

Date: 15 September 2025

Our Ref: LTA/DBC/R70.018.001

WHO SHOULD KNOW

Agencies, Building owners, Developers, Architects, Engineers, LEWs

Dear Sir / Mdm

ENHANCING THE SUBMISSION PROCESS FOR STREET WORKS PROPOSALS RELATING TO DEVELOPMENT WORKS

OBJECTIVE

1. This circular aims to inform the industry of enhancements to the submission process for Street Works Proposals relating to Development Works at the Layout Plan (DC/ DG) and Street Plan (BP/ CG) stage. The initiatives are as follows:
 - a) Submission Requirements for Street Works Proposals relating to Development Works
 - b) List of M&E Approved Products
 - c) Standardisation of Bus Stops

SUBMISSION REQUIREMENTS FOR STREET WORKS PROPOSALS RELATING TO DEVELOPMENT WORKS

2. In tandem with the launch of CorenetX, the Land Transport Authority (LTA) is publishing the Submission Requirements for Street Works Proposals relating to Development Works, which describes the required items to be included in Layout Plan (DC / DG) and Street Plan (BP / CG) submissions. Through the submission requirements, we aim to reduce the number of resubmissions that arise due to incomplete or missing details.
3. You may use the Submission Requirements as reference to ensure that the development proposal submission is complete and of sufficient detail. As of the date of this circular, the submission requirements checklist does **not** need to be submitted to LTA.
4. Additionally, we would like to draw your attention to the following submission requirements:
 - a) Civil + M&E (Item A2): To include the **full name** of persons/entities. For persons/entities with very long names, partial/shortened name may be used, provided that the name is sufficient to uniquely identify that person/entity.
(Example. John Tan Ah Kow (ok), John AK Tan / John Tan (ok if person is uniquely identifiable), J Tan/ JTAK / JT (not ok))
 - b) Civil (Item C2 / C4): To indicate **line-of-sight triangle** at access and corners, and **mark primary accessway routes** to nearby transport nodes, bicycle parking and end-of-trip facilities.
 - c) Civil (Item D1 / D2): To supplement the site plan, to provide the specified **section and interfacing details** and **swept path** at DG stage. By reviewing these details at the DG stage, we hope to minimise the likelihood of major design changes at CG stage.
5. The Submission Requirements for **Civil / Transport (DG and CG stage)** and **M&E (CG stage)** is included in **Annex A** and **Annex B** of this circular respectively. The requirements are also available on LTA's website at [LTA | Development and Construction Resources](#).

LIST OF APPROVED M&E PRODUCTS

6. To assist in the selection of M&E products and hence expedite the clearance of M&E submissions at the Street Plan (CG) stage, LTA is publishing a list of approved M&E products. These are products which have satisfied LTA's requirements and proven track record with LTA.
7. If you select products within the approved list, the products will be accepted by LTA by default. You are also reminded to annotate your specific product selection(s) from the catalogue and/or documentation in your submission to LTA.
8. If you wish to use other products for your submission, the submission process is unchanged from current practice – please submit the relevant specifications, test results and/or other relevant supporting documentation of the proposed product **as part of your M&E BP Stage submission** for LTA to review.
9. Apart from product selection, approval of M&E submissions also depends on design validation.
10. The List of Approved M&E Products is included in **Annex C**. It is also available for download on LTA's website at [LTA | Requirements for Street Works Proposals](#).

