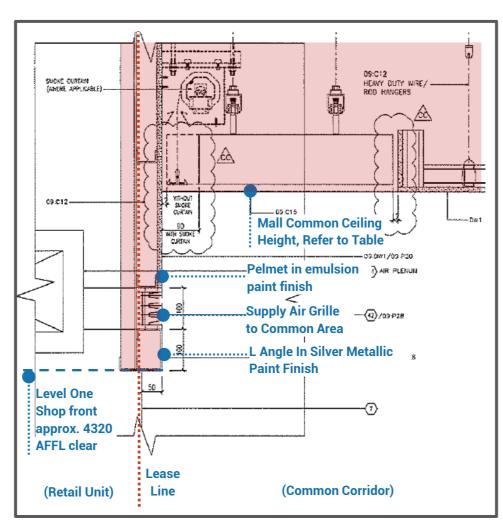
Note: Common Supply Air Grille is located at pelmet above Shop front. All dimensions & provisions to be verified at site.

SHOP FRONT	APPROX. HEIGHT AFFL
Typical Units	4320 mm
COMMON CORRIDOR CEILING HEIGHT	APPROX. HEIGHT AFFL
Atrium (Convention Centre)	4600 mm to 4800 mm
Atrium (T1 & T2)	4800 mm
Atrium (T3 & T4)	4500 mm

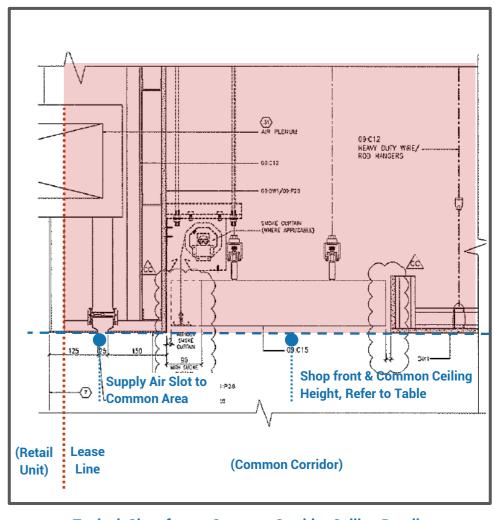
Basement 1, Levels 2 & 3

Note: Common Supply Air Grille is typically located at Common Ceiling just in front of Shop front, except for L3 Atrium facing units. All dimensions & provisions to be verified at site.

SHOP FRONT	APPROX. HEIGHT AFFL
Atrium (Convention Centre) L2 Units	3740 mm to 3840 mm
L3 Atrium-Facing Units	2880 mm to 3360 mm
B1 Mezzanine Units	2580 mm
B1 Fountain Court Units	3760 mm
All Other Locations Typical L2 & L3 Units	2880 mm
COMMON CORRIDOR CEILING HEIGHT	APPROX. HEIGHT AFFL
Atrium (Convention Centre) L2	3740 mm to 3840 mm
Atrium (T1 & T2) and Atrium (T3 & T4) L2 & L3, except below Atrium	2880 mm
B1 Mezzanine	2580 mm
B1 Fountain Court	4060 mm



Typical Shop front - Common Corridor Ceiling Details for Level One



Typical Shop front - Common Corridor Ceiling Details for All Other Locations (except L3 Atrium facing units)

BASE BUILDING: COMMON AREA FINISHES



COMMON AREA FINISHES:

The following are specifications should Tenant's contractor require to complete / make good the works.

Please refer to supplier / vendor contacts under NSC.

Note: These are available from MCST's Pa
LOCATION
Emulsion Paint for Common False Ceiling

ainting Term Contractor.

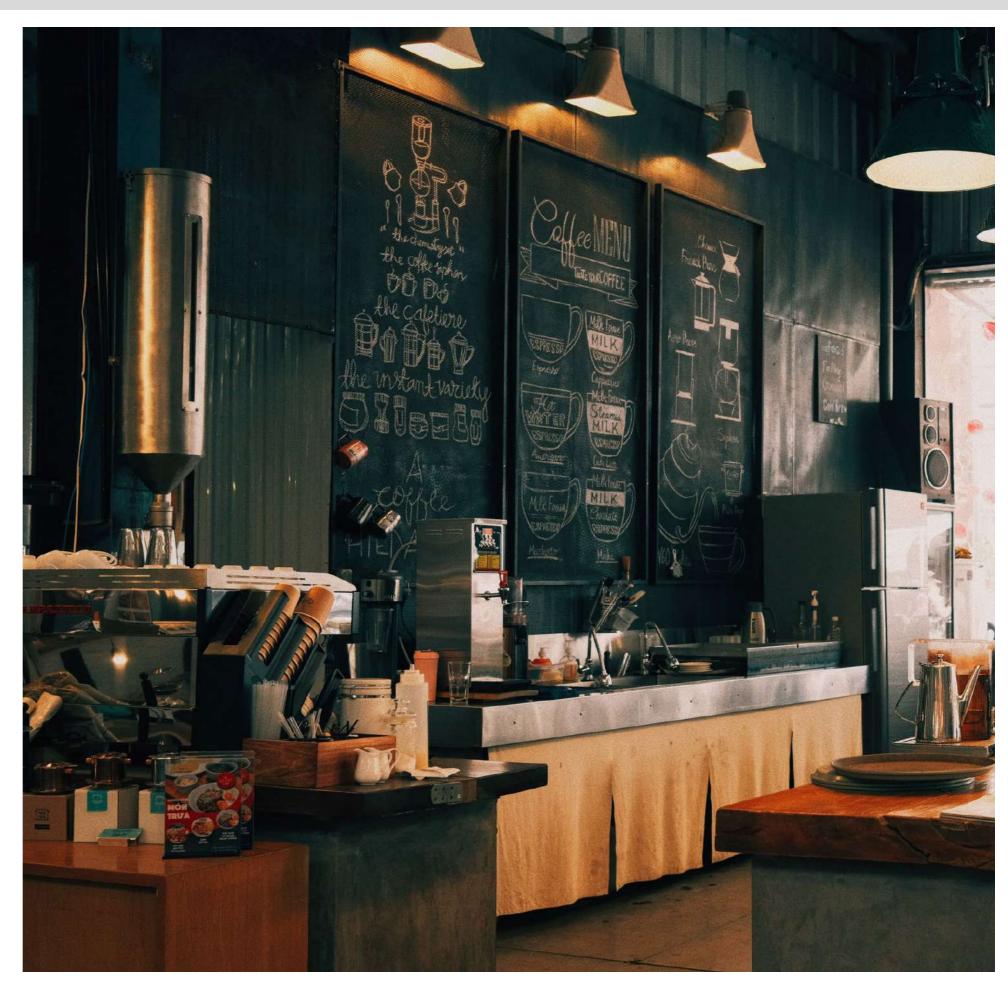
	LOCATION	MODEL
	Emulsion Paint for Common False Ceiling	ICI Dulux Super Maxilite 50YR83/003 matt
	Enamel Paint for metal Pelmet above Level One shop front	Nippon Silver Metallic CS 2968M
	Enamel Paint for certain Common area walls	SKK PU Enamel Colour White
	Enamel Paint for certain walls of Lift Lobby and back of house	PU Enamel ICI Barley White GL16208
	Enamel Paint for Common Area doors in mall	SKK Decolux Enamel Colour 10B15
	Enamel Paint (Admiralty Grey) for L1 Atrium metal structure in mall	SKK Decolux Enamel Colour DE8047

Tiles

Paints

Note: These are available from Vendors

LOCATION	MODEL	
B1, L1, L2, L3 Interior Common Floor Tile	To match existing	
L1 Interior Common Floor Tile	To match existing	
B1, L2, L3 Common Floor Tile	To match existing	
L1 Exterior Floor Finish	To match existing	
Column Marble Cladding	To match existing	
Film		
LOCATION	MODEL	
Not Applicable	Not Applicable	



