Building and Construction Authority

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Guidebook for Plans Submission and PTO Application of Fixed Installations

This document is a draft and is subject to changes.

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Contents

1. **Objective**

In the upcoming regulations for fixed installations works under the Building Control Act, plans approval is required before commencement of fixed installation works for new installations or major alteration or replacement (A/R) of lifts, escalators/passenger conveyors and mechanised car parking systems (MCPS) (collectively termed “fixed installations” (FI)).

This guidebook describes the detailed technical documents and information required for plans submission and application for new permit to operate (PTO) /PTO after major A/R works of fixed installations.

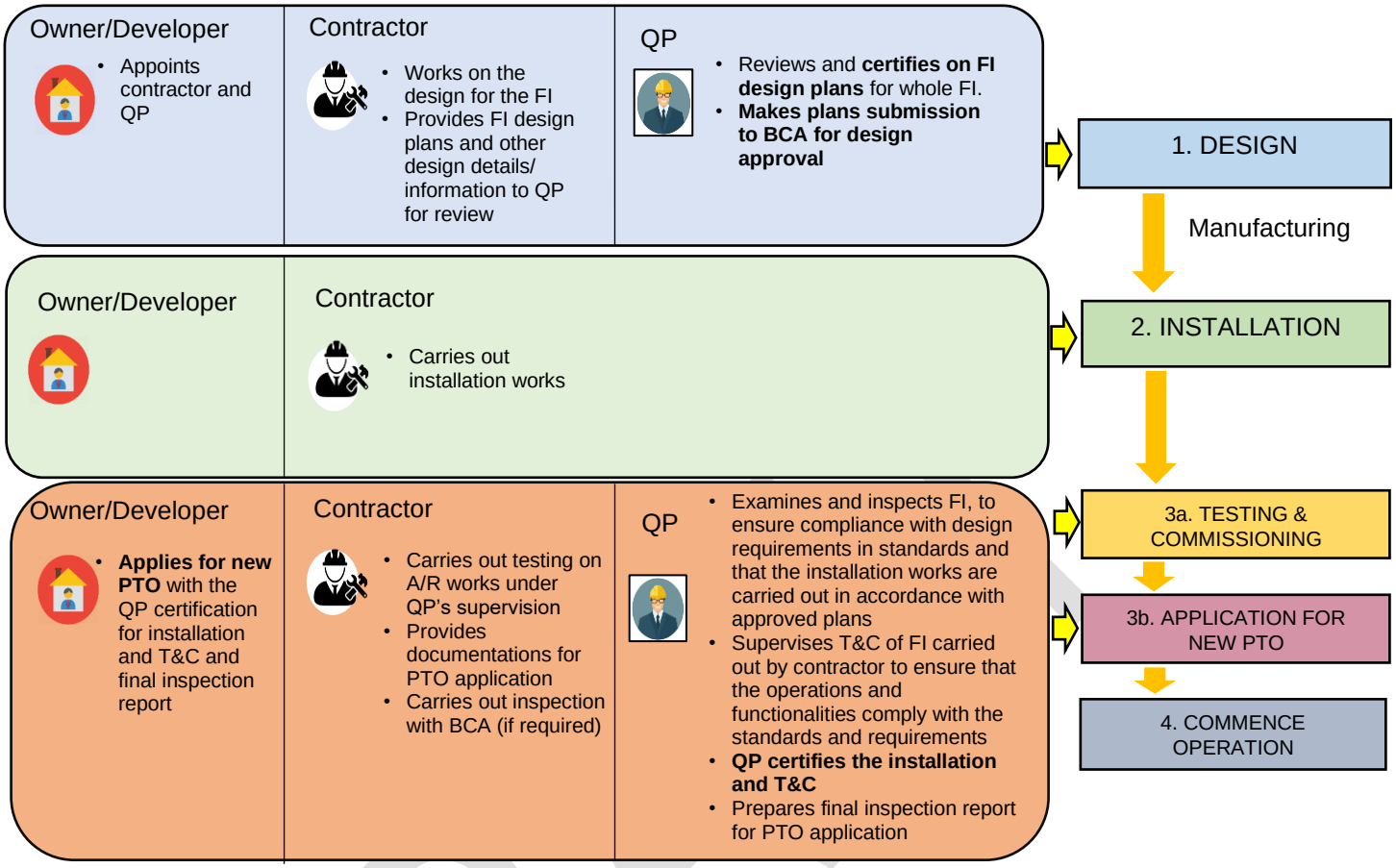
2. **Overview of Fixed Installation (FI) Regulatory Regime**

Sections **2.1** and **0** illustrate the processes for **new fixed installations (FI)** and **major A/R of FI** respectively, and the regulatory requirements at the various phases of such projects:

1. Design Phase
2. Installation/ Major A/R Phase
3. Testing & Commissioning (T&C)/ PTO Application Phase

The developer/owner will need to appoint a qualified person (QP) to fulfil the regulatory requirements at the design and T&C phases of the project. He may appoint the same or different QP(s) for each phase.

2.1. New FI



Changes to submitted/approved design prior to obtaining PTO may require submission of amendment plans (if they are classified as material changes) or as-built plans (if they are classified as immaterial changes).

Figure 1: Process for New FI

Such works will require plans submission (with QP certification on design) and approval prior to commencement of work, followed by T&C and application of new PTO (with QP certification on installation and T&C). PTO will be a prerequisite for the issuance of TOP for a new building.

