Form No	***REPUBLIC OF THE UNION OF MYANMAR***	
CL-001-B	***Yangon Regional Government***	
	Yangon City Development Committee	
	Building Control Authority	

B. Check-list for documents requirements and project technical review

	BCM			N/A	Yes	No
	L	M	H			
1. DRAWING REQUIREMENTS AND PROJECT TECHNICAL REVIEW						
1.1. For the Development Area Permit Section						
1.1.1. Architectural designs						
A. Drawing sheets						
- Equipment technical specification schedule, abbreviation						
- Drawing list						
B. Location Map (not to scale)						
- North Point						
- Surrounding main Roads, nearest junctions & landmarks (traffic lights, etc.) near by the proposed site						
- Topography mentioning the Above Mean Sea Level (AMSL)(if needed)						
- Traffic flow directions						
C. Site Plan (Scale- 1/8"=1'-0",3/32"=1'-0",1/16"=1'-0")						
- Orientation and scale						
- Traffic flow directions						
- Name, width and type of the principal access roads. For the plot located at a corner, also mention the roads nearby.						
- Plot dimensions, building dimensions & set-backs, building to be demolished						
- Dimensions, setbacks, type, use & orientation of existing buildings						
- Location and distance between the proposed building and the creek, well, lake, water supply pipe line, gas pipe line & electrical transmission line in the proposed site (if necessary)						
- Topographic map (if there is any level difference)						
- Distance between antique buildings & proposed site (if necessary)						
- Distance from Shwedagon Pagoda with respect to Shwedagon Restricted Area Map (if necessary)						
- Key plan of photoshoots						
- Location of trees, distinguishing those to be maintained, felled and planted, and specifying their species and the ground projection of their crowns						
- Location and dimensions of parking areas, garages, interior service roads and their connection to the main access road, specifying the nature of the materials used (permeable and impermeable)						
- Location and space provision for transformer, generator & septic tank (if necessary)						
- Location and space provision for the water supply and sewage system (with indication of the depth)						
- Springs, bodies of water, wetlands or marshes(if necessary)						
- Back drain space and side drain space (if necessary)						
- Location and space provision of the site drain system						
- Greening areas						
- Description of the nature of the materials used (permeable and impermeable) for principal access roads with percentage of each type						
- Description of the nature of the materials used (permeable and impermeable) for parking area with percentage of each type, garages and interior service roads						
- Line of building coverage & building coverage ratio						
- Site google map and GPS location (which includes Latitude / longitude) of site information						
D. Perspective drawings						
- Perspective view of proposed building						
E. Area Data Sheet						
- Site/Plot Area						
- Gross Floor Area (NFA, Parking, Service Area,etc…)						
- Building Coverage Ratio Calculation						
- Gross floor Area Ratio Calculation (for use risk evaluation and occupancy rates) with polygons						
- Car Parking Provisions (if necessary)						
- Green Area /Open Space percentage, Permeable Area, Road Area Ratio						

- Road Building Ratio in relation to building height						
- Total areas of the different types of occupancies taken into account for the Building Categorization Matrix in relation with the polygons detailing the different areas taken into account						
F. Architectural Floor Plans (Scale- 1/8"=1'-0",3/32"=1'-0",1/16"=1'-0")						
- Key Plan of elevations and sections						
- Name of the occupancy type for each room and/or spaces contained in the building						
- Dimensions and areas of each room						
- Door openings with swing directions						
- Windows						
- Stairs & vertical shafts, escalators						
- Ramp, driveway width & flow directions						
- Setbacks with plot boundaries (for irregular shape)						
- Section Line						
- Location and provisions of the mechanical, electrical and plumbing installations						
G. Elevations (Scale- 1/8"=1'-0",3/32"=1'-0",1/16"=1'-0")						
- Plinth level mentioning the natural ground level						
- Building height mentioning the natural ground level / road level						
- Building height mentioning the Above Mean Sea Level (AMSL)						
- Building height mentioning the Above Mean Sea Level (AMSL) if the building is located in the Shwedagon Restricted Area (if necessary)						
- Setbacks with boundary limits						
- Building heights with different natural ground level / road level (for plot with slope)						
- Description of the materials and colors used for the facades						
H. Architectural Sections (Scale- 1/8"=1'-0",3/32"=1'-0",1/16"=1'-0")						
- Mass and voids						
- Plinth level mentioning the natural ground leveland the projected ground level						
- Building height mentioning the natural ground level / road level						
- Level of existing and projected profile of the ground						
- Building height mentioning the Above Mean Sea Level (AMSL)						
- Building height mentioning the Above Mean Sea Level (AMSL) if the building is located in the Shwedagon Restricted Area(if necessary)						
- Stair section with riser , tread and landing						
- Lift shafts and data						
- Ramp design with indication of the slope and head room						
- Proposed building cross section continuously with existing building (if necessary)						
- Description of the materials used						
- Ceiling heights (if the ciling is mentionned in the drawings)						
- Floor to floor heights						
- Veranda or balcony handrails heights						
I. Architectural Details (Scale- 1/4"=1'-0",3/16"=1'-0")						
I.1. Stairs						
- Dimension of riser, tread & landing						
- Landing to landing height						
- Stair head room						
- Handrail heights						
I.2. Doors and Windows						
- Dimensions						
- Glass specification (if necessary)						
- Safety measures (if necessary)						
- Types and materials						
I.3. Car Ramp & Drive Way						
- Ramp Slope						
- Width of drive way						
- Head room height						
I.4. Mechanical Car Parking						
- Queuing space						
- Technical Specification						
I.5. Façade design consideration						

