GUIDELINES FOR THE PREPARATION OF MECHANICAL PLANS

For standard reference by commercial/institutional and residential establishments in Quezon City
from the INDUSTRIAL SAFETY DIVISION, Q.C.D.E.

1. The minimum size of the Mechanical Plan shall be 508 mm x 762 mm (20” x 30”) in 4 blue/white prints. Bigger plans are acceptable for bigger floor areas. All plans shall contain the following:

   a. 150 mm x 50 mm name plate or title block as specified by the Mechanical Engineering Code at the lower right hand corner of the plan.
   b. Location Plan / Vicinity Map drawn in true North orientation and drawn to scale.
   c. Site Development Plan showing lot boundaries, buildings/structures and setbacks; drawn to scale
   d. Key Plan showing location/space occupied by subject establishment if the building houses more than one (1) establishment.
   e. General Layout Plan for each floor, drawn to scale of not less than 1:100 m if the total floor area is less than 500 sq. m., or 1:200 m if 500 sq. m. or more. Each unit of equipment shall be drawn as top view, to scale, with heavier lines, and assigned item ID numbers. Section lines shall pass through fixed major installations.
   f. Longitudinal and Transverse Section Elevations drawn to scale, and showing approximate sections of equipment crossed by section lines in “e” also showing inter-floor relations and defining the manner of support as whether through building structure, by separate staging, or by foundation resting on the floor. Machine/equipment location and height shall be specified,
   g. Isometric drawing of piping system showing: a) assembly of pipes on racks and supports; b) complete individual piping system showing terminal to terminal valves, fittings, sizes, and color coding.
   h. Store rooms, fuel tanks, fire extinguishing system/s, fire doors, fire escape ladders and similar facilities. Automatic Fire Protection Systems shall include riser diagrams, tapping points, locations of inspector tests and drain sites, as well as hydraulic calculations and reserve water criteria.
   i. Plan of ductwork installations indicating duct sizes, dampers, control, filters, fire proofing, acoustic and thermal insulation, and capacities.
   j. Design plan of foundation and supports, drawn to scale of not less than 1:80; with design computations,
   k. Designed plan of boilers and pressure vessels with foundations regardless of ratings, with dimensions on elevations, cross and longitudinal sections to a scale of at least 1:25 m. Specification of shell, tube sheet, flue tubes or water tubes shall be indicated. Further detail of girth, all openings and joints appear with computations for heating surface and bursting pressure.
   l. Detail plan, design criteria/computations and specifications of elevators, escalators, dumbwaiters, and moving walks to scale of not less than 1:40 m. Detail plans shall include safety provisions, machine room plan, hoistway plan, buffer elevation, et al.
   m. Plan, front, and one side elevation of internal combustion engine (i.e. generator sets, et. al.) of 20 HP or more capacity, rigidly installed or portable units to a scale no less than 1:50 m. With foundation and design computations, engine and driven machine specifications (i.e. generator, water pump, compressor, etc.).
   n. Complete schedule of machinery/equipment showing item no., type/use, manufacturer, HP of individual drives and remarks to whether V, flat, chain, gear reducer, hydraulic, pneumatic, or line shaft driven, other machine specifications, and any important notes regarding said machinery/equipment.

2. Process flow sheet for processing, manufacturing, and/or assembly plants.

3. All plans with aggregate 50 HP or more shall be signed and sealed by a duly licensed professional mechanical engineer, who shall attach a photocopy of his PTR and PRC-ID. The following shall also be signed and sealed by a duly licensed PME, regardless of HP ratings; elevator, escalator, dumbwaiter, moving walks, boiler, pressure vessels (>1.00 cu. m. in volume and above atmospheric pressure), central/packaged/split-type air conditioners including ducting and piping installations, and sprinkler installations.

4. All plans shall be signed by the applicant/owner; and if less than eleven (11) units or six (6) HP, may be drawn on legal size coupon bond/s provided items a, b, c, d, e, and f appear.

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