2.1.1. Design Phase

- At the start of the project, the owner/developer will appoint the QP(s) and the FI contractor. The Builder or the FI contractor can also appoint the QP(s) on behalf of the owner/developer.

- The appointed QP will be required to prepare the FI design plan with inputs from the FI contractor, review the FI design plan for design compliance and submit the FI design plan and relevant documents and information for plan approval.

- Please refer to **Chapter 3** for more details on **plans submission**.

2.1.2. Installation Phase

- After the plans are approved, the FI contractor can proceed to carry out the installation of the FI.

2.1.3. Testing and Commissioning (T&C) Phase

- On completion of all FI works, QP is required to examine and inspect the works.
- FI contractor is to carry out the T&C under QP's supervision.
- On completion of the above actions, QP is required to certify that:
    - the FI works have been carried out in accordance with the Building Control Act, Regulations, approved plans, and any terms and conditions imposed by the Commissioner of Building Control; and
    - he has examined and inspected the FI in accordance with the Building Control Act, Regulations, and any terms and conditions imposed by the Commissioner of Building Control.
    - the FI had been tested in accordance with the Building Control Act, Regulations, and any terms and conditions imposed by the Commissioner of Building Control.
- QP is also required to prepare the final inspection report and submit it for the PTO application.
- Please refer to **Chapter 4** for more details on Application of New PTO/PTO after Major A/R works.

2.1.4. Deviations from Submitted/Approved Plans Prior to Obtaining PTO

- If there are any deviations from the submitted/approved plans at any stage prior to obtaining PTO, QP is to submit the following:
    - amendment plans, if the changes amount to material changes, or
    - as-built plans, if the changes amount to immaterial changes.
- Works related to any deviations from the submitted/approved plans amounting to material changes can only commence after the amendment plans are approved. Refer to Annex A for the lists of material changes and Annex B for the lists of immaterial changes.

- Works related to any deviations from the submitted/approved plans amounting to immaterial changes can proceed without the need for prior design approval. As-built plans can be submitted after the completion of the relevant works, just before the application for new PTO.

- If changes are made to the installation after the QP has certified (as per paras 2.1.2 and 2.1.3) on the installation works and/or T&C, the QP will need to re-certify on the installation works and the T&C. It may also require a repeat of a partial/full T&C.

2.2. **Major Alteration or Replacement Works**

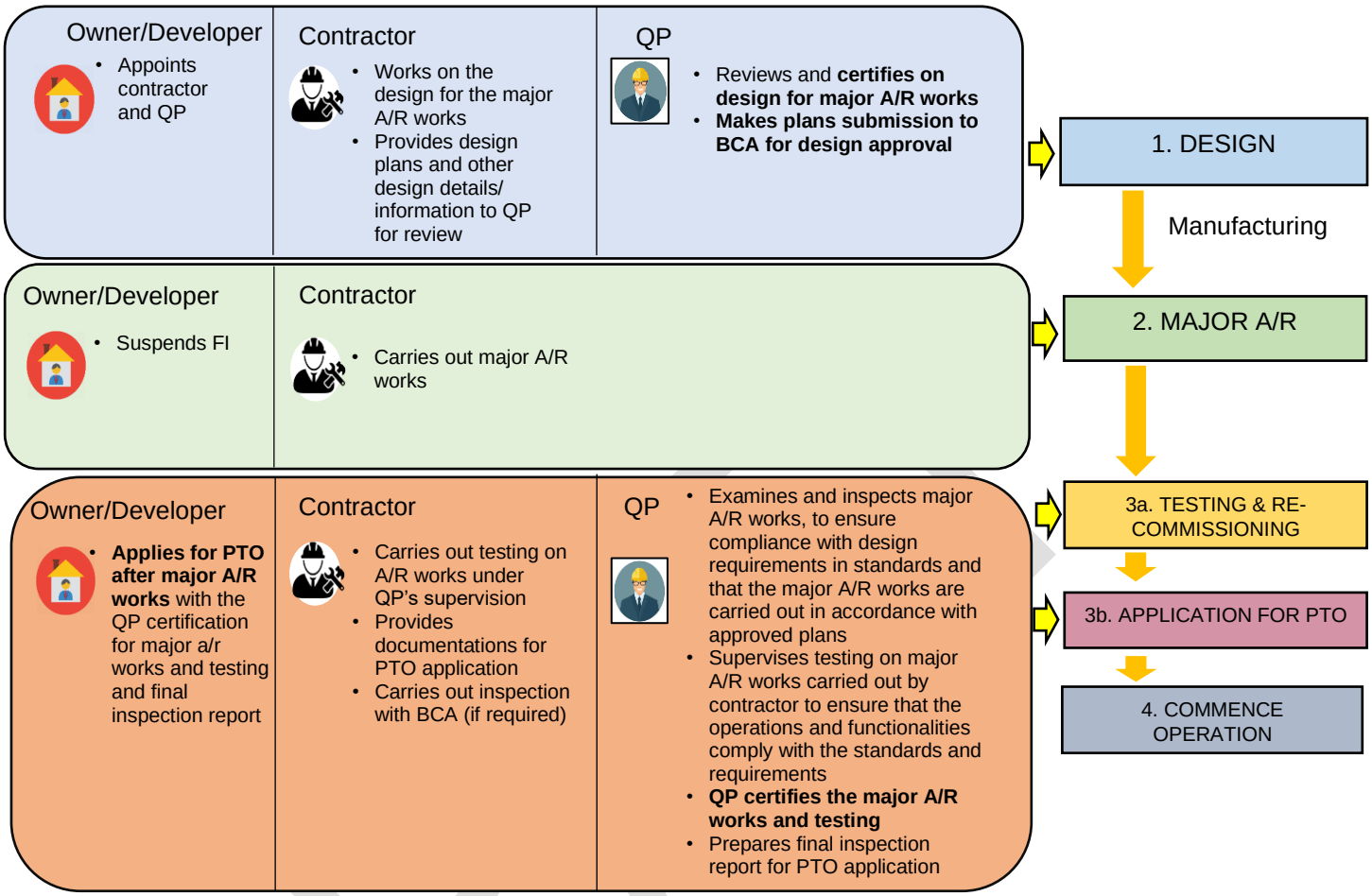
There are two categories of major A/R works as follows:

a) Major A/R works that require submission and approval of plans before the works commence. Refer to **Annex C** for the full list.

b) Major A/R works that do not require submission and approval of plans before the works commence. Refer to **Annex D** for the full list.

The details for the respective requirements for these two categories of major A/R works are provided in the sections below (**2.2.1** and **2.2.2**).

2.2.1. Major A/R works that require submission and approval of plans before the works commence



Changes to submitted/approved design prior to obtaining PTO may require submission of amendment plans (if they are classified as material changes) or as-built plans (if they are classified as immaterial changes)

Figure 2: Process for major A/R works that require submission and approval of plans before the works commence

Such works will require plans submission (with QP certification on design) and approval prior to commencement of work, followed by testing on the major A/R parts and application of PTO after major A/R works (with QP certification on major A/R works and testing). PTO will be a prerequisite for the issuance of TOP for a building (if the major A/R works are part of the A&A works of the building).

2.2.1.1. Design Phase

- At the start of the project, the owner/developer will appoint the QP(s) and the FI contractor. The Builder or the FI contractor can also appoint the QP(s) on behalf of the owner/developer.

- The QP will be required to prepare the FI major A/R design plan with inputs from the FI contractor, review the plan for design compliance and submit the design plan and relevant documents and information for design approval.

- Please refer to **Chapter 3** for more details on **plans submission**.

2.2.1.2. **Major A/R Phase**

- After the plans are approved, the FI contractor can proceed to carry out the major A/R works of the FI.

2.2.1.3. **Testing & Re-Commissioning (T&C) Phase**

- On completion of the major A/R works, QP is required to examine and inspect the works.

- FI contractor is to carry out the testing under QP's supervision.

- On completion of the above actions, QP is required to certify that:

    - the major A/R works have been carried out in accordance with the Building Control Act, Regulations, approved plans, and any terms and conditions imposed by the Commissioner of Building Control; and

    - he has examined and inspected the major A/R works in accordance with the Building Control Act, Regulations, and any terms and conditions imposed by the Commissioner of Building Control.

    - the major A/R works had been tested[1] in accordance with the Building Control Act, Regulations, and any terms and conditions imposed by the Commissioner of Building Control.

- QP is also required to prepare the final inspection report and submit it for the PTO application.

- Please refer to **Chapter 4** for more details on Application of New PTO/PTO after Major A/R works.

[1] In accordance with SS550: 2009 D3.2 and SS550: 2020 6.3.15.2.4, appropriate tests shall be performed by the competent person to ascertain the safe operation and also compatibility of the components that had been changed/added/replaced/restored in relation to the entire lift installation, after a major A/R work. Reference can be made to the commissioning test methods for consistency in testing.

2.2.1.4. **Deviations from Submitted/Approved Plans Prior to Obtaining PTO**

- If there are any deviations from the submitted/approved plans at any stage prior to obtaining PTO, QP is to submit the following:
  - amendment plans, if the changes amount to material changes, or
  - as-built plans, if the changes amount to immaterial changes.

- Works related to any deviations from the submitted/approved plans amounting to material changes can only commence after the amendment plans are approved. Refer to Annex A for the lists of material changes and Annex B for the lists of immaterial changes.

- Works related to any deviations from the submitted/approved plans amounting to immaterial changes can proceed without the need for prior design approval. As-built plans can be submitted after the completion of the relevant works, just before the application for PTO.

- If changes are made to the installation after the QP has certified (as per paras 2.2.1.2 and 2.2.1.3) on the major A/R works and/or testing, the QP will need to re-certify on the major A/R works and the testing. It may also require a repeat of a partial/full testing.

2.2.2. **Major A/R works that <u>do not require submission and approval of plans</u> before the works commence**