M&E GUIDELINES: PLUMBING & SANITARY SERVICES



- Tenant shall engage Licensed Plumber(s) to carry out plumbing and sanitary works in accordance to the relevant Statutory Requirements, Acts, Guidelines and Code Of Practice regulated by the Public Utilities Board (PUB) and National Environment Agency (NEA).
- 2. All cold water pipes must be of approved material with proper joints only.
- 3. All sanitary and kitchen waste discharge pipes must be of epoxy coated hub less cast iron pipe.
- 4. All concealed floor waste pipes shall be pressure tested to ensure no leakage.
- 5. Pipes receiving cold water discharge (e.g. from ice machine, etc.) shall be insulated within Tenant's premises and Tenant shall insulate at their own cost 2 to 2.5m length of pipe(s) immediately connected to these floor trap(s). Insulation length shall be extended accordingly when the insulation done is found not sufficient to prevent condensation and cause nuisance.
- 6. All sanitary and kitchen waste pipes must be properly labelled.
- 7. All floor traps(KWP) are to be installed and accompanied with a removable strainer basket, to be installed below the secondary discharge pipes. Tenant shall check all strainer basket(s) regularly and clear it to prevent built-up of debris.
- 8. Tenant shall ensure no obstruction of access to the sanitary system (e.g. floor traps, etc.). Access covers shall be kept free from obstruction to facilitate inspection with room to enable cleaning and clearing of chokes.
- 9. Tenant shall install air-tight seal plug and provide an unperforated stainless steel cover to all floor traps which are not in use.
- 10. Tenant is to adopt source control practices to reduce the discharge of fats, oil and grease; food waste; and other solids into the sanitary system, including grease traps. Source control practices include:
 - a. Keeping floor traps closed at all times and provide strainer cups,
 - b. Disposing food waste from the food preparation area into a rubbish bin,
 - c. Disposing leftover food from soiled utensils and plates into a rubbish bin,
 - d. Using a catch basket to capture food waste that are washed into sink,
 - e. Pouring used oil into a separate container and not into the sanitary system
- 11. For food establishments, Tenant shall adopt a regular cleaning and desilting programme including visual inspection and maintenance of the sanitary pipes, drip trays, drain-out pipes at least once every six(6) months. Tenant must carry out more frequent maintenance for those sanitary pipes which are found to be prone to choke.
- 12. Tenant is responsible for maintaining the floor trap(s) within their premises and the connecting waste discharge pipe(s) till sub-main stack free of chokes.
- 13. Tenant shall engage MCST's appointed Sanitary Works term contractor(s) to carry out regular maintenance at their own cost, with a copy of service report submitted to RO for record. Tenants shall maintain records e.g.

invoices and activity log with dates and nature of maintenance works done during their servicing carried out for the sanitary system. Should Tenant fail to do so, Landlord shall then engage MCST's appointed Sanitary Works term contractor(s) to carry out the maintenance and back charge the cost to the tenant.

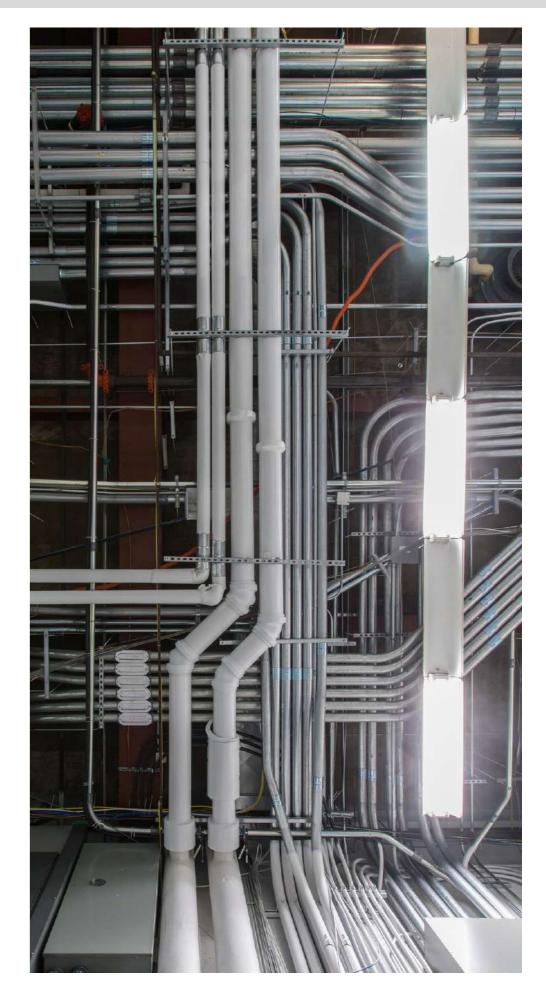
PLUMBING & SANITARY WORSKS:

FOR TENANTS' ACTION

(Forms in Appendix 01C unless noted otherwise)

SUBMISSIONS	FORMS
☐ Letter of indemnity/ undertaking by occupier.	Your format
☐ Plumbing and sanitary drawings endorsed by PUB's licensed plumber.	Your drawing
☐ Application for a private or PUB sub-meter account according to your Landlord's stipulation	See section 01.2 Table: Utility Accounts & Vendors

Useful Links	
PUB	Code of Practice on Sewerage and Sanitary Works https://www.pub.gov.sg
NEA	Code of Practice on Sewerage and Sanitary Works http://nea,gov.sg



M&E GUIDELINES: ELECTRICAL SERVICES



TEMPORARY ELECTRICAL SUPPLY

- 1. Tenant to note the following when applying for temporary supply of electricity:
 - a) Maximum load for temporary supply is 230V 60A single phase
 - b) Tapping of temporary supply is chargeable for fit out works.
 - c) During fitting-out work, Tenant is required to fill up the "Applying for Temporary Supply of Electricity" form which is to be endorsed by their LEW, before any tapping commences. They need to install necessary protective devices (such as ELCB & MCB) to prevent nuisance tripping during fitting-out works. They are required to bypass the kWh meter terminals by connecting with GI connectors.
 - d) Tapping of temporary electrical supply is also chargeable when the Tenant starts their operation / business without installing an approved Power kWh meter. This is available as an option only with approval of RO with installation of temporary check meter.
- 2. Refer to Temporary Supply Application form for more details on the charges.

ELECTRICAL WORKS - AT SWITCH BOARDS & METER BOARDS

- 1. By tapping of Landlord's supply, Tenant is accountable to maintain the base provision of main cables, main isolator and main circuit breakers.
- 2. An approved Tuas Power kWh meter shall be installed at:
 - a) The Landlord's meter board for Tenants whose MCCB rating is 100 A, 3-phase or less.
 - b) The Tenant's premises for Tenants whose MCCB ratings are more than 100 A, 3-phase.
 - c) Or at location advised by RO
- 3. Tenant's Fit-Out Contractors to label all outgoing circuits at Landlord's main switchboard / meter-board, from which the supply is tapped, with engraved tags (black lettering over white background), with the following descriptions:
 - a) Unit no. and shop/restaurant/office name above the meter board's viewing panel.
 - b) Unit no. onto teakwood where the approved private Power kWh meter is to be installed.
 - c) The electrical approved load.
- 4. Tenant's Fit Out Contractors to label all outgoing circuits at their respective isolator / MSB / DBs c/w attached labels are to be provided with the wording "Electrical Supply from MSB-PD-B1-101" (example) on front of Tenant's isolator and MSB panels.

METER INSTALLATION & TURNING ON ELECTRICAL SUPPLY

 Tenant / tenant's Fit-Out Contractor are to notify MCST's appointed Energy Retailer <u>at least 3 days in advance</u> of kWh meter installation/turn-on date. The kWh meter shall be turned on prior to the commencement of operation by the shop/office or at the expiry of the Fit-out period.

- Upon the completion of the fit-out works, the power supply WILL NOT BE TURNED ON by RO if the Tenant has not installed a power meter or completed the account opening procedure with Landlord's appointed Energy Retailer.
- 3. Otherwise, only upon approval by RO, a temporary check meter must be installed and all consumption of electricity will be chargeable. Otherwise, during these operation (business) period, Tenant have to pay for the utility consumption to MCST, until kWh meter installed.

ADDITIONAL NOTES ON ELECTRICAL INSTALLATION

- 1. When Tenant has acquired three-phase power supply from the landlord, they are to ensure that all loads are balanced on all the three phases. When the operation of the premises is stabilized, the loads shall be re-distributed if found unbalanced and to prevent nuisance tripping.
- 2. All cables shall be installed in GI conduit, trunking or tray.
- 3. All floor embedded cable installation shall be concealed in GI conduit, no PVC conduit are permitted.
- 4. Neon signs shall be of low voltage 230V-supply type, installation subject to approval by Landlord.
- 5. Tenant shall maintain all Landlord's EXIT lights located within the premises, which shall be reinstated to the original Landlord power source when vacating premises upon lease expiry, where applicable.
- Tenant is to seek approval in writing from RO for permission to install and/or convert light fittings over common area for their use. Tenant's proposal is subject to review and approval by RO on a case to case basis only.
- 7. When Tenant converts landlord's lighting installed either within lease area or at common area for their use, the affected lighting circuits are to be diverted and connected to Tenant's power source, to be controlled and maintained by Tenant. Should Tenant replace landlord's light fitting with their own, Landlord's light fitting shall be retained for future reinstatement. Tenant is required to reinstate the original light fittings and properties into its original position and condition during reinstatement works.
- Subject to Landlord's approval, any decorations put up by the Tenant, along the common corridor must be allow access for M&E servicing purposes. Fire rated roller shutters, smoke curtains, smoke detectors and PA systems / speakers installed in the Tenant premises.

