

## Architect/Co-ordinating Consultant

### Design Process

Verify that limits of existing and new work are clearly shown (additions and renovations only).  
 Verify all structural elements and dimensions against structural drawings.  
 Compare elevations to floor plans; check all features shown on both.  
 Compare building sections to elevations and plans; check all features on both.  
 Compare detail wall sections with building sections.  
 Verify that all details referenced on plans, elevations and sections.  
 Verify rough openings for doors and windows against schedule and structural.  
 Verify movement joint locations and cross-check with structural engineer requirements.  
 Compare Schedule of Finishes with ceiling and wall finish notes.  
 Check lighting fixture layout against electrical plan and schedules.  
 Check diffusers, grilles and registers against mechanical plans.  
 Check vent locations against reflected ceiling plans and elevations.  
 Verify door schedule data including sizes, types, frame conditions and fire ratings etc.  
 Verify hardware and door furniture schedule against door schedule and specification.  
 Compare door swings with electrical switch locations.  
 Verify fire rated wall locations and details.  
 Verify ratings of doors in fire rated walls.  
 Check all dimensions  
 Verify fit of cabinets and items of equipment.  
 Verify that material descriptions are in specification and not on drawings.  
 Verify data on room finish schedule against all other drawings; check room names and numbers, ceiling heights and finishes.  
 Check detail of plan enlargements against small scale plans.  
 Where plan of one floor is on more than one drawing, check match of all meeting lines.  
 Check completed documents are adequate for building consent requirements of Territorial Authority.  
 Verify with Client location of site access and extent of construction area.  
 Check services risers are correct size required and vertically align plan to plan.  
 Check structural element, lifts and stair wells vertically align plan to plan.  
 Check ground levels and contour co-ordinate with information and are correctly shown on elevation and sections.  
 Locate all in-ground services, power poles, footpaths, existing buildings and existing feature that need to be shown on site and floor plans.  
 Check the acoustic requirements of building elements and indicate their required construction and scope.  
 Check toilet areas comply with the NZ Building Code in numbers of fittings, disabled access requirements and service requirements.  
 Check window and door sections are adequate or have sufficient strengthening required to take the design wind and seismic loads set by the engineer.  
 Have the engineer review all hand rail, balustrade, veranda / balcony and canopy elements are of sufficient size and have adequate fixings to meet the required design loads.  
 Provide references on plans to all sections, wall sections, external and internal elevations, stair and core larger stake drawings etc.  
 Check stairs, ramps, handrails and egress ways comply with the NZ Building Code for surface slip resistance spread of flame, light levels and signage, general setout, safety from falling and disabled access requirements.  
 Provide buildings setout datum and reduced levels to all floors, ceilings, parapets, lift towers and other design elements.  
 Provide tile setout point for floors and walls.  
 Check services trenches, penetrations, plinths, and nibs required are shown on floor plans and slab setout plans (if provided).  
 Review all expansion and control joints required for slabs, blockwork, solid plaster, sheet products, and concrete products are shown on plans, elevations and sections.  
 Review size and location of seismic joints required by the engineer, having them review the details produced.  
 Ensure all openings have lintels reviewed by the engineer.  
 Have the engineer review the bracing design.  
 Review sufficient set-downs are provided to checks and terraces and to the adjacent ground to meet the requirements of the NZ Building Code and disabled persons access.  
 Review access panels and hatches have been provided to services for maintenance as required by the services engineers.  
 Ensure safety restraints and anchoring points are provided to roofs and external facades, have the engineer review their design.  
 Confirm the size and fall of the gutters, downpipes and overflows with the hydraulics engineer.  
 Is a lighting conductor required.

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### Commentary

## Specifications

### Design Process

Determine form of Conditions of Contract or obtain copy of Conditions of Contract

Review project file and determine any Special Conditions

Write Preliminaries section; check for compatibility with other parts of contract and other disciplines.

Circulate CoC and Preliminaries to Client/Quantity Surveyor/Project Manager for review.

Confirm whether Quantity Surveyor will provide Schedule of Quantities

Provide outline specification of materials and finishes

Review progress drawings and compile draft list of all specification sections and subsections required.

Confirm specification sections titles.

Confirm specification format and style.

Obtain and co-ordinate architect's and engineer's specification sections, review and format.