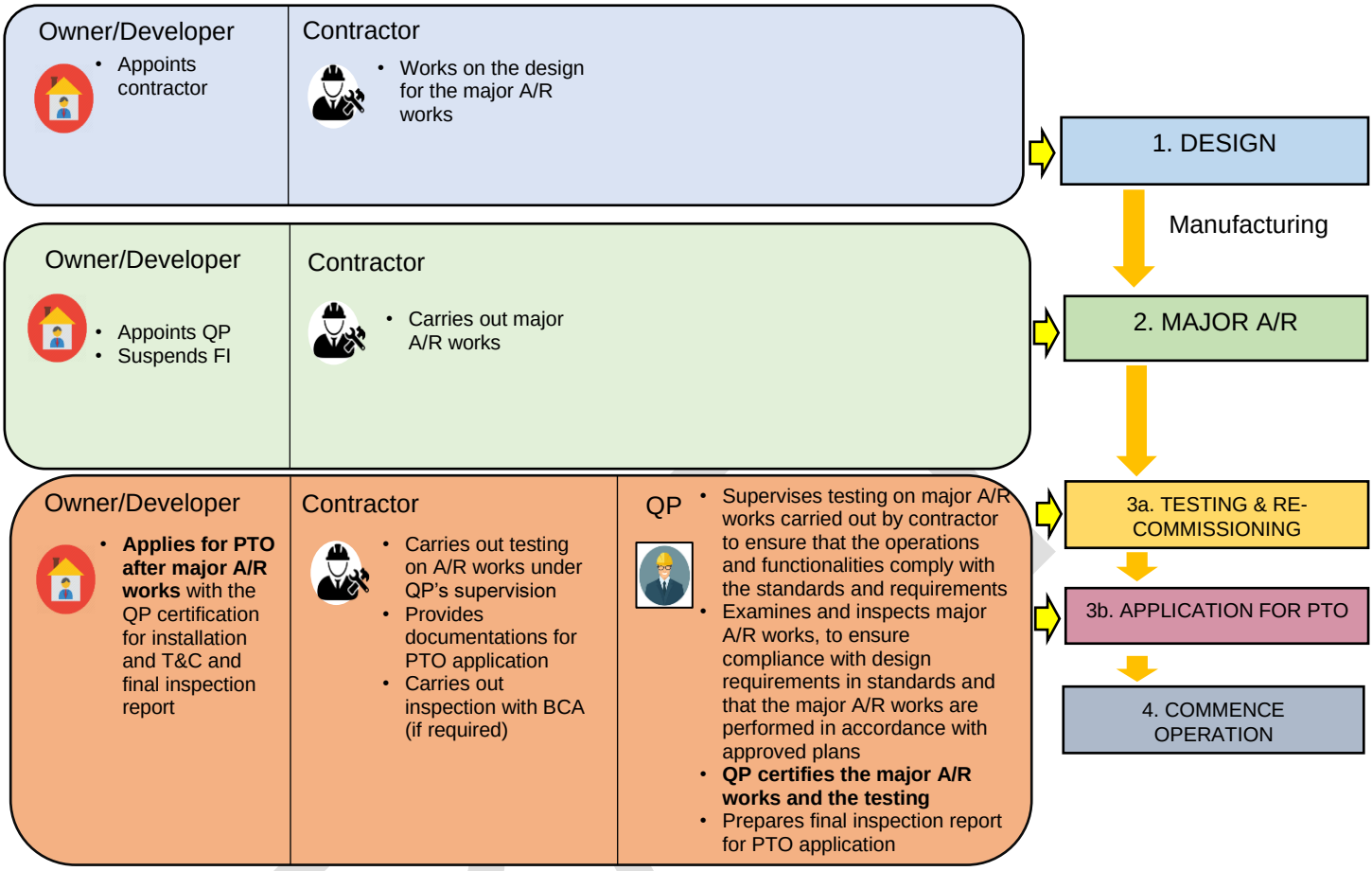


Figure 3: Process for major A/R works that <u>do not require submission and approval of plans</u> before the works commence

Such works may commence without the need of plans submission and approval, followed by testing on the major A/R parts and application of PTO after major A/R works (with QP certification on major A/R works and testing). PTO will be a prerequisite for the issuance of TOP for a building (if the major A/R works are part of the A&A works of the building).

2.2.2.1. **Design Phase**

- At the start of the project, the owner/developer will appoint the FI contractor, who will work on the design for the major A/R related works.
- Plans submission and approval are not required for this category of major A/R works.

2.2.2.2. **Major A/R Phase**

- The owner/developer will appoint the QP(s). The Builder or the FI contractor can also appoint the QP(s) on behalf of the owner/developer.

- The FI contractor will proceed to carry out the major A/R works of the FI.

2.2.2.3. **Testing & Re-Commissioning (T&C) Phase**

- On completion of the major A/R works, QP is required to examine and inspect the works.

- FI contractor is to carry out the testing under QP's supervision.

- On completion of the above actions, QP is required to certify that:

    - the major A/R works have been carried out in accordance with the Building Control Act, Regulations, approved plans, and any terms and conditions imposed by the Commissioner of Building Control; and

    - he has examined and inspected the major A/R works in accordance with the Building Control Act, Regulations, and any terms and conditions imposed by the Commissioner of Building Control.

    - the major A/R works had been tested[2] in accordance with the Building Control Act, Regulations, and any terms and conditions imposed by the Commissioner of Building Control.

- QP is also required to prepare the final inspection report and submit it for the PTO application.

- Please refer to **Chapter 4** for more details on Application of New PTO/PTO after Major A/R works.

[2] In accordance with SS550: 2009 D3.2 and SS550: 2020 6.3.15.2.4, appropriate tests shall be performed by the competent person to ascertain the safe operation and also compatibility of the components that had been changed/added/replaced/restored in relation to the entire lift installation, after a major A/R work. Reference can be made to the commissioning test methods for consistency in testing.

3. **Plans submission**

The types of technical documentations and information required for plans submission include:

- Equipment Data
- Plans and Drawings
- Certificates and Reports

Sections 3.1 to 3.6 list down the full details of the documentations and information required to be submitted for each type of FI.

After QP's review of the FI design documents and information, QP will certify them and make submission to BCA for design approval. In the submission to BCA, QP will be required to key in the equipment data and upload the documents, drawings, certificates and reports of the FI.

BCA's approval on the FI design plans must be obtained before carrying out installation / major A/R works that require submission and approval of plans.