SAMPLE METER BOARD ENGRAVED TAG

*Engraved tag size to be approx. 10cm by 2cm







ELECTRICAL WORKS:

FOR TENANTS' ACTION

(Forms in Appendix 01C unless noted otherwise)

The following are to be submitted to RO. SLD & CS-form also to be submitted to Building LEW.

OLD & GO TOTTI GIGG TO BE GUDITIRECE TO BUILDING ELTV.	
SUBMISSIONS	FORMS
Before Fit-Out Works	
□ Letter of Undertaking and Indemnity, with company heading printed on the top of the letter, sign/endorse by Tenant	Appendix 01C
☐ Application form for Temporary Supply	Appendix 01C
☐ Payment for Temporary Supply	Appendix 01C
Before Permanent Electrical Works & Power Turn On	
Tenant &/or Tenant's LEW is to submit: Single-line drawings and loads table for RO's/Building LEW's review prior to commencement of works. necessary documents and electrical SLDs to our Building's LEW (Refer to Section re: NSC) who will vet, prepare and endorse CS3 form, which will be returned to Tenant/ Tenant's LEW.	Your drawings Appendix 01C
Tenant &/or Tenant's LEW is to submit below listed for completion of CS-3 form and account opening: Completed account opening application form Meter installation (if needed) request forms CS3 electrical single line drawings, GIRO form and Electricity deposit cheque	Appendix 01C
After Permanent Electrical works & Turn on	
 Certificate of Compliance endorsed by Tenant's LEW Tenant's LEW is to endorse and submit all test reports on the electrical installation works and switchboard / distribution boards. 	Appendix 01C Building LEW
 □ Three (3) set of As-Built drawings (single line, lighting and power layout) in paper prints and soft copy □ One set (single-line, lighting and power layout) to be attached on the Tenant's main board, for easy to trace/troubleshoot the faulty circuit promptly. □ Supply & install Meter Board Tags. 	Your drawings
EMA Licence	
Tenants, i.e all sub-metered accounts, shall obtain from Building LEW Annual electrical installation licence	Building LEW

01A-2

M&E GUIDELINES: ELECTRICAL SERVICES PA SPEAKERS & FIRE ALARM SYSTEM



UPGRADING OF ELECTRICAL LOADS

- 1. Tenant to bear the cost for the upgrading electrical installation work.
- 2. When upgrading of electrical load is required, Tenant to apply request for review and approval:
 - a) To indicate the new upgrade load required by the Tenant.
 - b) To submit two(2) copies of proposed single line diagram c/w equipment specification lists.
 - c) To submit to the landlord:
 - i. The total connected load and maximum demand load;
 - ii. Equipment specification list;
 - iii. Main single line diagram accompanied with LEW's endorsement;
 - v. Tenant respective DB's; Main consumer's switchboard; Air-con DB on the single line drawing. [The proposed load is subject to approval by Building's LEW/ RO].
- To ensure the type/setting of main protection devices at the consumer's main switchboard (earth fault / overcurrent) is appropriately discriminated with reference to the upstream landlord's power supply tap-off point. All protection settings shall be subjected to the approval by the landlord's LEW.
- 4. All electrical circuitry must be clearly indicated on the Single Line Diagram (SLD) at the DB (distribution board) in the Tenant's premise in order to detect any electrical trips instantly. Electrical single line diagram must be placed inside the DB panel.
- 5. Installation of new main cable:
 - a) Installation of new outgoing cables from the landlord's electrical riser to the isolator (Tenant to install above their unit's service chamber), and to main switchboard (Tenant provide). All new cables to be laid in new trunking/cable ladder and to be labelled at 5-meter intervals with the shop name /unit no., and also at locations where there is a change in cable route direction. The cable route shall be verified on site with RO prior to starting work. The cables shall be of XLPE insulated material.
 - b) For safety measure and to prevent hindering of the mall/car park operation, all cables installation work at common area shall be night works only according to stipulated working hours of that location.
 - c) Any wall openings for laying of cables must be identified and obtain prior approval from the landlord before starting work. If needed, Tenant must also engage structural engineer to endorse the work prior to commencement of work. All penetrations must be made good with fire rated material and touched up with the existing wall colour paint.
- 6. Tenant requires notifying RO at least 2 weeks in advance of any shutdown date for its upgrading works. This is for the RO to have enough time to notify and minimise impact to the affected Tenants who are sharing the same electrical meter board / main switch board. All upgrading works shall be planned properly such that minimum shutdown time is required.
- 7. Tenant to make provision an access opening c/w cover (600mm X 600mm) below the electrical isolator which was installed in the service chamber, at

the front of the shop/unit, where applicable.

ELECTRICAL INSTALLATION LICENSING (ABOVE 45KVA) AND SUBSEQUENT ANNUAL LICENCE RENEWAL

Suntec City Mall is a contestable consumer with EMA and is under one EMA electrical installation licence. According to EMA regulation, all sub-metered accounts shall obtain an electrical installation licence from building LEW.

Building LEW will approach Tenant for licence renewal before Tenant's licence expires. Refer to Building LEW's annual licence fee table for charges. Refer to Appendix 01C for NSC details.

PUBLIC ADDRESS SPEAKER & FIRE ALARM SYSTEM

- 1. Occupiers must strictly comply with Singapore Standard SS 546. If additional speakers are required for emergency communication, the location of these speakers shall be shown in a drawing to be submitted to MCST for approval prior to installation.
- MCST's written approval is required prior to any modification work. Testing and commission of the public address system with MCST is compulsory after the Fit-Out work, and must be arranged with RO for after mall operation hours only.
- 3. Fire alarm system: Any electrical works to tap on the fire alarm signal from the MCST's sub addressable panel shall comply with the Singapore Standard SS CP10 for the installation and servicing of electrical fire alarm systems. The cost of installation and compliance will be borne by Tenant. Tenant shall, at his own cost, engage a QP if modification works to the fire alarm system are required.
- 4. All independent sound system speakers and/or all PA speakers which are being utilized to play piped music, must be installed with an over-riding interlocking relay. This control module enables the switch from music to message when fire alarm is activated.
- This relay must be installed by MCST's appointed NSC to ensure that the music does not cause any conflict or mask the PA announcements during any fire emergencies.
- 6. Tenant's Contractors are to engage MCST's nominated contractor to carry out alterations (if any) to the following:
 - a) Public Address Speakers
 - b) Installation of music override control module
 - c) BMS
 - d) Alarm bell and call point
 - e) Smoke detectors (Note: must be accessible for visual inspection & maintenance)
- 7. Refer to Appendix 01C-6 for NSC details.

PA / FIRE ALARM SYSTEM WORKS:

FOR TENANTS' ACTION

(Forms in Appendix 01C unless noted otherwise)

The following are to be submitted to RO. SUBMISSIONS **Before Fit-Out Works** Tenant &/or Tenant's Fit-Out Contractor is to submit drawings layout plan showing: ☐ proposed addition & alteration to PA / smoke detectors ☐ Proposed routing of fire signal connection / ☐ Proposed music override module, ■ & etc. Reflect the proposed addition & alteration in the necessary authority submission and obtain authority approvals. To engage NSC for the works upon receiving no objection. After Fit-Out Works ☐ To conduct T&C inspection together with RO after mall ☐ Provide As-Built & Authority Approved drawings in soft copy with QP endorsement.

M&E GUIDELINES: FIRE PROTECTION SYSTEM ABF MICRODUCT INFRASTRUCTURE



FIRE PROTECTION SYSTEM

Tenant / Tenant's Fit-Out Contractors are to engage MCST's nominated contractor to carry out all modification include all addition and alterations (if any) to the Sprinkler system:

- a) Alteration to 1st layer sprinkler system
 b) installation of 2nd layer sprinkler system
- c) Add new / relocation of existing Hose reel

Occupier may engage own QP for SCDF submission.

Refer to Appendix 01C-6 for NSC details.

FIRE PROTECTION SYSTEM WORKS:

FOR TENANTS' ACTION

(Forms in Appendix 01C unless noted otherwise)

The following are to be submitted to RO.

SUBMISSIONS	FORM
Before Fit-Out Works	
Tenant &/or Tenant's Fit-Out Contractor is to submit drawings layout plan with PE endorsement showing: □ proposed addition & alteration to sprinkler system / fire hose reel system □ Proposed valve control □ & etc.	
Reflect the proposed addition & alteration in the necessary authority submission and obtain authority approvals.	
To engage NSC for the works upon receiving no objection.	
☐ Sprinkler System drainage Form via PTW Portal	
☐ Payment for drainage charges	See detail on Form
After Fit-Out Works	
☐ To conduct T&C inspection together with RO after mall hours	
☐ Provide As-Built & Authority Approved drawings in soft copy with QP endorsement.	