- Specification of finishing material						
- Curtain wall						
- Green wall						
J. Foundation Plan (Scale- 1/8"=1'-0",3/32"=1'-0",1/16"=1'-0")						
- Plot boundaries with dimensions						
- Foundation type						
K. Accessibility provisions (if needed)						
- Dimensions and numbers of parking lots						
- Dimensions of entrance and doors						
- Dimensions of corridors and walk ways						
- Floors materials						
- Dimensions of handrails						
- Dimensions of ramps and slope						
- Dimensions of lifts and stairs						
- Dimensions of restrooms and toilets						
1.1.2. Pile Load Test (Bored, ultimate or working) when structural system requires						
A. Method of Statement						
- Code of practice and design reference						
- Method of Statement of pile load test						
- Material Properties						
- Pile design report by foundation designer (geotechnical and structural design)						
- Geotechnical Report (should consist adequate c, Φ and SPT value for pile design calculation) and Borehole Profile						
- Site Location Plan with adjacent building and bore holes						
- Columns loading calculation (for working pile load test)						
- Piling Plan with Test Pile Locations						
- Test pile details (Anchor pile details if anchor method)						
- Sample Record Form						
- Load Conversion Table						
B. Report						
- Code of Practice and Design Reference						
- Material Properties						
- Piling Plan with Test Pile Locations						
- Test Pile details						
- Anchor Pile Details (if necessary)						
- Test Results						
- Recommendation for Pile Capacity Results						
- Calibration Certificate						
- Record Form						
C. Submission Set						
C.1. Signatures						
- Local Design: Signature of the PE and RSE (Geotechnical)						
- Foreign Design: Signature of Original Geotechnical Design Engineer						
- Foreign Design: Signature of National Counter Part (PE)						
C.2. Document Set						
- Set of design drawing, calculation and report submitted through the YDPS						
1.1.3. Structural designs						
A. Design Report						
A.1. Structural system design criteria						
- Code of Practice and Design Reference, Specification						
- Basic Structural System						
- Material Properties						
- Soil Investigation Report						
- Design loads						
- Load combination						
A.2. Structural analysis						
- Static Analysis						
- Dynamic Analysis						

- Analysis Input Data						
- Analysis Output Results						
- Analysis Soft Copy						
A.3. Super Structure Design						
A.3.1. Super structure design						
- Beam Design						
- Column Design						
- Slab and Stair Design						
- Shear Wall Design						
- Car Ramp Design						
- Others (if necessary)						
A.3.2. Super structure stability checking						
- Storey unit weight						
- Base Shear/weight ratio and Calculation						
- Storey drift limit						
- Mode Participation Ratio						
- Soft Storey						
- P-Δ Effect						
- Overturning						
- Torsional Irregularity						
- Sliding						
- Analysis Results						
- Structural Design Results						
- Dual system						
- Diaphragm Discontinuity						
A.4. Sub structure Design						
A.4.1. Substructure (Pile foundation)						
- Pile Capacity Calculation						
- Lateral Subgrade Reaction Calculation (if necessary)						
- Pile Base Spring and Skin Friction Calculation (if necessary)						
- Pile Cap Design						
- Cap Beam Design						
- Pile Settlement Calculation						
- Liquefaction Analysis						
A.4.2. Substructure (shallow foundation)						
- Allowable bearing capacity of soil						
- Modulus of subgrade reaction of soil						
- Punching Shear Check						
- Settlement Calculation						
A.4.3. Substructure (basement)						
- Basement Retaining Wall Design						
- Basement Slab Design						
A.5. Steel structure						
- Bolted and Welded Connection Design						
- Slab Design						
- Bracing Design						
- Base Plate Design						
- Others (if necessary)						
A.6. Earth retaining structure						
- Overturning Check						
- Sliding Check						
- Bearing Capacity Check						
- Others (if necessary)						
B. Drawings						
B.1. Foundation Drawing						
B.1.1. General drawings						
- List of Drawings						
- Standard drawings and general notes						