STANDARDISATION OF BUS STOPS

11. To expedite the design submission process for bus stops, **LTA will prescribe the bus stop location, type (linear or bay), size (single, double, triple, etc), and bus shelter dimensions** as part of the Layout Plan (DG stage) written direction, or , where possible, as part of the planning conditions for the development. While you are no longer required to compute the bus stop parameters using bus and passenger volume, the table relating said volumes and bus stop sizing within LTA's Infrastructure Design Criteria (IDC) will remain for reference.
12. Bus stop shelters shall be **minimally 12 metres long** to shelter passengers alighting from 3-door buses.
13. LTA will be standardising the **requirements for adopting linear bus stop** as follows:
 - a) The road is designed at or below 60 km/h;
 - b) There are no safety and operational concerns,
 - c) The bus stop is not a high roof bus stop (example. abutting MRT Station or Integrated Transport Hub (ITH))

LTA will reference the above criterion to prescribe the type of bus stop (linear vs bay). The criterion, including item (b) in greater detail, will also be reflected in the in the next revision of LTA's Civil Design Criteria (CDC).

Thank you

Yours Faithfully,

Alex Ang
Director, Development and Building Control
Traffic and Road Operations Group

ANNEX A

STREET WORKS PROPOSALS RELATING TO DEVELOPMENT WORKS

Submission Requirements for DG and CG Stage

The following requirements are designed to assist QPs in ensuring that sufficient detail is included in the submission. LTA approval subject to compliance with design requirements. LTA reserves the right to reject incomplete submissions.

DG stage	CG Stage
<ul style="list-style-type: none"> • Site Plan [Part B & C] • Supplemental details [Part D] • Floor, Section and Elevation Plans • Topographical Plan • Longitudinal and Cross Section Plans [COP 5.13/ 5.14] (developments where road realignment is impacted/ changed) 	<ul style="list-style-type: none"> • Site Plan [Part B & C] • Supplemental details [Part D] • Detailed Plan [Part E] • Traffic Plan [Part B & F] • Design Calculations (for major road and commuter structures, tall slopes and retaining structures) • Utility Services Plan [COP 5.5] • Coordinated Utility Plan [COP 5.6]

No	Item	Requirement	Submission Stage	Included in Submission?
A		General (DG / CG Stage)		
A1	Title	To include the project title, drawing title and project and drawing reference number.	DG / CG	
A2	Name and Endorsement	To include QP endorsement. To include the full name of the design firm, contractor, client, as well as personnel who developed, checked & approved the drawing.	DG / CG	
A3	Scale	Drawings to be A3 / A1 size. <ul style="list-style-type: none"> • Site/ Traffic Plan: 1:100, 1:500, or 1:1000 • Details/ Cross Section: 1:20, 1:10, or 1:5 • Key Plan: 1:20,000, 1:10,000, or 1:5,000 	DG / CG	
A4	Key Plan	To include key plan showing location of accesses, key public transport (PT) nodes and surrounding road network.	DG / CG	
A5	Compass & Coordinates	To include north arrow / compass rose and reference coordinates.	DG / CG	
A6	Legend	To include legend.	DG / CG	
A7	RRL	To indicate the road reserve line (RRL).	DG / CG	
A8	Street Reserve Plot	To include the plot number, boundary and land area for plots affected by RRL.	DG / CG	
A9	Road Name and Category	To indicate road name and road category.	DG / CG	
A10	Maintenance	To indicate the maintenance owner.	DG / CG	
A11	Project scope	To indicate the extent of works to be carried out under this submission.	DG / CG	
A12	SDRE	To provide reference table to the Standard Design for Road Elements (SDRE) drawing(s).	DG / CG	
A13	Changelog	To describe changes in resubmission annex.	DG / CG	