AIR BLOWN FIBRE (ABF) MICRODUCT INFRASTRUCTURE

Air Blown Fibre (ABF) Microduct infrastructure is the property of Suntec MCST (2197) which has been provided for all Tenants at the entrance of unit premises above false ceiling.

Generally, each unit no. is provided with 1 pair of coiled 5m length ABF microducts with End Cap connector for future fibre connection.







Photo shows Typical Labelling for 1 Pair

- 1. Tenants are responsible for their use of the ABF Microduct infrastructure, their connection and shall reinstate when vacating premises upon expiry of lease.
- 2. Tenant may engage their preferred Internet Service Provider (ISP) and submit to RO details for review and approval before carrying out the fibre installation work between MDF Room, Telecom Riser and Tenant's Unit, namely the following:
 - a. Layout plan and
 - b. Proposed ABF Microduct servicing port
 - c. PTW with Application Form
- 3. Tenants may move or extend the ABF Microducts to designated fibre termination point location, however, must not damage or cut the original microducts.
- 4. When vacating premises upon lease expiry, Tenants are required to reinstate the ABF Microduct to original location as well as to engage their respective Telco Service Provider to remove the fibre installed by tenant.
- 5. Tenants are to compensate MCST the cost of reinstatement should there be any damage to the Air Blown Fibre (ABF) Microduct infrastructure and End Cap connector and/or in the event of failure to remove their fibre from ABF Microduct before returning premises.

6. Tenant's Contractors are to engage MCST's nominated contractor to carry out Reinstatement to (ABF) Microduct infrastructure.

ABF MICRODUCT INFRASTRUCTURE:

FOR TENANTS' ACTION

(Forms in Appendix 01C unless noted otherwise)

SUBMISSIONS	FORMS
Before installation	
Tenant and/or their appointed Telco contractor to submit documents via PTW portal: Customer Information recording form ABF infrastructure Application form Proposed routing layout plan Proposed ABF Microduct servicing port number stated in Tenant Unit / Telecom Riser / MDF Room	

\bigcirc \triangle \bigcirc **M&E GUIDELINES:** AIR CONDITIONING SERVICES



AIR CONDITION BASE PROVISION

The base provision for cooling load depends on the intended usage of premises, typically as follows:

- Retail approx. 130W/sqm
- F&B approx. 250W/sqm

Tenants upgrading at their own cost, cooling capacity for their premises and/or installing additional air condition equipment at their own cost are to submit request with cooling load calculation for review and approval by RO.

This is subject to MCST's discretion and charges for additional chilled water usage for all new equipment and licence fee for all approved new equipment installed in common area, where applicable.

AIR CONDITION EQUIPMENT OPERATION HOURS

Operation of chilled water air condition is controlled via Tenant's own electrical supply and by central controlled BMS. Typical mall air condition BMS operation hours is between 10am to 10pm daily.

Tenants requesting to amend and/or extend chilled water air condition operation hours for their premises are to submit request for review and approval by RO. All such extension(s) is subject to MCST's discretion and charges for additional chilled water usage.

DX/ VRV air condition system is directly controlled by Tenant and equipment operation hours is determined by Tenant.

AIR CONDITION EQUIPMENT SPECIFICATION

Typical chilled water FCU equipment model specification is listed in the table below.

For all AHU, PAU, DX-FCU and/or other FCU models, Tenant to contact RO to request for equipment specification detail, if required.

All power supply to FCU/ AHU/ PAU serving Tenant's premises must be installed by Tenant and tapped from Tenant's DB. These shall be ready before Tenant arrange for turning on of air condition supply to their premises.

OPENINGS TO NATURAL VENTILATED AREAS

Where Tenant plans to have direct opening(s) to natural ventilated outdoor area, Tenant is required to comply to BCA air condition control requirements:

- 1. Where DX-FCU's have been provided for the tenancy premises, Tenant is required to provide self-closing doors
- Where chilled water FCU's have been provided for the tenancy premises, Tenant is required to provide an air lock, i.e., a vestibule with 2 sets of selfclosing doors
- 3. EM lock with break glass door controller may be provided for fire escape exit doors for emergency use only.

AIR CONDITION RETURN FOR SPECIALIST TRADES

Tenants operating specialist trades such as pet shops, hair and nail i.e.. manicure / pedicure services, etc. are to provide ducted air return for their premises as well as provide air cleaner / filter, where necessary.

Tenant shall seek advice from their M&E QP and refer to Code of practice for air-conditioning and mechanical ventilation in buildings for more details.

AIR-CONDITIONING AND MECHANICAL VENTILATION WORKS

 AHU/FCU power supply must be installed by Tenant and supply tapped from Tenant's DB. AHU/FCU units must be clearly indicated at the DB (distribution board/panel) in the Tenant's premise in order to detect any air-con trip instantly. Electrical single line diagram for air-con units must be placed inside the DB panel.

- Tenant/ Tenant's contractor must inform RO and shall be present for the joint inspection both during power connection to the fan control panel and during turning on of air condition. Tenant/Tenant's contractor is responsible to check and ensure things are in order before calling for inspection.
- 3. BMS interface are provided to all AHU/FCU installed by Landlord.
- 4. All thermostats and its cables are wired up by Landlord. Tenant to ensure all thermostats are not hidden/covered in order to give an accurate temperature sensing/reading.
- 5. Tenant/Tenant's contractors are to turn off all air-conditioning equipment during fitting out or renovation and are not to turn on the power for AHU/FCU. In addition, there is need to block/seal off the AHU/FCU during the Fit Out Period. This is to prevent dust particle generated to be trapped inside the air-conditioning equipment/unit.
- Tenant/Tenant's contractor is to ensure that all fresh air ducts to premises FCU's / AHU's/ PAU's are temporarily blanked off during fitting out or renovation.
- 7. The Tenant has to undertake all responsibility for carrying out any additional installation to the existing air-conditioning system.
- 8. Any additional new air-conditioning equipment installed by Tenant shall be provided with secondary drain pan at Tenant's cost.
- 9. The Tenant is responsible to test and ensure the smooth discharge of water inside the pipeline of the condensate drainage system prior to operations or handing back of premises after reinstatement.
- 10. The consumption of chilled water or auxiliary cooling water is chargeable to Tenant for this new equipment. Tenant is also to install at his own cost, new BMS interface and/or chilled water flow meter to the additional FCU/ AHU, to be reviewed and approved by RO
- 10. Access panel provisions on plaster/false ceiling must be of size 600 x 600 mm for maintenance and servicing trimmed with aluminium framing for all AHUs/FCUs/Fans. Tenant is not to block any access way in order to facilitate servicing of AHUs/FCUs/Fans above. All access panels should be easily accessible at all time for maintenance purpose.
- 11. Access panel must be provided for direct access to ceiling mounted cat ladder, filter, fan control panel, main chilled water supply and return valves, chilled water actuating valve and all parts of the air-conditioning equipment/unit located inside the Tenant's premises. Landlord will not be responsible for any ceiling damage caused by Maintenance staff due to accessibility.
- 13. Where accessibility for maintenance is limited or obstructed, Tenant has to install cat ladder/ platform at his own cost, especially when the void space between the false ceiling and the FCU/AHU is more than 1 meter height apart.
- 14. All existing duct works and diffusers that are taken over by the new Tenant in 'as is where is' condition will be the responsibility of the new Tenant. Tenant/Tenant's contractor is advised to check the ducts and carry out any rectification work and documentation at Tenant own cost before carrying out ceiling works.
- 15. Once there is any renovation to the tenancy premises, accessibility to the air-conditioning equipment must be reviewed and additional provision to facilitate maintenance must be installed where required.
- Upon completion of Fit-Out works, Tenant is carry out a fresh air-condition balancing exercise with report duly certified by Tenant's M&E QP, before submitting a copy to RO.