Request list of all 'builders work' items for all other consultants.

Determine if any sections are likely to require performance specifications; if affirmative, agree on method of performance testing.

Prepare draft list of Standards likely to be needed for reference; obtain those not in library.

Provide specification data request list to co-ordinate with other team members.

Confirm completion schedule for specification sections and related drawing groups

Develop suggested list of alternatives with Client.

Review drawings as completed, deleting proprietary names (Note: Generally the specification should reference proprietary names not the drawings).

Confirm specification of any required staging of construction; check against preliminary construction schedule.

Check Schedule of finishes, material and equipment against specification indexes; confirm all finishes, material and equipment are included.

Confirm that final issue of drawings matches specified Schedule of Drawings exactly

Verify all specification cross-referencing.

Eliminate all references as 'by others'; determine and note responsible party.

Check all specification references to drawings ("as indicated", "as shown") and verify they are so indicated, and that drawing references to specifications are covered

Check major equipment listings against drawings.

Confirm schedule of monetary provisions

Obtain Client agreement on contingency sum allowances and authority for expenditure

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### Commentary





## Mechanical Services Co-ordination

### Design Process

- Verify mechanical floor plans and space allocations against architectural.
- Confirm that adequate ceiling height clearances exist at intersections of largest ducts, including construction tolerances.
- Confirm ducts fit within clear height at raised floors.
- Check duct clearances at all deep beams and congested zones.
- Verify locations of structural supports at all items of mechanical equipment; compare with structural documentation.
- Verify that smoke and fire dampers are indicated where required.
- Check grilles and diffusers against reflected ceiling plans.
- Verify that exhaust fans and relief vents are shown on roof plan.
- Verify that wall air conditioners, fans, grilles and louvres are shown on elevations.
- Verify that equipment will fit in space provided; check service clearances.
- Verify clearance of installation path for equipment installed after walls are up.
- Verify door undercuts and door grilles against door schedule.
- Verify that material descriptions are in specification and not on drawings.
- Check duct cleaning access provision are accessible.
- Check equipment items on plans against mechanical schedules.
- Verify that electrical connections are shown on electrical plans and schedules for all items requiring power connections.
- Verify locations of condensate drains on architectural documentation.
- Check for missing or incomplete drawing notes.
- Check mechanical specification against mechanical drawings.
- Confirm sizes and locations of all equipment plinths to be supplied by builder.
- Check and confirm that all builders' work required by mechanical services installation are included in architectural specification.

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### Commentary



## Lifts and Escalator Co-ordination

### Design Process

- Request analysis of cost options in lift design, speeds, capacities, waiting times.
- Verify that QS has been advised of the provisional sum for lifts etc
- Check lift and escalator details against structural drawings
- Check sizes and heights of motor rooms and overruns against architectural
- Confirm lead times for ordering of cars and equipment against construction schedule.
- Check standard lift door opening details against architectural details
- Confirm estimates for car interiors against cost plan allowances
- Obtain sample service agreements, review for conformity with spec and submit to Client
- Verify shaftway sizes, all levels
- Confirm that fireman's lift complies with Fire Service requirements
- Confirm security requirements for lifts and coordinate with communication system
- Check for missing or incomplete drawing notes

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### Commentary

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## Electrical Services Co-ordination

### Design Process

- Confirm location, size, access and other details of substation, vault rooms, or other provision for power supply against architectural
- Verify electrical floor plans and dimensions against architectural
- Confirm that all light fixtures are shown on architectural reflected ceiling plans
- Verify that sufficient height exists for all recessed fixtures
- Confirm that recessed fixtures are not in conflict with beams and ducts
- Verify location and space requirements of all electrical and other service panels; check requirements for radius dimensions of large conduits
- Verify that material descriptions are in specification and not on drawings
- Check lighting fixture schedule against drawings and specification
- Verify electric strike releases, hold open devices and security switches with door schedule.
- Confirm location of incoming services ducts (power/communications). Co-ordinate entry heights/bending radius of ducts.
- Confirm electrical services rooms requirements match architectural.
- Verify that suspended exit signs are clear or full height doors.
- Verify underground external wiring provision for building lighting is shown on sitework drawings.
- Verify light switch positions against door swings.
- Check for missing or incomplete drawing notes
- Check electrical specification against electrical drawings

(included in scope)

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### Commentary

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