For **amendment plans**, **as-built plans** or **plans for major A/R works that require submission and approval of plans**, the QP may submit only the information and documents required from Section 3.1 to 3.6 that are relevant to the amendments to submitted/approved design or the major A/R works.

A separate guidebook will be provided for the procedures to make a plan submission through the online submission system.

3.1. **Traction Lifts (SS550)**

3.1.1. **Data to be submitted**

The following data are required to be keyed into the e-form:

1. Manufacturer - Brand Name
2. Lift Type – Motor Roomless (MRL)/Motor Room (MR), Geared/Gearless
3. Lift Number
4. Accessibility Provision
5. Fire Safety Provision
6. Code Compliance
7. Travel Height (m)
8. Number of Stops served
9. Car Size - interior dimension (width x depth x height) without décor (mm)
10. Max allowable Décor Weight (kg)
11. Rated Speed (m/s)
12. Rated Load (kg)
13. Counterweight Runby (mm)
14. Car and Counterweight Buffer Stroke (mm)
15. Maximum Passenger Capacity
16. Guide Rail Size (mm)
17. System Model Number
18. Controller Model Number
19. Traction Machine Model Number
20. Suspension Rope or Belt – number, size (mm) (diameter of rope/thickness of belt), configuration (1:1/2:1/3:1/4:1, Single Wrap/Double Wrap, Under Slung/Over Slung)
21. Machine Brake Type (Drum/Disc/Others) and Machine Brake Model Number
22. Emergency Brakes for ACOP or UCMP - Type (Machine Brake/Rope Gripper/Sheave Jammer/Safety Gears/Others) and Model Number
23. Car Door Operator – Make, Model and Type (Centre Opening/Side Opening Telescopic/Bi Parting/Sliding Up)
24. Door Protective Device - Make, Model and Type
25. Type Testing Details (Certificate Number, Model Number, Expiry Date of Cert, Permissible Mass (kg) (for Safety Gears and Buffers), Rated Speed (m/s) and Tripping Speed (m/s) (for Overspeed Governor) and Impact Speed (m/s) (for Buffers)) for:
    a) Lift Model
    b) Safety Circuits containing Electronic Components
    c) Safety Circuits containing Programmable Electronic Systems in Safety Related Applications for Lifts (PESSRAL) (if applicable)
    d) Unintended Car Movement Protection (UCMP)
    e) Ascending Car Overspeed Protection (ACOP)
    f) Landing Door Locking Device

g) Car Door Locking Device
h) Safety Gears
i) Overspeed Governor
j) Car and Counterweight Buffers

3.1.2. **Drawings**

The following drawings are required to be submitted:

1. Site plan and floor plans showing:
   a) Location of machine rooms and lift shafts
   b) Plan and elevation views of access path to machine room
   c) Any occupancy space below pit (e.g. underground carpark)

2. Machine room layout plans showing:
   a) Plan and elevation views which include entrance dimensions
   b) Space around the controller and machinery

3. Hoistway/shaft and lift car cross sectional plans showing:
   a) Car top clearance with car position at top floor
   b) Car bottom clearance with car position at bottom floor
   c) Dimensions and position of pit ladder
   d) Car and counterweight buffer strokes

3.1.3. **Certificates and Reports**

The following documents are required to be submitted:

1. Type test certificates and reports (showing details including the models and specifications of other components that can be used with the certified lift model/component) for:
   a) Lift Model
   b) Safety Circuits containing Electronic Components
   c) Safety Circuits containing Programmable Electronic Systems in Safety Related Applications for Lifts (PESSRAL) (if applicable)
   d) Unintended Car Movement Protection (UCMP)
   e) Ascending Car Overspeed Protection (ACOP)
   f) Landing Door Locking Device
   g) Car Door Locking Device
   h) Safety Gears
   i) Overspeed Governor
   j) Car and Counterweight Buffers

3.2. **Hydraulic Lifts (SS550)**

3.2.1. **Data to be submitted**

The following data are required to be keyed into the e-form:

1. Manufacturer - Brand Name
2. Lift Type – Direct/Indirect Hydraulic, Number of Cylinders, Telescopic Piston (Y/N), Cantilevered (Y/N))
3. Lift Number
4. Accessibility Provision
5. Fire Safety Provision
6. Code Compliance
7. Travel Height (m)
8. Number of Stops served
9. Car Size - interior dimension (width x depth x height) without décor (mm)
10. Max allowable Décor Weight (kg)
11. Rated Speed (m/s)
12. Rated Load (kg)
13. Car Buffer Stroke (mm)
14. Maximum Passenger Capacity
15. Guide Rail Size (mm)
16. System Model Number
17. Controller Model Number
18. Hydraulic Pump Model Number
19. Hydraulic Control Valve Model Number
20. Suspension Rope or Belt – number, size (mm) (diameter of rope/thickness of belt), configuration (1:1/2:1/3:1/4:1, Single Wrap/Double Wrap, Under Slung/Over Slung) (if applicable)
21. Car Door Operator – Make, Model and Type (Centre Opening/Side Opening Telescopic/Bi Parting/Sliding Up)
22. Door Protective Device - Make, Model and Type
23. Type Testing Details (Certificate Number, Model Number, Expiry Date of Cert, Permissible Mass (kg) (for Safety Gears and Buffers), Rated Speed (m/s) and Tripping Speed (m/s) (for Overspeed Governor) and Impact Speed (m/s) (for Buffers)) for:
    a. Lift Model
    b. Safety Circuits containing Electronic Components
    c. Safety Circuits containing Programmable Electronic Systems in Safety Related Applications for Lifts (PESSRAL) (if applicable)
    d. Landing Door Locking Device
    e. Car Door Locking Device
    f. Safety Gears (if applicable)
    g. Overspeed Governor (if applicable)

h. Rupture Valve or One-way Restrictor (Check Valve) (if applicable)
i. Car Buffers