				Cooling	Capacity		Ext. Static		Power
Equipment FCU Model	Make	Type	Model	Total (kW)	Sensible (kW)	Air Flow (CMH)	Pressure (Pa)	Motor (kW)	Supply (V/Ph/Hz)
FCU 06	York	Ducted	DCP 06-6R	5.61	4.30	1020	150	0.32	220/1/50
FCU 08	York	Ducted	DCP 08-4R	7.41	5.45	1360	150	0.32	220/1/50
FCU 10	York	Ducted	DCP 10-3R	8.50	6.24	1700	150	0.32	220/1/50
FCU 12	York	Ducted	DCP 12-4R	10.76	8.00	2040	150	0.63	220/1/50
FCU 14	York	Ducted	DCP 14-4R	12.89	9.46	2380	150	0.63	220/1/50
FCU 24	York	Ducted	DB 20-6R	30.10	19.27	4280	150	1.10	400/3/50

Table 01A-2.06 Above: Typical Chilled Water FCU Equipment Specification

\bigcirc \bigcirc \bigcirc **M&E GUIDELINES**: MV SERVICES FOR F&B



STANDARD GUIDELINES TO KITCHEN VENTILATION SYSTEM AND TREATMENT SYSTEM

- All submissions for the kitchen ventilation system to be submitted by Qualified Person and in compliance to all codes of practices and relevant authorities' requirements. All exhaust fans are to be accompanied with specific attenuators on acoustic aspects of fan during operation mode (Base M&E consultant to advice)
- 2. Variable speed drives and backdraft dampers are to be installed in all the duct work with Magnetic gauges to indicate operating pressure of the fans.
- 3. Kitchen hoods are to be installed with grease filter and smoke and odour treatment system of Electrostatic & UV air cleaner type.
- 4. Short-circuit of the exhaust to the fresh air supply / air conditioning shall be avoided based on SS 553; no exhaust and supply/ return air shall be less than 5 meters apart.
- 5. The following engineering practices to be adopted for Kitchen ventilation system:
 - For greasy operations, ducts shall be in stainless steel or galvanised iron of at least 1.2mm thick and with minimum 1 hour fire rating according to code of practice and fire code, to be advised by M&E QP;
 - b. Velocity flow rate of duct to be not more than 10.3 m/s;
 - c. Ducting construction to be based on SMACNA standards;
 - d. Fans selection to be based on SS 553, however the static pressures are to be carefully selected to ensure that a backflow does not affect the other tenants in the common exhaust duct system, and to ensure effective exhaust through the discharge point);
 - e. Kitchen exhaust system shall comply with the maximum fan power of 0.17W/CMH (≤4kW) or 0.47 W/CMH (>4kW);
 - f. Kitchen exhaust system shall be at all times negative pressure so that smell and cooking fumes are not transferred to the air conditioning system and surrounding tenant units/common area.
 - g. While maintaining the negative pressure in the kitchen, kitchen MV system shall be designed in such a way that outdoor fresh air makeup to be sized at least 85% of exhaust air volume. This is to prevent excessive indoor cooled air being exhausted out by the kitchen exhaust air system and contribute to the waste in energy.
 - h. A kitchen hood fire suppression system is to be installed and shall interlock with the exhaust fan system and gas supply emergency shutoff valve system, according to Code of Practice and Fire Code.
 - i. An approved gas leak detector system shall be provided in areas using gas, connected to localized alert alarm, emergency shut-off valve, kitchen exhaust system and fire suppression system, according to Code of Practice and Fire Code, where applicable.
- 6. The installation and design of the kitchen ventilation system shall be such that it does not draw air conditioning load out, preferably to be an isolated system, with fresh air supplied into the exhaust system.

- 7. Spot cooling is recommended for the kitchen area.
- 8. Adjustable timers are to be installed for the fan operation to save energy and to ensure that the fans are run to cool down the kitchen area and remove smell and fumes for at least 30 minutes before and after kitchen operation.
- 9. The system shall be designed to achieve the indoor air quality as stipulated in the recommended Guidelines for Indoor Air Quality.
- 10. Tenant shall engage appropriate contractor/ specialist to carry out monthly maintenance at their cost to kitchen mechanical ventilation system, kitchen hood fire suppression system, gas distribution and detection system and etc. which includes but not limited to MV fans, filters, control panels, distribution board, nozzles, fusible links, actuators, gas detectors, solenoid valve, MV fans/gas/fire suppression system interlocking function to ensure proper functioning of the respective system and clean and odourless kitchen discharge air. The kitchen hood, exhaust air duct (from kitchen hood to external louvre) and the external louvre shall be clean minimum once a year or to maintain duct cleanliness with average thickness of surface grease < 50 micron meter (0.0508mm) as per NFPA 96 guide. Kitchen hood and filter for kitchen with heavy cooking activity to be cleaned more regularly as per the interval recommended by manufacturer. A copy of monthly service report to be submitted to TO/RO for record.
- 11. Kitchen hood and filter shall be cleaned on regular monthly basis or duration recommended by manufacturer for kitchen with heavy cooking activity.
- 12. Tenant shall keep records, e.g. invoices, log/activity sheets of the regular maintenance works carried out for their own kitchen exhaust system including exhaust hood, air cleaners, filtration system, supply and exhaust fans, section of KED connection from Tenant's premise to main KED or exhaust grill, etc. These records should state the dates and nature of maintenance works done.
- 13. Should Tenant fail to engage appropriate contractor to carry out the service and maintenance, the Landlord shall then engage appropriate contractor to carry out the maintenance and back charge the cost to the Tenant.
- 14. Tenant must review & rectify their installation upon feedback of any complaint arising regarding smoke and odour from their operations.
- 15. For Tenants using UV-C treatment system, the tubes of the UV-C lamps to be wiped cleaned with proper cleaning agent soap and water at least once every week and the tubes shall be replaced after 8,000 operating hours.
- 16. The UV-C filtration is highly sophisticated system and under no circumstances access to the tubes be allowed unless the power supply to the UV-C control panel has been turn-off as looking into the lighted lamps may damaged the eyes.
- 17. The activated carbon bank filters removes and retains gaseous contaminants within its microscopic porous structure. The pollutants are

absorbed by the carbon grains which increase in weight as they absorb. This process continues until the capacity of the carbon is saturated. At this point or before (every 6 months), the carbon must be replaced or reactivate.

ACMV WORKS:

FOR TENANTS' ACTION

(Forms in Appendix 01C unless noted otherwise)

Tenant / Tenant's Fit-Out contractor to submit the following to RO

SUBMISSIONS	3				
Before installa	tion				
□ AC drawings showing proposed ducting layout & air flow, endorsed by PE.					
	showing proposed ducting, Air & FAF, hood, air grille layout, PE.				
	r KEF, FAF, Air Cleaner with & UV functions				
☐ Gas leak pane	el diagram				
☐ Fire Suppress	ion system drawings				
Request to ins	tall Auxiliary FCU				
☐ Heat & Cooling	☐ Heat & Cooling Load Calculation				
☐ Piping routing	to CU location				
☐ Catalogues fo	☐ Catalogues for Auxiliary FCU & CU				
After installati	After installation				
☐ ACMV As buil	t drawings, endorsed by PE.				
☐ As built Air Ba	lancing reports, endorsed by PE.				
☐ Label all equip	oment on site				
Useful Links	Useful Links				
Singapore Standards (SS)					
Singapore Standards (SS)					
SCDF SCDF fire code on Air-Conditioning and Mechanical Ventilation Systems https://www.scdf.gov.sg/firecode2023/firecode202					

M&E GUIDELINES: MV SERVICES FOR F&B



AIR CLEANER REQUIREMENT FOR F&B AND/ OR FOOD KIOSK TENANTS

All F&B or Food kiosk Tenants who are carrying out cooking activities shall ensure that their cooking steam and/or fumes is properly directed through an air cleaner so that all discharge air is clean and odourless.

Kitchen exhaust air treatment system shall be properly designed and selected to ensure the quality of discharged air to environment is comply with all the local authorities' and Singapore Code of Practices requirements.

All F&B or Food Kiosk Tenants with KED provisions shall supply and install, operate and maintain their own kitchen exhaust system including exhaust hood, air cleaners, filtration system, supply and exhaust fans, section of KED connection from Tenant's premise to main KED or exhaust grille, etc. as necessary at their own expense. The maintenance frequency shall be at least once a year as per SCDF requirement.

Tenants without KED provisions and conducting minimal cooking activities that do not produce oily fumes shall supply, install, operate and maintain their own hood, with an electrostatic air cleaner ventilation system for their kitchen at their own expense. UV-C type air cleaner is not suitable for such operations. Refer to following section of Standard Guidelines to Kitchen Ventilation System and Treatment System for more details.

TYPICAL LANDLORD'S PROVISION FOR F&B TENANCY PREMISES WITH KED PROVISIONS

Generally, F&B premises with KED provisions in our mall have been provided with tap off outlet/ inlet points connected to separate and individual Kitchen Exhaust & Kitchen Fresh Air Supply ducts which are directly serving only the respective premises.

Only KED & KFS ductwork outlet / inlet are provided by Landlord. Tenant shall install and maintain at their own cost and expense their own internal ductwork, smoke and odour treatment equipment, fans, silencers, etc. Refer to following section of Standard Guidelines to Kitchen Ventilation System and Treatment System for more details.