- Site Location Plan with adjacent building and bore holes						
- Foundation plan						
- Basement floor beam and slab plan						
- Car ramp, lift pit beam & slab plan (if necessary)						
B.1.2. Detail drawings						
- Structural detail drawings: beams, columns, slabs, shear walls and retaining walls (up to another level)						
- Detail of Pile (longitudinal and transverse section, joint end plate, connection)						
- Detail of the different types of pile caps (steel layout and dimension)						
- Detail of cap beams (steel layout and dimensions)						
- Basement floor beam and slab details						
- Car ramp detail (if needed)						
B.1.3. Schedules						
- Schedules (mat, strip, strap, combined, single, wall footing)						
- Schedules (pile, pile cap and cap beam)						
- Schedules (basement floor beam & slab)						
- Other Schedules (if necessary)						
B.2. Super Structure Drawing						
B.2.1. General drawings						
- List of Drawings						
- Standard Drawings and General Notes						
- Structural Plans (beams, columns, slabs)						
- Structural Sections						
- Stair Landing Beam & Slab Plans						
- Tendon Profile Plans (for Post-tension, Pre-tension Slab with Method of statement)						
B.2.2. Detail drawings						
- Beam Details						
- Column Details						
- Slab Details						
- Opening Slab and Wall Details (if necessary)						
- Stair Detail(Main Stair, Fire Escape)						
- Lift Pit Detail						
- Shear Wall Detail						
B.2.3. Schedules						
- Beam Schedules						
- Column Schedules						
- Shear Wall Schedules						
B.3. Steel structures drawings						
- Connection Detail						
- Base Plate Detail						
- Bracing(Plan and Elevation)						
C. Submission Set						
C.1. Signatures						
- Local Design: Signature of PE and RSE (Structure) and PE and RSE (Geotechnical)						
- Foreign Design: Signature of Original Structural and Geotechnical Design Engineers						
- Foreign Design: Signature of National Counter Part (PE)						
C.2. Document Set						
- Set of design drawing, calculation and report submitted through the YDPS						
1.1.4. Deep excavation design						
A. Design Report						
- Code of Practice and Design Reference						
- Analysis Methodologies (monitoring instrumentation general note)						
- Material Properties						
- Analysis Results						
- Structural Member Checks						
- Geotechnical Report and Bore Hole Profile and Location						
- Construction Sequences						
B. Design Drawings						

- Drawing list						
- Monitoring instrumentation general note						
- Site location plan with adjacent building and bore holes						
- Building layout plan with foundation boundary line and TERS Line						
- Retaining wall layout plan						
- Strutting layout plan (if necessary)						
- Monitoring plan and frequency table						
- Critical sections						
- Structural member details						
- Joints and connection details						
- Retaining wall details						
- Strutting member details (if necessary)						
- Joints and connection details						
- Soil stability check						
- Method of statement						
C. Submission Set						
C.1. Signatures						
- Local Design: Signature of PE or RSE (geotechnical)						
- Foreign Design: Signature of original geotechnical design engineers						
- Foreign Design: Signature of National Counter Part (PE)						
C.2. Document Set						
- Set of design drawing, calculation and report submitted through the YDPS						
1.1.5. Electrical design						
A. Design Report						
- Load Calculation						
- Voltage Drop Calculation						
- Illumination Level Calculation (at Special room)						
B. Design drawings						
B.1. Drawing sheets						
- Drawing List						
- Legend, Note & Abbreviation						
- Site plan, Layout plan						
- High Tension Receiving Schematic Drawing						
- Low Tension Distribution Schematic Drawing						
- Power Distribution & Circuit Diagram (single line diagram)						
- Tray, Trunking & DB Layout Plan						
- Lighting Layout Plan						
- Power Layout Plan						
B.2. Supplements and notes						
- Earthing System (TT, TN-S)						
- Lightning Protection System (Conventional Type)						
- Basic Lift Drawing complete with specification						
- Sub-Station & Generator Locations						
C. Submission Set						
C.1. Signatures						
- Local Design: Signature of PE or RSE (electrical)						
- Foreign Design: Signature of original electrical design engineers						
- Foreign Design: Signature of National Counter Part (PE)						
C.2. Document Set						
- Set of design drawing, calculation and report submitted through the YDPS						
1.1.6. Mechanical design						
A. Design Report						
- Design calculation						
- Cooling load calculation						
- Car park mechanical ventilation						
- Staircase pressurization						
- Smoke stop and fire fighting lobbies						
- Mechanical ventilation						