3.2.2. **Drawings**

The following drawings are required to be submitted:

1. Site plan and floor plans showing:
   a) Location of machine rooms and lift shafts
   b) Plan and elevation views of access path to machine room
   c) Any occupancy space below pit (e.g. underground carpark)
2. Machine room layout plan showing:
   a) Plan and elevation views which include entrance dimensions
   b) Space around the controller and machinery
3. Hoistway/shaft and lift car cross sectional plans showing:
   a) Car top clearance with car position at top floor
   b) Car bottom clearance with car position at bottom floor
   c) Dimensions and position of pit ladder
   d) Car buffer strokes

3.2.3. **Certificates and Reports**

The following documents are required to be submitted:

1. Type test certificates and reports (showing details including the models and specifications of other components that can be used with the certified lift model/component) for:
   a) Lift Model
   b) Safety Circuits containing Electronic Components
   c) Safety Circuits containing Programmable Electronic Systems in Safety Related Applications for Lifts (PESSRAL) (if applicable)
   d) Landing Door Locking Device
   e) Car Door Locking Device
   f) Safety Gears (if applicable)
   g) Overspeed Governor (if applicable)
   h) Rupture Valve or One-way Restrictor (Check Valve) (if applicable)
   i) Car Buffers

3.3. Vertical Platform Lifts

3.3.1. Data to be submitted

The following data are required to be keyed into the e-form:

1. Brand Name
2. Model Number
3. Lift Number
4. Accessibility Provision
5. Code Compliance
6. Type of Drive system: Rack and Pinion/Ropes and Suspension/Screw and Nut/ Friction or Traction Drive/Guided Chain/Scissors Mechanism/Hydraulic (Direct)/Hydraulic (Indirect)
7. Car Mass (kg)
8. Rated Load (kg)
9. Rated Speed (m/s)
10. Platform Size (width x depth) (mm)
11. Travel Height (m)
12. Number of Floors served

3.3.2. Drawings

The following drawings are required to be submitted:

1. Site plan and floor plans
2. Equipment layout showing:
   a) Car and lift way enclosure (elevation and plan view)

3.3.3. Certificates and Reports

The following documents are required to be submitted:

1. Test certificate/report of PESSRAL (if applicable)
2. Test procedures of PESSRAL (if applicable)

3.4. **Stairlifts**

3.4.1. **Data to be submitted**

The following data are required to be keyed into the e-form:

1. Brand Name
2. Model Number
3. Lift Number
4. Accessibility Provision
5. Code Compliance
6. Type of Drive System: Rope Suspension/Rack and Pinion/Chain or Belt/Screw and Nut/Friction/Guided Rope and Ball
7. Car Mass (kg)
8. Rated Load (kg)
9. Rated Speed (m/s)
10. Travel Height (mm)
11. Platform Size (width x depth) (mm)

3.4.2. **Drawings**

The following drawings are required to be submitted:

1. Site plan and floor plans
2. Equipment layout showing:
   a) Carriage size and clearances (elevation and plan view)

3.4.3. **Certificates and reports**

The following documents are required to be submitted:

1. Test certificate/report of PESSRAL (if applicable)
2. Test procedures of PESSRAL (if applicable)

2.

3.5. **Escalators/Passenger Conveyors**

3.5.1. **Data to be submitted**

The following data are required to be keyed into the e-form:

1. Manufacturer - Brand Name
2. Escalator Type
3. Escalator Number
4. Code Compliance
5. Rated Speed (m/s)
6. Rise of Escalator (m)
7. Inclination Angle (°)
8. System Model
9. Controller Model
10. Drive Machine Model Number
11. Drive Machine Brake Model Number
12. Emergency/Auxiliary Brake Model Number
13. Step or Pallet Widths (mm)
14. Balustrade Type (Glass/Metal)
15. Number of Flat Steps at Landing
16. Drive Chain Number and Type (Duplex/Triplex)
17. Number of E-stop Switches

3.5.2. **Drawings**

The following drawings are required to be submitted:

1. Site plan and floor plans
2. Drawings showing:
   a) Safety zone, clear height
   b) Structural support

3.5.3. **Certificates and Reports**

The following reports and certificate are required to be submitted:

1. Factory acceptance test reports:
   a) Proof of calculation of sufficient breakage resistance of the parts directly driving the steps, pallets or the belt e.g. step chains, racks
   b) Calculation of the stopping distances for loaded moving walks together with adjustment data
   c) Proof testing of steps or pallets
   d) Proof of the breaking strength of the belt

e) Proof of stopping distances and deceleration values

2. Test certificate/report of PESSRAE (if applicable)
3. Test procedures of PESSRAE (if applicable)

3.6. **Mechanised Car Park Systems (MCPS)**

3.6.1. **Data to be submitted**

The following data are required to be keyed into the e-form:

1. MCPS Type
2. MCPS Number
3. Brand Name
4. System Model Number
5. Country of Manufacture
6. Code Compliance
7. Maximum Size of the Car (LxWxH) (mm)
8. Maximum Load (kg)
9. Number of Stacks/Layers
10. Number of Car Park Lots
11. Type of Operation – Automatic/Semi-Automatic/Manual (Hold to Run)
12. Size of Transfer Area (mm)