F&B TENANCY PREMISES WITH KED PROVISIONS & WITH SHARED LANDLORD'S COMMON KITCHEN VENTILATION SYSTEM

There are exceptions where F&B tenancy premises whose Kitchen Exhaust & Kitchen Fresh Air supply provisions are connected to Landlord's Common Kitchen Ventilation system, which includes the following:

- KED & KFASD tap off points for Tenants, with VCD and motorised damper which shall be kept in open position at all times
- 2. These ducts terminate with common Landlord's Kitchen Exhaust & Kitchen Fresh Air Supply Fans respectively
- 3. Junction box for Tenant's connection to interlock Tenant's gas system with

- Landlord's main KEF. This is to ensure Tenant's gas supply will shut off when common main KEF is not running.
- Junction box for Tenant's connection to interlock Tenant's fire suppression system with Landlord's main KEF.

Tenants may request more information from RO and verify all details and provisions at site. Premises with shared Common Kitchen Ventilation System are listed in Table on the right hand side.

Tenants with shared Common Kitchen Ventilation System are advised to engage their M&E QP to review their operational requirements and to safe guard the continuity of essential kitchen operations by installing at their own cost and expense necessary booster exhaust & fresh air fan(s) of suitable size(s) within their premises:

- Tenant shall install and maintain at their own cost and expense their own internal ductwork, smoke and odour treatment equipment, fans, silencers, etc.
- 2. Booster fan(s) are only required to overcome the static pressure from the tenant's hood (including air cleaner) to the incoming duct provided by Landlord.
- 3. Interlocking must be installed to ensure that both Tenant's booster fan(s) and Landlord's main KEF will stop operations in the event of emergency.
- 4. The booster fan size specification shall not exceed the Landlord's MV provisions for the tenancy premises and shall not exceed common fan specification.
- Centrifugal box fans are recommended as these are generally quieter. Axial fans are best avoided as such motor are in the air stream, which might affect airflow.
- Tenant shall conduct air balancing of their Kitchen Exhaust system and submit to RO report with PE endorsement:
 - a) to confirm that Tenant's booster fan(s) installed on site has not exceeded the allocated exhaust provision for their premises.
 - b) to ensure that Tenant's kitchen exhaust system performance is optimal for their premises.

Refer to section of Standard Guidelines to Kitchen Ventilation System and Treatment System on the previous page for more details.

LIST OF UNITS WITH SHARED KED:

Note: Check with RO for technical update

S/N	Unit No.(s)	Location
1 to 7	B1-K3, B1-K4, B1-K6 B1-K7, B1-K8 B1-K9, B1-K10	B1 Mezzanine
8	B1-K5/K11	B1 Mezzanine
9	B1-121	B1 Mezzanine
10, 11	B1-121A, B1-121B	B1 Mezzanine
12	B1-121B	B1 Mezzanine
13	B1-122	B1 Mezzanine
14	B1-122A	B1 Mezzanine
15	B1-123/124	B1 Mezzanine
16	B1-126	B1 Mezzanine
17	B1-127	B1 Mezzanine
18	01-649/650	Atrium (T3 & T4)
19	01-651/652	Atrium (T3 & T4)
20	02-600	Atrium (T3 & T4)
21	02-601	Atrium (T3 & T4)
22	02-601A	Atrium (T3 & T4)
23	02-605	Atrium (T3 & T4)
24	02-606 / 607	Atrium (T3 & T4)
25	02-615	Atrium (T3 & T4)
26	02-615A	Atrium (T3 & T4)
27	02-616	Atrium (T3 & T4)
28	02-616A	Atrium (T3 & T4)

M&E GUIDELINES: SMOKE CONTROL



SMOKE CONTROL

- 1. All submission for smoke control system by Qualified Person must be in compliance with relevant authority's requirement.
- 2. All Landlord's smoke control system including smoke curtains, ductwork, fans, dampers, panels, etc. within the tenancy space should not be demolished or altered. 600 mm x 600 mm access panels shall be provided to the fans, dampers, panels, etc. for access and maintenance where false ceiling is installed by tenant,
- 3. For Tenants with their unit area ≥ 1300 sq. m and/or with smoke control system in their premises, at least 25% free area perforated ceiling shall be provided where false ceiling is proposed as part of tenant's shop fit design.
- 4. The operation of all installed smoke curtains and smoke detectors shall not be obstructed, especially by tenant's furniture or internal partition(s). A clearance height of 2100 mm AFFL shall be maintained for the operation of smoke curtains. Any damage to the smoke curtains due to Tenant's actions shall be rectified by the Tenant at his own cost according to code requirements.
- 5. Perforated shop closure with free area at least 25% of shop front, &/or as advised by QP, shall be required for the smoke control make-up fresh air intake.
- 6. If the Tenant chooses not to implement perforated shop closure, 2 hour fire-rated fresh air transfer duct, to their QP's advice may be installed and extended to low level with air grilles by the Tenant at his own cost. The details and route of this duct shall be submitted to RO and authority for approval. The fresh air make-up duct MUST not be removed/ concealed by partition walls or display cabinets in order not to fail the smoke extraction system. Any damage to the fire rated duct shall be rectified by the Tenant at his own cost according to code requirements.
- Where motorized perforated shutter (for Levels B1, L2 & L3 only) is used instead of manual type, switch to manual mode shall be provided in case of power failure.
- 8. The integrity of the smoke zone boundary shall be maintained at all times. Finishes for smoke zone boundary include the following options, to be advised by Tenant's QP:
 - a. Smoke curtain, dropping to 2100mm height AFFL and come with gypsum barrier above to soffit of slab
 - b. Gypsum partition to soffit of slab
 - Laminated fixed glass panels and with gypsum barrier above to soffit of slab
 - d. All openings and/ doors to be not more than 2100 mm height AFFL and come with gypsum barrier above to soffit of ceiling slab
- 9. All perforated shop closure and smoke zone boundary treatment as part of shop front are subject to review & approval by TD on overall aesthetic

evaluation. Refer to 03.2 SPECIFIC DESIGN GUIDELINES: UNIT WITH SMOKE CONTROL (SED) for shop front design guide.

FIRE SUTTER / FIRE CURTAIN

Fire Shutters / Fire Curtains are provided to segregate compartments as part of base compliance. During emergency, these fire shutters/ fire curtains will cover full height and full width of the affected compartment boundary opening.

When these provisions are located within Tenancy premises, Tenant must take note that operation of all installed Fire Shutters / Fire Curtains shall not be obstructed, especially by tenant's furniture, etc.

Any damage to the Fire Shutter / Fire Curtain due to Tenant's actions shall be rectified by the Tenant at his own cost according to code requirements.

SMOKE CURTAIN AND FIRE SHUTTER NSC

The smoke curtain and fire shutter system in the mall are maintained by MCST's appointed contractors.

Tenants requiring to carry out any addition &/alteration of such work are advised to engage our relevant NSC for the work and to integrate the fire signal into our mall's system..

Submission is to be carried out by the Base Smoke Control QP. Refer to Appendix 01C-6 for NSC details.

WARNING

- 1
- ☐ The operation of all installed Smoke Curtains and Fire Shutters / Fire Curtains shall not be obstructed, by tenant's installations or furniture.
- ☐ A clearance height of 2100 mm AFFL shall be maintained for the operation of smoke curtains.
- □ Any damage to the Smoke Curtains / Fire Shutters / Fire Curtains due to Tenant's actions shall be rectified by the Tenant at his own cost according to code requirements.
- ☐ Any alteration to Smoke Curtains / Fire shutters / Fire Curtains must be carried out by MCST's appointed NSC.

SMOKE CONTROL WORKS:

FOR TENANTS' ACTION

(Forms in Appendix 01C unless noted otherwise)

SUBMISSIONS	FORMS
Before installation	
Drawings showing proposed alteration & addition to the existing smoke zone layout, smoke curtain, fire shutters / fire curtains.	
To engage Smoke Control QP / Smoke Curtain NSC / Fire shutter / Fire Curtain NSC, where applicable	
To submit and obtain NOA from relevant Authorities before commencing site works.	
After installation	
Smoke Curtain / Fire Shutter / Fire curtain As built drawings, endorsed by PE.	
T&C reports, endorsed by PE.	
Authority Approvals & Approved drawings set.	



01B



O B - GREEN BUILDING GUIDE



INTRODUCTION TO GREEN BUILDING GUIDE

Suntec City Mall is a Greenmark Gold certified building and is committed to do our part in conserving and maintaining sustainable environments.

The Green Building Guide strives to communicate, educate and encourage all our stakeholders and business partners, including Tenants to work together and achieve our environmental goals in areas of:

Ene	rgy conservation,
Wat	er conservation, and
☐ Was	ste recycling.