- Equipment schedule						
B. Design Drawings						
- Drawing list						
- Legend, note & abbreviation						
- Air conditioning design drawings						
- Exhaust and fresh air mechanical ventilation						
- Car-park mechanical ventilation						
- Staircase pressurization (schematic)						
- Smoke stop and fire fighting lobbies						
- Mechanical ventilation						
1.1.7. Requirements for fencing						
A. Location Plan						
- North Point						
- Surrounding main Roads, nearest junctions & landmarks (traffic lights, etc.) near by the proposed site						
- Topography mentioning the Above Mean Sea Level (AMSL)(if needed)						
- Traffic flow directions						
B. Site Plan (Scale- 1/8"=1'-0",3/32"=1'-0",1/16"=1'-0")						
- North Point						
- Plot dimensions						
- Main Gate with dimension						
- Names of roadway						
- Loc.of Creek, Well, Lake, Water Supply Pipe Line, Gas Pipe Line & Elec.Trans. Line in the prop. site						
- Distance between proposed site and the creek, drain, water supply line,railway line etc.						
- Key plan						
C. Fencing Plan (Scale- 1/8"=1'-0",3/32"=1'-0",1/16"=1'-0")						
- Dimensions						
- Main Gate with Dimension						
D. Elevations (Scale- 1/8"=1'-0",3/32"=1'-0",1/16"=1'-0")						
- Plinth Level with NGL						
- Fencing height with NGL						
- Fencing height with different NGL						
E. Details (Scale- 1/4"=1'-0",3/16"=1'-0")						
- Wall						
- Column						
- Gate Door						
- Footing						
- Retaining wall						
1.2. For the Drainage and Sewage Management Task Force						
A. Design report						
A.1. Design report for drainage						
- Sizing of main drain						
- Sizing of perimeter drain (internal drain)						
A.2. Design report for sewage						
- Calculation for the required diameter for soil branch, stack and ventilation pipes.						
- Calculation for the required diameter for waste branch, waste stack and ventilation pipes.						
- Since not all wastewater discharge are from residential premises, other wastewater discharge from such premises, such as Hotels,Restaurants,Clinics,Hospitals and Markets will have to be treated by appropriate method (eg. Septic tank with filtration, Activated Sludge system and their modification such as MBR,MBBR,SBR etc.)with respect to guideline provided by MNBC/CQHP /YCDC before their respective disposed. Wastewater treatment plant or separate treatment for black water(soil) and grey water(for other spent water)shall also be provided.						

- Domestic Sewage Treatment System, consisting of A septic Tank, consequently followed by a Secondary Treatment of Upflow Anaerobic Filter and Disinfection Processes shall be used for a maximun population equivalent(PE) of 300. *- Where the population equivalent(PE) is greater than 300 and Space is Available, the use of the above system is limited to 2 Identical Streams of flow only. ie 2 Septic Tanks each followed by an Upflow Anaerobic Filter and Disinfection units.* *-Where the population equivalent(PE) exceeds the use of the limit of the above system, suitable Sewage Treatment System from Recognized Companies or Institutions may be used.* *- For such kinds of systems mentioned above, all of these systems must follow the guideline provided by MNBC/CQHP /YCDC before their respective disposed.*						
- Sludge Trestment is to be considered if the population equivalent(PE) is over 1000.						
- Rainfall intensity						
- Calculation for the required gutter dimension.						
- Calculation for the required diameter of down take pipe.						
- Disposal pump where required						
A.3. Design report of Water Supply and Management for Sanitation						
A.3.1 Source of Water Supply for Sanination						
- Source of water supply (eg. YCDC/ground water/surface water)						
- When ground water is utilized,the ground water quality shall be tested. *From the result of the raw water tests, treatment for the reduction of pollutants shall be identified and their method for the reduction provided.*						
A.4. Design report for the Water Supply Management						
- Calculation for the required capacity for ground water reservior and roof tank.						
- Design of Water Treatment Plant where required.						
- Determining the required capacity for pumps used in the supply system.						
- Head loss calculation at critical location and calculation for the location of Pressure Reducing Valve (PRV) where installed.						
- Calculation for the required diameter of pipes used for hot water supply and hot water supply system.						
B. Design Drawing						
B.1. Design drawing for drainage						
- Site plan and layout plan with the location, type and dimensions of the drainage system (drains, etc.) until the public main drainage						
- Site plan and layout plan with the location and dimensions of rain water retention tanks (if necessary)						
B.2. Design Drawings for Sewage Treatment plant system						
B.2.1. Drawings for Sewage						
Remarks:						
- Package Treatment Units meeting the Soil Water Effluent Quality Requirement ,as Stipulated by MNBC /CQHP/ YCDC, can also be used						
- Symbols, Abbreviation and Equipment Schedule						
- Site location plan and building layout plan: -If the proposed building is at the corner and its septic tank is proposed in Back Drain Space(BDS) or Side Drain Space(SDS) need to attach the document for no objection by the owner of adjacent building and the approval by the ward administrator.						
- Floor plan						
- Detail Drawings						
- Design Criteria						
- Must be relevant with the criteria and guidelines as stipulated by MNBC/CQHP /YCDC for the Wastewater Treatment System used (eg. Septic tank with filtration, Activated Sludge system and their modification such as MBR,MBBR,SBR etc.) for the proposed buildings such as Residential, Hotels, Restaurants, Clinics, Hospitals, and Markets etc.						