ANNEX A

No	Item	Requirement	Submission Stage	Included in Submission?
B		General details to be included in Site Plan (DG/CG stage) & Traffic Plan (CG stage)		
B1	Kerb	To indicate the kerb alignment.	DG / CG	
B2	Paths	To indicate alignment, clear width, gradient, turning radius, and the type of path.	DG / CG	
B3	Pedestrian/ Cyclist Access	To indicate location, clear width, gradient & turning radius.	DG / CG	
B4	Vehicular Access	To indicate location, clear width, gradient, turning kerb radius and configuration.	DG / CG	
B5	Gantry	To indicate the location of gantry, drop barriers, and/or holding bays.	DG / CG	
B6	Commuter Facilities	To indicate location, clear width, setbacks, headroom, roof gradient, fall direction, column setting out or commuter facilities. (ie. covered linkway, taxi stand, POB, underpass)	DG / CG	
B7	Bus Stop	To indicate location, dimensions, headroom, roof gradient, fall direction and bus stop pole.	DG / CG	
B8	Road Facilities	To indicate location and dimensions (width, angle, radius) of road facilities (ie. u-turn/right turn, kerb cut, humps, lanes, medians, islands)	DG / CG	
B9	Barriers, Railings & Walls	To indicate the railings, bollards, safety barriers and vehicle restraint systems, including buffer / setbacks.	DG / CG	
B10	Crossings	To indicate the location, width and length of all crossings including signalised, zebra, kerb cut ramp, etc.	DG / CG	
B11	Structures	To indicate location, dimensions and outline (to scale) of road structures (ie. vehicular bridge, POB, underpass, box culvert, retaining wall) and columns.	DG / CG	
B12	Roadside Equipment	To indicate roadside equipment such as street lighting, electrical box, fire hydrant, totem, etc to scale.	DG / CG	
B13	Levels	To indicate path, landing, platform and access point levels.	DG / CG	
B14	Tactile	To show tactile tiles & indicate contrasting colour bands.	DG / CG	

ANNEX A

No	Item	Requirement	Submission Stage	Included in Submission?
C		Site Plan (DG / CG Stage) – Internal works details may also be shown on floor plan(s).		
C1	Colour Code	The colour for all proposed, existing to be retained and existing to be removed should be in magenta, cyan and yellow respectively.	DG / CG	
C2	Sightlines	To indicate the line-of-sight triangle & stopping sight distance at all accesses and corners	DG / CG	
C3	Features at Access and Corners	To show to scale the gate, fence, door, walls, columns, totems, meter compartment, etc at accesses and corners, including material, visual permeability and height of features.	DG / CG	
C4	Circulation / Covered Walkways	To indicate clear width for key pedestrian/ cyclist circulation routes and covered walkways. To mark primary accessway routes to nearby transport nodes, bicycle parking and end-of-trip facilities.	DG / CG	
C5	PUDO	To include the location, number and type of PUDO bays, queue length, width and kerb alignment at PUDO point.	DG / CG	
C6	Loading/ Unloading	To include the location, layout and dimensions of loading/unloading bay	DG / CG	
C7	Parking	To indicate the location, dimensions and numbering of parking lots and location of EV chargers. To provide parking provision table.	DG / CG	
C8	Internal Driveway / Parking Aisle	To indicate width, turning radius, ramp gradient, headroom clearance and traffic markings.	DG / CG	
C9	Bicycle Parking	To indicate the location, dimensions (parking & circulation space), type of bicycle parking, and number each lot. To provide bicycle parking provision table.	DG / CG	
C10	End of Trip Facilities	To indicate location, type of End of Trip (EOT) facilities, number each facility and provide EOT facilities provision table (where required)	DG / CG	
C11	Wayfinding	To indicate decision making zones, placement and type of signage (where required)	DG / CG	
C12	Drainage	To include the alignment, invert level of drain, location and type of grating, sumps.	DG / CG	
C13	DIC	To show drop inlet chambers (DIC).	DG / CG	
C14	Man-hole	To show manholes.	DG / CG	
C15	Trees	To indicate the trees to be retained and removed, TPZ barriers, and provide tree table.	DG / CG	