Together we aim to manage, operate and occupy the building and premises to promote environmental sustainability, through energy efficiency improvements, positive behavioural changes and healthy practices.

ENERGY CONSERVATION GUIDE

□ EQUIPMENT SELECTION:

- □ When selecting equipment for daily operation, Tenants are encouraged to look at energy efficiency by weighing on long term energy savings instead of short term capital investments. The following are some fundamental principles to look at:
- □ Select right capacity for appliances and equipment for daily operational needs. e.g. correct size of freezer/ fridges to avoid wastage of energy due to over sizing.
- □ Consider purchasing energy-efficient equipment and make sure energy management features are activated. All equipment recommended to be NEA 4 tick energy efficiency labelled or approved equivalent. Specialist equipment (with no label) is required to follow industry best practice guides in terms of energy efficiency.
- ☐ Provide separate sub-meter(s) for server rooms / data centres for the purpose of monitoring consumption.
- Equipment Plug Load Average for retail is <22W/m2 and F&B is <60W/m2.

□ ACMV, AIR QUALITY & CONTROL SYSTEMS:

- □ Air conditioning controls to maintain thermal comfort and good indoor air quality according to SS553 & SS554 standards.
- □ Air conditioning shall be designed for Temperature to follow SS 554: 2009 (Indoor operative temperature between 24C +/- 1 degree Celsius. Relative humidity < 65%).</p>
- ☐ Tenant to ensure that for areas that require stand-alone air-conditioning system, Tenant must first explore with Landlord on the feasibility of tapping the building's chilled water. Dedicated supplementary cooling installed are required to meet SS 553 : 2016 (Code of Practice for Air-Conditioning and Mechanical Ventilation in Buildings) or prevailing standards.
- ☐ Tenant to ensure that enclosed areas are to be provided with dedicated thermostat controls (e.g. meeting rooms, closed offices, conference facilities, private dining rooms, etc.) for their stand-alone air-conditioning system linked to occupancy sensors to switch off the system when not in use with local overrides.

- ☐ Tenant to ensure that stand alone ventilation and air conditioning systems are to be regularly inspected, cleaned and maintained.
- ☐ Tenant to inform Landlord to switch off centralised air conditioning to their premises should air conditioning is not required during the normal central air conditioning operations hours.
- ☐ Where applicable, do not block any heat dissipater. Insufficient ventilation reduces the efficiency of heat dissipation for appliances and equipment, resulting in higher energy consumption.
- □ Where applicable, do not place any heating appliances near to room air-conditioning thermostat because the thermostat will sense heat from these appliances, which gives 'false' signal to air-conditioning system resulting in over cooling in space.
- ☐ Where applicable, blinds are encouraged to reduce heat entering premises.
- ☐ Kitchen exhausts must include an active grease capture separation system, air cleaner and UV light.
- Where installation of ACMV equipment may generate noise, the ambient sound level must not exceed recommended levels according to SS553 standards.

☐ LIGHTING:

- ☐ Select energy-efficient light bulbs or lighting systems for lighting needs, especially LED based bulb replacements and light sources.
- Ensure that lighting zoning and control strategies to be implemented. Enclosed spaces to have dedicated light switches. All lights must be linked to occupancy sensors to switch off the lights when not in use with local overrides.
- □ All back of house, storage areas and fitting rooms is recommended to be motion or switched controlled with all lights programmed to be switched off after hours.
- ☐ Additional suggestions under lighting power budget

□ LIGHTING POWER BUDGET

- ☐ Tenants are recommended to achieve total lighting power budget of 22w/m2 or less for Retail units and 15w/m2 or less for F&B units.
- ☐ Tenants are encouraged to achieve a lower lighting power budget or higher Greenmark standard, whichever is more stringent.

☐ Information needed for lighting power budget review:

- Lighting layout plans,
- ☐ Lighting technical specifications,
- ☐ Lighting schedules showing quantity, type of fitting & ballast, sensors and coverage area & location, etc.

■ Lighting type:

- □ Use of Energy efficient lamp (LED light sources) and high frequency/ electronics ballast is encouraged to achieve good luminance with visual comfort, based on Singapore Standard SS531 / Part 1: 2006 (Lighting for Work Place) achieving minimum lux level requirements.
- ☐ Use of incandescent and halogen lights are prohibited.









☐ Advantage of Efficient Lighting Design & Management:

- ☐ Reduce lighting energy bill
- ☐ Reduce heat load
- Potential savings in lamp maintenance and replacement cost with correct selection of lamp types
- ☐ Indirectly reduce green house gas and carbon emission
- More comfortable shopping and working experience with proper design to avoid unnecessary glare

■ Suggestions:

- Avoid 'over design' of lighting level
- □ Select high efficiency lamps. i.e.. higher lumens output per input wattage (lm/watt)
- ☐ Use LED for most lighting sources.
- ☐ Use electronic ballast instead of magnetic ballast.

FOR TENANTS' ACTION		
Useful Links		
Green Mark	BCA https://www1.bca.gov.sg/buildsg/sustainability/green-mark-certification-scheme	
Singapore Standards (SS)	Enterprise Singapore https://www.enterprisesg.gov.sg/grow-your-business/boost-capabilities/quality-and-standards/explore-standards/find-a-standard	
PUB	Water Efficiency Labelling Scheme (WELS) □ https://www.pub.gov.sg/ □ https://app.pub.gov.sg/wels/Pages/ListOfProduct s.aspx	
Green Products	Singapore Green Building Council (SGBP) https://web.sgbc.online https://web.sgbc.online/public/directory	

GREEN BUILDING GUIDE



WATER CONSERVATION GUIDE

Tenants are encouraged to contribute towards water conservation by doing the following:

- □ Selection of fittings: Applicable for Tenants with private pantries/washing basins, use at least "3 ticks" type water fittings under the Water Efficiency Labelling Scheme endorsed by Singapore's PUB.
- Day to day operations:
- ☐ Immediately report any water leakages to Centre Management Office.
- ☐ Report any abnormalities such as wet cabinets, floors and wall coverings.
- ☐ Encourage your cleaners to carry out regular mopping of floors instead of flushing or washing with water hose.
- ☐ Encourage occupancies to keep the space clean so as to reduce the frequency of cleaning.
- Stop dripping taps. Fast dripping taps can waste up to 200 litres of water a day!
- Avoid using excessive detergent when washing hands

The list of brands and their respective registered suppliers can be found on PUB Website under Useful Links.

WASTE RECYCLING GUIDE IN FIT-OUT DESIGN & CONSTRUCTION

Tenants should consider the impact on environment and end-of-life recyclability for materials specified in their project during the design, material specification & construction stages of proposed fit-out. The following practices may be adopted:

□ DESIGN & PLANNING:

- ☐ Design flexible layouts implementing energy conservation strategies.
- ☐ Include vestibule as a transitional space between air-conditioned & natural ventilated spaces to avoid infiltration of warm air thereby increasing energy use.
- ☐ Incorporate landscape as part of overall design (especially in conditions exposed to sunlight) to lower heat load and air-con consumption.
- ☐ Design displays and fixtures for multiple and recycle usage.
- ☐ Pre-used visual merchandising props in good condition may be refurbished to create new display and avoid materials wastage.
- ☐ Design submission in soft copy to reduce paper wastage.
- □ Specify environmentally friendly finishes and materials, i.e., green products, in design and during operation e.g. biodegradable & recycled materials or packaging.
- □ Specifying Furnishings, furniture, and carpets which are certified with at least SGBP 2 ticks or equivalent by local certification bodies containing recycled materials and be low VOC.
- □ Avoid specifying PVC based products, the use of rare or exotic timber and materials with a high embodied energy. Where possible the Tenant shall commit to use rapidly renewable materials.

□ CONSTRUCTION:

- □ Recycle or reuse or require its contractor to recycle or reuse as much as possible any waste created in the demolition of existing Improvements or Alterations within the premises so as to minimise the amount of waste ending in landfill.
- ☐ Ensure that interior paints, varnishes, sealants and adhesives to be low VOC using natural and water based products where possible. These products should be certified with at least SGBP 2 ticks or equivalent by local certification bodies.
- ☐ Require the cleaning contractor engaged directly by tenant shall use cleaning products certified in accordance with at least SGBP 2 ticks or equivalent by local certification bodies.
- ☐ Liaise with Landlord upon completion of construction and all fitting-out of interior finishes (including fixed furniture and furnishings) for all occupied spaces to manage the contaminants.

GREEN PRODUCTS

Green products have a lesser impact on the environment and help to improve quality of indoor environment. It contains recycled content which helps to reduce the impact on the environment by reducing the amount of raw materials extracted.