- Indicate the Total Population Equivalent(PE) used for the Design of the Wastewater Treatment System. ***Directives*** *≤300 PE --> a Secondary Treatment of Upflow Anaerobic Filter and Disinfection Processes shall be used.* *300 <* PE *≤600 and Space is Available--> the use of the above system is limited to 2 Identical Streams of flow only. ie 2 Septic Tanks each followed by an Upflow Anaerobic Filter and Disinfection units.* *PE>600 (the use of the above systems are not recommended)--> Suitable Sewage Treatment System from Recognized Companies or Institutions shall be reffered to.* *The Wastewater Treatment System used (eg. Septic tank with filtration, Activated Sludge system and their modification such as MBR,MBBR,SBR etc.) for the above populations.*						
B.2.2. Wastewater for Sanitary Fixture and disposal of Wastewater						
- Layout of source of Water Supply for Sanitation: (1) YCDC (2) Ground Water (3) Both						
- To indicate the Treatment System where used.						
- Floor plan with Sanitary Fixtures and antisyphon, floor traps where required.						
- Position of: (a)Water pipes, (b)Waste pipes and (c)Ventilation pipes						
- Schematic diagram						
C. Signatures for Sewage						
- Local Design: Signature of PE-Professional Engineer (water and sanitation)/RSE-Registered Senior Engineer (water and sanitation)						
- Foreign Design: Signature of water and sanitation engineer						
- Foreign Design: Signature of National Counter Part (PE)						
1.3. For the Water and Water Supply Management Task Force						
1.3.1. Design report						
- Source of water supply						
- Cold and hot water demand with respect to design PE						
- Sizing of ground water reservoir and roof tank reservoir						
- Water treatment plan						
- Sizing of transfer pump and transfer pipe						
- Head loss calculation at critical location						
- Positioning of Pressure Reducing Valve (PRV)						
- Sizing of booster for boosting pressure for floors with inadequate (low) pressure						
- Sizing of water meter						
- Sizing of hot water supply facilities						
1.3.2. Design drawings						
- Drawing list						
- Equipment, schedule, abbreviation						
- Site plan with the location and dimension of the main pipe line						
- Site plan with the location and dimension of the ground tank						
- Site plan with the location and dimensions of the storage tank (for the construction phase)						
- Floor plan and cross section of the water connection system						
1.3.3. Supplements and notes						
- Well logs if ground water is used						
- Provide both chemical and bacteriological analysis of water sample						
- Provide chart, table, monograph, ac., which are used duringdesign calculation						
1.4. For the Environmental Management Task Force						
1.4.1. Design report						
- Estimation of solid waste volume						
- Calculation of the number of compactor bin or dust bin						
- Calculation of bin center or bin room size						
- Description of collection and disposal system						
- Coordination and contact with relevant task force for the disposal of construction waste						
- IEE, EIA, ESIA, EMP if required						
1.4.2. Design drawings						
- Site plan with the location and dimensions of the bin center (if necessary)						
- Floor plans with the location and dimensions of the bin room(s) and chute system (if necessary)						
- Sections with the location and dimensions of the chute system (if necessary)						

1.5. For the Streets and Bridges Task Force						
- Name and width of the principal access road. For plots located at a corner, also mention the roads nearby.						
- Location and dimensions of parking areas, garages, interior service roads and their connection to the main access road						
- Number and type of car-parking						
- Location and dimension of platform areas						
- Distance to the nearest main road junction if the plot is situated within a distance of less than 100 meter from this main road junction						