ANNEX A

No	Item	Requirement	Submission Stage	Included in Submission?
D		Separate drawings supplementing plans		
D1	Section / Interfacing Details	To provide section and interfacing details for pedestrian and vehicular accesses, commuter facilities, drainage, slopes, road structures, barriers, railings & handrails.	DG / CG	
D2	Swept Path	<ul style="list-style-type: none"> To provide swept path of the largest vehicle envisioned to use each access, key movement & junction (all movements at each phase). To show the lane where the vehicle is turning in/out from To overlay on site plan (DG stage) or traffic plan (CG stage) 	DG / CG	
E		Detailed Plans (CG stage)		
E1	Materials and Finishes	To indicate the materials, finishes, coatings, durability, waterproofing class and waterproofing details of all road and commuter facilities. To provide warranty details (if applicable)	CG	
E2	Structural Details	To include structural, interfacing, connection and foundation details.	CG	
E3	Bridges & POBs	To include articulation and bearing details, railings, guardrails and drainage.	CG	
E4	Pedestrian & Vehicular Underpass	To include waterproofing details, interfacing detail with basement/underground structures, overburden, internal drainage, summit and low point, water catchment area.	CG	
E5	Slope	To include slope sections, and include slope protection, slope permeability & water management features.	CG	
E6	Deep Foundations	To indicate location, dimensions, socketing and debonding of deep foundation elements (DFEs). To provide DFE schedule.	CG	
E7	Borehole	To provide borehole location & borelog data.	CG	
E6	Bus Stop	To indicate the seating, bollards, bus information display; bus pole; back panel; panel, signage & seat details; bus bay box; elec. pipe for advertisement panel & lighting.	CG	
E7	Taxi Shelter/ Taxi Stand	To indicate the seating, bollards, access aisle taxi pole, taxi information panel.	CG	
E8	Vertical Circulation (Stairs / Lifts / Ramp)	To provide architectural details; plan, elevation and section drawings, showing riser, tread, contrasting colour, run length, tactile tiles etc. Annotate dimensions and finishes.	CG	

ANNEX A

No	Item	Requirement	Submission Stage	Included in Submission?
F		Traffic Plan (CG Stage)		
F1	Colour Code	The colour for all proposed, existing and removal of road signs / markings / lines should be in red, black and yellow respectively.	CG	
F2	Gazetting Table	To include a gazetting table	CG	
F3	Road and path marking	<ul style="list-style-type: none"> To indicate road and path markings to scale as per the colour code above. This includes relevant lane types, word markings, arrow markings, yellow box, bus zone box, etc. Where applicable, to define their type with reference made to the latest SDRE. 	CG	
F4	Directional Signs	To indicate the position, type, orientation and content of the directional signs.	CG	
F5	Traffic and Path Signs	<ul style="list-style-type: none"> To indicate all traffic and path signs as per the colour code above. This includes stop, give way, keep left, pass either side, speed limit sign, pedestrian crossing prohibition, stay on track, etc. To define their type with reference made to the latest SDRE. 	CG	
F6	Turning Radius	To indicate turning radius of junctions, movements, accesses, corners, etc	CG	
F7	Signal Aspects	<ul style="list-style-type: none"> To include existing, proposed and removed traffic light poles and signal type (e.g. RAG, RTGA, LTGA) per SDRE. To indicate flashing beacons, advance warning lights, etc 	CG	
F8	Signal Phasing	To include the traffic phases, movements, and indicate if AM/PM adopt different phasing.	CG	
F9	Traffic Management Measures	<p>To reflect all associated elements of the traffic management measures. Ie.</p> <ol style="list-style-type: none"> Speed Regulating Measures: including Humps, Bus Friendly Humps, Speed Regulating Strips Special Zones: including School Zones, Friendly Streets, Silver Zones. Other measures, eg, lane merging, lanes flaring, acceleration & deceleration lane etc. 	CG	

ANNEX B

STREET WORKS PROPOSALS RELATING TO DEVELOPMENT WORKS

M&E Submission Requirements for CG Stage

The following requirements are designed to assist QPs in ensuring that sufficient detail is included in the submission. LTA approval subject to compliance with design requirements. LTA reserves the right to reject incomplete submissions.