3.6.2. **Drawings**

The following drawings are required to be submitted:

1. Site plan and floor plans showing:
   a) Location of the MCPS)
   b) Entrance level
   c) Number of stacks
   d) Storage area
   e) Entrance and Exit of the vehicle
   f) User exit door(s)
   g) Emergency door(s)

2. MCPS design drawings (plan view, elevation view, sectional view) showing:
   a) Layout of transfer area indicating the location of the vehicle and the dimensions of the transfer area (length, width and height).
   b) Dimensions of maximum size of the vehicle
   c) Dimensions of load carrier transfer platform
   d) Location of the control panel which contains the press to hold button, start and stop buttons
   e) Location of emergency-stop button(s)
   f) Location, dimensions and coverage of door protective devices
   g) Location and dimensions of anti-fall devices
   h) Location and coverage of sensors in the transfer area

4. **Application for New PTO/PTO after Major A/R works**

Valid PTO will have to be obtained before putting each FI into operation after installation or major A/R works. QP is to submit the final inspection report for the FI and other documents as attachment to the PTO application.

Sections 4.1 to 4.6 list down the final inspection report templates that the QP needs to fill in and submit and the other required submission documents and equipment data for each of the types of FI.

BCA may choose to conduct an inspection of the FI before the issuance of the PTO. A proposed inspection date should be provided during the PTO application.

A separate guidebook will be provided for the procedures to make a PTO application through the online application system.

4.1. **Lifts (SS550)**

4.1.1. **Data to be submitted**

The following data are required to be keyed into the submission page:

1. Lift Type
2. Postal Code
3. Lift Number
4. Lift ID (for major A/R)
5. Test Dates
6. Code Compliance
7. ARD make and model
8. UPS make and model

4.1.2. **Certificates and Reports**

The following documents are required to be submitted:

1. Mill Test certificates for ropes
2. Final inspection report (using template below):

4.2. **Vertical Platform Lifts**

4.2.1. **Data to be submitted**

The following data are required to be keyed into the submission page:

1. Lift Type
2. Postal Code
3. Lift Number
4. Lift ID (for major A/R)
5. Test Dates
6. Code Compliance

4.2.2. **Final inspection report**

The following documents are required to be submitted:

1. Final inspection report (using template below):

4.3. **Stairlifts**

4.3.1. **Data to be submitted**

The following data are required to be keyed into the submission page:

1. Lift Type
2. Postal Code
3. Lift Number
4. Lift ID (for major A/R)
5. Test Dates
6. Code Compliance

4.3.2. **Final inspection report**

The following documents are required to be submitted:

1. Final inspection report (using template below):

4.4. **Escalators/Passenger Conveyors**

4.4.1. **Data to be submitted**

The following data are required to be keyed into the submission page:

1. Escalator Type
2. Postal Code
3. Escalator Number
4. Escalator ID (for major A/R)
5. Test Dates
6. Code Compliance

4.4.2. **Final inspection report**

The following documents are required to be submitted:

1. Final inspection report (using template below):

4.5. **MCPS**

4.5.1. **Data to be submitted**

The following data are required to be keyed into the submission page:

1. MCPS Type
2. Postal Code
   MCPS Number
3. MCPS ID (for major A/R)
4. Test Dates
5. Code Compliance

4.5.2. **Final inspection report**

The following documents are required to be submitted:

1. Final inspection report (using template below):

Annex A – Lists of Material Changes to Submitted/Approved Design

Note: The lists in this Annex are subject to changes. Please refer to the revised Building Control Regulations that are tentatively set to gazette in 2022. For any discrepancies between this guidebook and the Regulations, the Regulations shall take precedence.

Any deviations to the submitted/approved design prior to obtaining the PTO that fall within the lists of material changes below will require the submission and approval of amendment plans before the commencement or works.

A1. Lifts (SS550)

a) Changing the rated speed
b) Changing the rated load
c) Changing the mass of the car (≥ 5%) (including the finishing)
d) Changing the travel distance
e) Changing the type of door locking devices
f) Changing the size of the guiderails
g) Adding one or more landing entrances or car entrances
h) Changing the type of drive system
i) Changing the overspeed governor
j) Changing the ascending car overspeed protection means
k) Changing the buffers
l) Changing the safety gears
m) Changing the unintended car movement protection means
n) Changing the rupture valve
o) Changing the restrictor/one-way restrictor
p) Changing safety circuit containing electronic components and/or programmable electronic system
q) Changing the car bottom clearances and overhead clearances
r) Providing new occupancy space below lift pit

A2. Vertical Platform Lifts

a) Changing the rated speed
b) Changing the rated load
c) Changing the mass of the platform (≥ 5%) (including the finishing)
d) Changing the travel distance
e) Changing the type of drive system
f) Changing the pit depth
g) Adding one or more landing entrances

A3. Stairlifts

a) Changing the rated speed
b) Changing the rated load
c) Changing the mass of the carriage (≥ 5%)
d) Changing the type of drive system

A4. Escalators/Passenger Conveyors

a) Increasing the maximum rated speed
b) Changing the drive system
c) Changing the auxiliary brakes

A5. MCPS

a) Changing the rated load
b) Changing the location of the entrance and exit of vehicle, user exit door and emergency door
c) Changing the dimensions of the transfer area

Annex B – Lists of Immaterial Changes to Submitted/Approved Design

Note: The lists in this Annex are subject to changes. Please refer to the revised Building Control Regulations that are tentatively set to gazette in 2022. For any discrepancies between this guidebook and the Regulations, the Regulations shall take precedence.