Tenants are encouraged to select materials that satisfies sustainability criteria:

- ☐ Use materials with good percentage of recycled content listed in Singapore Green Building Council (SGBP) for reference.
- ☐ Green product covers range of application in building industry sectors such as Architectural, Landscape, Civil & Structural, Mechanical, Electrical, Smart systems, Public Hygiene, etc.
- ☐ For more green information, visit SGBP website under Useful Links.
- ☐ General green products for fit-out are such as:
- ☐ Drywall (Gypsum) SGLS / SGBC labeled or equivalent

The products do not contain toxic/harmful substances. It helps to improve indoor air quality with its good emission standards that met PSB testing standards.

■ Autoclaved Concrete Blocks

It does not contain toxic substances which might be harmful to humans when come into contact or contaminate the environment when disposed.

□ Composite Timber

The products ensure a good recycled content which helps to protect the environment by reducing the demand for timber. The raw materials are obtained from sustainable sources and approved forestry. It also has low formaldehyde emissions rates.

☐ Low-VOC paints / varnishes / sealants / adhesives

It ensures the low emission of volatile organic compounds (VOCs) from the paint which can be harmful to human bodies with prolong exposure when inhaled.













01B-2 MATERIAL SPECIFICATION



Material Specification

Additional considerations in selection and specification of finishing materials will contribute towards a more sustainable fit-out design & construction especially in categories of Applied Finishes, Adhesives & sealants, Joinery and use of Plastics.

Applied finishes

Applied finishes should be reduced or eliminated throughout the project wherever practicable. This methodology encourages the specification of materials that require no additional finish to maintain their integrity.

- □ Paint: Paint is typically made up of pigment, resin, solvent and additives. Some additives can render paint to be toxic to humans and the environment.
 - ☐ Conventional paint is a key source of indoor air pollution and releases VOCs that are detrimental to the ozone layer and human skin and respiratory systems.
 - ☐ Only ultra low-VOC paints (<1g/L) should be specified as broad wall paints, particularly in internal areas.
 - ☐ Some specialty paints and protective coatings require higher chemical content to ensure durability, in these cases, low-VOC options should be specified where practicable.
- ☐ Timber finishes: Composite & engineered wood can be considered in lieu of solid timbers. Exposed class 1 and class 2 hardwood timbers should be left untreated to naturally 'grey off'.
- ☐ This minimises applied finishes and reduces ongoing maintenance to the timber.
- ☐ An initial application of protective oil may be required to stabilise timber during construction, however, should not be intended as a finished treatment.
- ☐ Designers should note that under initial exposure, the tannins in untreated timber will naturally leach onto adjacent surfaces during this process.
- ☐ Where finishes are applied to timber (e.g. floor boards and bench tops), they should contain natural materials, be low-VOC, UV stable and not compromise the recyclability of the material at the end of its useful life.



Benchmarks

√ Low/zero VOC products where practicable.

√ Eliminate unnecessary finishes.

√ Choose finishes that are fitfor-purpose.

X Exposed class 1 and class 2 timbers with no additional finishing treatment.



Exclusions

X Avoid paint products containing harmful ingredients.





Adhesives & sealants

Adhesives and sealants can have major impact on human health and indoor air quality.

Many conventional adhesives and sealants contain toxic ingredients such as silica, residual monomers, plasticisers and heavy metals and have significant VOC emissions.

In addition, many other ingredients require high energy use and produce harmful emissions and toxins during production.

- ☐ The use of adhesives should be minimised to increase the likelihood for building materials to be recycled at the fit-out's end of life.
- ☐ Mechanical fixing is always preferred over adhesive use.
- ☐ Designers should review the material content of specified adhesives and sealants and ensure that products containing known harmful ingredients avoided or eliminated.



√ Low/zero VOC and formaldehyde E0 or E1 Products.

✓ UV stable products.



Exclusions

X Avoid products containing harmful materials.

X Avoid Products containing carcinogenic materials or toxic heavy metals.

X Avoid use of adhesives to increase recyclability of materials at the fit-out's end of life.



0 1 B - 2 MATERIAL SPECIFICATION



Joinery

Joinery for furniture and interior fittings & fixtures is subject to frequent usage and handling. Selections should prioritise natural, durable joinery materials that exceed trends.

- ☐ Timber: Solid timber bench tops and joinery are a durable and renewable material source. A sustainable alternative for timber flooring is engineered wood.
- ☐ Designers should design timber joinery to minimise waste and maximise the recyclability of the material at the fit-out's or building's end of life.
- ☐ See adhesives & sealants for principles on specification.
- □ Plywood, MDF and particle board: Plywood, MDF and particle board are common joinery board substrates.
- ☐ Many joinery boards can be used in their raw form and simply be sealed with a clear, low-VOC finish where required. This eliminates the need for a decorative layer such as laminate, which cannot be repaired over time.
- ☐ Finger pulls or handles can also be routed into the material, eliminating the need for additional joinery fittings.
- □ Laminates: Laminate is composed of layers of paper that are impregnated with resins, then compressed under pressure and heat. Laminates come in variety of decorative patterns and are applied by adhesive binding to a plywood, MDF or particle board substrate.
- ☐ Designers should ensure that paper content is FSC-certified and that all resins are water-based where practicable.
- □ Natural stone: Though more costly than some other options, natural stone can be incorporated as a durable benchtop option.
- ☐ Stone should only be sought from quarries with sustainable and ethical practices.
- Designers should select stone from local quarries where available to reduce the embodied energy in importing processes.
- ☐ Stone elements should be designed to be reclaimed at the end of the fitout or building's life.
- ☐ Engineered stone: Engineered stone is made of crushed natural stone and resins. It is durable, non-porous and scratch resistant making it a wellperforming benchtop material
- ☐ The high quartz content leads to substantial risk of silicosis and other illnesses if safe work practices are not undertaken. Due to these health risks, engineered stone with high silica (quartz) content should be avoided.
- □ Stainless steel: Though high in embodied energy, stainless steel is an extremely durable, fully recyclable material. An outer layer of chromium oxide enables corrosion resistance that improves the performance of stainless steel.
- ☐ The chromium content poses risk only in the form of fumes produced

during welding. Designers should reduce or eliminate the need for welding and ensure that the material can be reclaimed at the end of its useful life.



Benchmarks

- √ Low/zero VOC products.
- √ No added formaldehyde or low / zero E0 formaldehyde products.
- √ Prioritise specification of timber in the following order:
- 1) recycled timber,
- 2) fast growing alternatives (e.g. bamboo),
- 3) FSC certified timber,
- 4) plantation timber.
- √ Prioritise products with recycled content or those that are recyclable.
- ✓ Prioritise mechanical fixings over adhesives to improve recyclability.



Exclusions

- X New timber sourced from non-FSC. PEFC or AFS accredited forests.
- **X** Any timber sourced from locations where responsible forestry cannot be assured.
- X Stone from unsustainable sources.
- X Avoid stone or engineered stones with high silica content.
- X No dry cutting, grinding or polishing of engineered stone.
- X No welding to chrome finished parts.



Plastics

Plastics are used extensively in conventional construction. The production of plastics causes extreme greenhouse gas emissions and is energy intensive in manufacture.

Plastics are produced using non-renewable natural resources such as petroleum, coal and gas. They never break down and so perpetually pollute and degrade our land and waterways.

- ☐ There is an increasing availability of building materials with recycled plastic content. These products should always be specified before alternatives that use new plastics.
- ☐ As the development of bioplastic construction material improves, designers should look to these as alternatives to conventional plastics.
- ☐ Plastics should be reduced or eliminated where possible. In particular, PVC or polyvinyl chloride should be eliminated wherever possible due to its toxic content and hazardous impacts to the environment and humans during and at the products' end of life.
- ☐ Designers should avoid specifying products with harmful ingredients wherever possible.
- Stickers: Vinyl stickers are commonly applied onto hoarding and interior walls as a printable decorative graphic finish. Eco PVC-free vinyl stickers would be a more sustainable choice.

PVC-free vinyl is made from plastics and polymers that are more easily recyclable and have a smaller carbon footprint compared with PVC.

The main PVC-free materials are: PP vinyl - PP or polypropylene is a 100% recyclable thermoplastic polymer, and is available for long-lasting, heavy-duty use.





Benchmarks

- √ Reduce or eliminate use of plastic.
- √ Specify recycled or recyclable plastic components.
- √ Install plastic component which can be recycled at the fitout's /building's end of life.
- √ Minimise use of PVC (use) recyclable metals, UPVC or HDPE for plumbing applications and cloth or LSZH-FR cabling in electrical applications).



Exclusions

- X No plastic-coated or PVC containing floorings or linings.
- X Avoid products containing harmful materials.