No	Item	Requirement	Included in Submission?
A		General	
A1	Title	To include the project title, drawing title and project and drawing reference number.	
A2	Name and Endorsement	<ul style="list-style-type: none"> All drawings to include LEW endorsement All lightning protection system drawings, documents and calculations to include electrical PE endorsement. To include the full name of the design firm, contractor, client, as well as personnel who developed, checked & approved the drawing. 	
A3	Scale	Drawings to be A3 / A1 size. <ul style="list-style-type: none"> Site Plan: 1:100, 1:500, or 1:1000 Details/ Cross Section: 1:20, 1:10, or 1:5 Key Plan: 1:20,000, 1:10,000, or 1:5,000 	
A4	Key Plan	To include key plan showing location of accesses, key public transport (PT) nodes and surrounding road network.	
A5	Compass & Coordinates	To include north arrow / compass rose and reference coordinates.	
A6	Legend	To include legend.	
A7	RRL	To indicate the road reserve line (RRL).	
A8	Project scope	To indicate the extent of works to be carried out under this submission.	
A9	Changelog	To cloud changes in drawings and describe changes in resubmission annex.	
A10	Product Selection (apples to all equipment inc. lift and escalator)	<ul style="list-style-type: none"> To provide the technical data, catalogues, relevant test certificates / certificates of compliance from accredited testing facilities for proposed equipment, cables, materials and accessories. To indicate in catalogue the specific product selected To provide warranty documentation (if applicable) 	
B		Site Plan	
B1	Colour Code	The colour for all proposed, existing to be retained and existing to be removed should be in magenta, cyan and yellow respectively.	

ANNEX B

No	Item	Requirement	Included in Submission?
B2	Equipment	To indicate the location, dimensions, mounting/ support point, equipment type/name and rating of M&E equipment. To indicate clear headroom and depth of protrusion for equipment located over footpath/cycling path/ shared path.	
B3	Cable and trunking	To indicate the alignment, connected equipment and type of cable/ trunking/ conduit. To indicate if cable/ conduit/ trunking is located below ground or embedded in path slab, and provision of draw wires if applicable.	
C		Electrical Details and Analyses	
C1	Single line diagram	To provide single line diagram for OG box and distribution board. To include equipment rating in the diagram.	
C2	Calculation	To provide design calculations for electrical loading and cable sizing.	
C3	Lighting simulation	To include the lighting level simulation report with lux plots.	
C4	Lighting	<ul style="list-style-type: none"> To indicate direction of light throw. To provide intelligent lighting detection system for covered POB. To include lighting layout plans and sections with detailed cable routes from the OG box to the respective light fittings are included. To provide alternate lighting circuits. 	
C5	Lightning Protection	To indicate the layout, section, installation details of all components of the lightning protection system, including air termination, earth pit and equipotential bonding.	
C6	OG Box	To indicate the plan, elevation, section and electrical connections of the OG box.	
C7	Mounting	To provide mounting details of all electrical fittings.	
C8	Surge protection	To provide surge protection device.	
C9	Lift and Escalator	<ul style="list-style-type: none"> To include the location, section, elevation of lifts, escalators and their components. To provide landing, pit and shaft details, motor and power supply details, maintenance access ladder, etc To provide operating manual, control diagrams and design calculations. To furnish schedule of spare parts 	

ANNEX C

List of Approved M&E items

(list updated as of 15 September 2025)