Any deviations to the submitted/approved design prior to obtaining the PTO that fall within the lists of immaterial changes below will require the submission of as-built plans. Works can proceed without the need to obtain design approval for the as-built plans.

B1. Lifts (SS550)

a) Changing the brake system
b) Changing the number or size of the hoisting ropes
c) Changing the controller model
d) Changing the traction sheave
e) Increasing the effective platform size (e.g. by changing/removing grab bars or cosmetic panels)

B2. Vertical Platform Lifts

a) Increasing the effective platform size (e.g. by changing/removing grab bars or cosmetic panels)

B3. Stairlifts

a) Changing the travel distance
b) Changing the carriage dimensions

B4. Escalators/Passenger Conveyors

a) Changing the brake system
b) Changing the controller model
c) Changing the step band (including step band and step type)

B5. MCPS

a) Changing the design of the anti-fall device
b) Changing the positions and coverage of sensors in the transfer area
c) Changing the position and coverage of door protective device (light curtain/photo sensor)
d) Changing the control e.g. hold to start, automatic parking and retrieval process before and after the user enter and leave the transfer area
e) Changing the control and logic programming (that affects the transfer area)

Annex C – Lists of Major Alteration or Replacement Works that require the Submission and Approval of Plans

Note: The lists in this Annex are subject to changes. Please refer to the revised Building Control Regulations that are tentatively targeted to gazette in 2022. For any discrepancies between this guidebook and the Regulations, the Regulations shall take precedence.

C1. Lifts (SS550)

a) Changing the rated speed
b) Changing the rated load
c) Changing the mass of the car (≥ 5%) (including the finishing)
d) Changing the travel distance
e) Changing the type of door locking devices
f) Changing the size of the guiderails
g) Adding one or more landing entrances or car entrances
h) Changing the type of drive system
i) Changing the overspeed governor
j) Changing the ascending car overspeed protection means
k) Changing the buffers
l) Changing the safety gears
m) Changing the unintended car movement protection means
n) Changing the rupture valve
o) Changing the restrictor/one-way restrictor
p) Changing safety circuit containing electronic components and/or programmable electronic system
q) Changing the car bottom clearances and overhead clearances
r) Providing new occupancy space below lift pit
s) Changing the brake system
t) Changing the number or size of the hoisting ropes
u) Changing the controller model
v) Changing the traction sheave
   Increasing the effective platform size (e.g. by changing/removing grab bars or cosmetic panels)

C2. Vertical Platform Lifts

a) Changing the rated speed
b) Changing the rated load
c) Changing the mass of the platform (≥ 5%) (including the finishing)
d) Changing the travel distance
e) Changing the type of drive system
f) Changing the pit depth

g) Adding one or more landing entrances
h) Increasing the effective platform size (e.g. by changing/removing grab bars or cosmetic panels)

C3. Stairlifts

a) Changing the rated speed
b) Changing the rated load
c) Changing the mass of the carriage (≥ 5%)
d) Changing the type of drive system
e) Changing the travel distance
f) Changing the carriage dimensions

C4. Escalators/Passenger Conveyors

a) Increasing the maximum rated speed
b) Changing the drive system
c) Changing the auxiliary brakes
d) Changing the brake system
e) Changing the controller model
f) Changing the step band (including step band and step type)

C5. MCPS

a) Changing the rated load
b) Changing the location of the entrance and exit of vehicle, user exit door and emergency door
c) Changing the dimensions of the transfer area
d) Changing the design of the anti-fall device
e) Changing the positions and coverage of sensors in the transfer area
f) Changing the position and coverage of door protective device (light curtain/photo sensor)
g) Changing the control e.g. hold to start, automatic parking and retrieval process before and after the user enter and leave the transfer area
h) Changing the control and logic programming (that affects the transfer area)

Annex D – Lists of Major Alteration or Replacement Works that do not require the Submission and Approval of Plans

Note: The lists in this Annex are subject to changes. Please refer to the revised Building Control Regulations that are tentatively targeted to gazette in 2022. For any discrepancies between this guidebook and the Regulations, the Regulations shall take precedence.

D1. Lifts (SS550)

a) Changing the type of hoisting ropes
b) Changing the software such that safety functionalities are affected
c) Changing the type of car doors or landing doors
d) Changing the pawl device
e) Changing the hydraulic jack
f) Changing the pressure relief valve
g) Changing the compensation system

D2. Vertical Platform Lifts

a) Changing the brake system
b) Changing the number or size of the hoisting ropes
c) Changing the type of hoisting ropes
d) Changing the size of the guiderails
e) Changing the overspeed limitation devices
f) Changing the type of landing doors
g) Changing the landing door locking devices
h) Changing the software such that safety functionalities are affected
   Changing safety circuit containing electronic components and/or programmable electronic system

D3. Stairlifts

a) Changing the brake system
b) Changing the overspeed limitation devices
c) Changing the software such that safety functionalities are affected
d) Changing safety circuit containing electronic components and/or programmable electronic system

D4. Escalators/Passenger Conveyors

a) Changing the truss

b) Changing the balustrade
c) Changing the overspeed and reversal protection means
d) Changing the software such that safety functionalities are affected
e) Changing safety circuit containing electronic components and/or programmable electronic system

D5. MCPS

a) Nil