S/N	M&E Items	Approved Models	Remarks
1	Linear LED Light Fitting	• AZ e-lite (Series LF212) • Gruppe (Series Orion) • Philips (WT188C) • Thorn (Formula LED 1000-840)	Colour temperature shall comply with IDC
2	LED Flood Light	• Schreder (INDU FLOOD GEN2 1) • Hugo (209X, 209X-30) • Thorn (TONPAK G2 100W 840 CL1 HFP) • Gruppe (Delta G2) • CLI (TC343-LED) • Koizumi (GFL) • Philips (BVP151)	Colour temperature shall comply with IDC
3	Low Voltage Cables	• Sigma • Keystone • Tai Sin • Wilson • Prysmian	Cable type and construction shall comply with IDC
4	OG Box	• Spanners (1134-55) • Double H (DH/AFP) • GSM (Series 5.2/7810/OG)	Design and construction shall comply with IDC
5	Lightning Protection System	• Heng • BN Solutions • DEHN • NSI • Hong Seng • EMTECH	Product shall comply with SS555
6	Isolators	• Hager (Series SBN) • Schneider (Series Acti9) • Terasaki (Series EPI) • ABB (Series OT)	Rating shall comply with IDC
7	Metal Conduit	• Kripal • Spinne • SMARTr • Wanco	Metal conduit shall be Class 4 type
8	Miniature Circuit Breakers (MCB)	• Hager (Series SBN or Series NC) • Schneider (Series iC60H) • Terasaki (Series EP) • ABB (Series S200) • Eaton (Series PLS) • Chint (Series NXB)	Rating shall comply with IDC
9	Residual Current Circuit Breakers (RCCB)	• Hager (Series CE or Series CD) • Schneider (Series Acti9) • Terasaki (Series EPR) • ABB (Series F200) • Eaton (Series PFIM) • Chint (Series NL1)	Rating shall comply with IDC
10	Lifts	<ul style="list-style-type: none"> • KONE (Model: S Monospace) • XJ (Model: Siemens Optima) • OTIS (Model: GeN2 Premier) • IFE (Model: CTRL70) • Mitsubishi (Model: GPS-III) 	Car lift size shall comply with IDC

List of Approved M&E items

S/N	M&E Items	Approved Models	Remarks
11	Escalators	<ul style="list-style-type: none"> KONE (Model: TM120, TM140) XJ (Model: FTGW30-50) CNIM (E-Premium W800) OTIS (Model: 520 NPE) 	Angle of inclination shall comply with IDC
12	Drainage Pump System	<ul style="list-style-type: none"> Flygt (Model: N-pump Series) Steady (Model: 1300 Series) Wilo (Model: FA Series) Homa (Model: K(X) Series) 	Product shall comply with code of practice on surface water drainage
13	Fire Alarm Panel	<ul style="list-style-type: none"> Patent (Model: System 88) EST (Model: EST4) Tyco (Model: T1200 Series) 	Design shall comply with IDC
14	Clean Gas Panel	<ul style="list-style-type: none"> Bosch (Model: Avenar Series 2000) EST (Model: EST4) Ansul (Model: AutoPulse) 	Product shall comply with NFPA 2001
15	Mechanical Ventilation System	<ul style="list-style-type: none"> Rosenburg (Model: ANDB Series, RV Series) SystemAir (Model: AXC Series, AR Series, KD Series) LTI Ventilatoren (Model: FM Series) FlaktWoods (Model: JM Series) Kruger (Model: TDA Series) 	Motor insulation shall comply with IDC
16	Air Curtain	<ul style="list-style-type: none"> TECO (Model: PNN Series) Panasonic (Model: FY Series) Mitsubishi (Model: GK Series) 	Effective velocity shall comply with IDC
17	Air-Conditioning System (VRF and split unit)	<ul style="list-style-type: none"> Daikin (Model: FXAQ Series, FXMQ Series, RXMQ Series, FTKS Series, RKS Series, RXQ Series) Mitsubishi (Model: PLY Series, SUY Series) Panasonic (Model: CU Series, CS Series) Trane (Model: TTA Series, TTV Series) Carrier/Toshiba (Model: MMY-MUP Series) 	Pipework material shall comply with IDC

Note: This list comprises previously LTA-approved products and may not be exhaustive. Product compliance alone does not guarantee design acceptance. Final approval depends on design validation. QPs must explicitly annotate their specific product selections from the catalogue documentation.