Drawing Checklist for Building Developments, Extensions and Subdivisions

The proponent's Power and Water Corporation (PWC) accredited hydraulic designer/draftsperson should use this checklist as a guide to PWC's documentation requirements for water, sewer and power project drawings. Ensure your development drawings comply with this checklist before submitting to PWC Indigenous Community Development. For more information contact Customer Service on 1800 245 092 or visit powerwater.com.au

General / Cover Sheet

- ☐ Ensure designs conform to all requirements of Power and Water Corporation (PWC) Remote Operations.
- ☐ Ensure each PWC drawing sheet has a specific 'Registered Drawing Number' issued by the Technical Record Section of Department of Construction and Infrastructure (DCI). Call Technical Records on 8924 7371 or send email request to technicalrecords.dpi@nt.gov.au for drawing numbers.
- ☐ Ensure each of the drawing sheets have a descriptive title including:
    - Subdivision name (i.e. South, Stage 1, Subdivision of lot 200)
    - Lot numbers (i.e. Proposed lots 200 and 201)
    - Street details (i.e. Perdjert Street)
    - Location/region (i.e. Wadeye)
    - Project type (i.e. Water, sewer and power services)
    - Sheet description, for example:
        - Cover sheet
        - Water, sewer and power services
        - Water (or sewer) details
        - Water (or sewer) plan sheet 1 of 4
        - Sewer longitudinal section Line 1 sheet 1 of 2
        - Thrust block details
        - Power extension plan
- ☐ Ensure the drawings supplied include:
    - PWC standard notes as a minimum plus others as required
    - A list of water, sewer and power project drawings and standard drawings
    - A locality plan showing adjacent lots and roads
    - A legend.
- ☐ For large subdivisions provide 30%, 70% and 90% drawings to PWC for comment.
- ☐ Ensure a site servicing plan is submitted.

Clearances / Approvals

- ☐ Ensure all relevant authorities (DCI - Road Networks, developer, Telstra, local Shire and Land Councils, etc.) have proofed and approved the design proposal.
- ☐ Show AAPA clearance certificate no. with associated restriction (if any) on project drawings.
- ☐ Ensure the drawing was proofed, signed & dated by both the checker and designer before being sent to PWC for approval or review. Designer and certifier initials, signature and date of check to be included on design drawing.
- ☐ Show appropriate revision numbers to reflect PWC's review stages (preliminary, 30%, 70%, 90%, final).

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- ☐ On each sheet include a PWC design approval signature box as per the template below. Design must be updated to current standards and re-submitted for approval if construction does not commence within the 2 year validity period. Re-analysis may occur to determine if upgrades are required.

Permission to use for construction purposes only

Signed:_____ Date / /

On behalf of Indigenous Community Development for the incorporation into Power and Water Corporation's network

This permission to use this approved design is given on the basis that the developer and/or consultant is not absolved from full responsibility for the correctness and accuracy of the design and/or documents associated.

This drawing is valid for two years from the date of signing.

Format / Set Out

- ☐ Submit drawings in A3 printable electronic format (*.pdf). Submission of CAD files (*.dgn/*.dwg) is also required for as-constructed drawings. For large subdivisions one hard copy set should also be delivered to PWC Indigenous Community Development.
- ☐ For water, show chainage/location (MGA co-ordinate system accepted by PWC, and levels to AHD) for all valves, fire hydrants, tees, bend and line ends. Show separation distances/levels for intersecting services.
- ☐ For sewer, show location (MGA co-ordinate system accepted by PWC, and levels to AHD) of all maintenance holes/shafts, inspection openings, separation distances/levels to crossing services, type of lot service connections, distance of all service connections form downstream maintenance holes/shafts, invert levels of type 2, 3, 4 and 5 service connections to certify compliance of the drawings.
- ☐ For power, show location (MGA co-ordinate system accepted by PWC, and levels to AHD) for all power poles, service poles, road clearance poles (RCP), transformers, MCB and meter boxes.
- ☐ Show typical service allocation plans and sections for both road reserve and lot services.

Plans / Longitudinal Sections / Details

- ☐ Scale and text are to be suitable for A3 sized drawing sheets.
- ☐ Ensure a drawing bar scale, A3 written scale and north point is provided on each sheet.
- ☐ For staged developments, each stage will require clear labelling and separate location diagram or plans detailing each stage of works.
- ☐ Ensure the lot number, zoning and ultimate equivalent population (EP) for each non-SD lot is clearly indicated on the plans.
- ☐ Show road reserve boundary, water, sewer and power clear accesses outside the road reserve. Provide clear accesses outside road reserve in accordance with PWC's Easement Policy Guidelines.
- ☐ Show lot boundary positions and description of surrounding existing and proposed buildings, driveways, carports, gates, etc.
- ☐ Show possible constraints, such as flood implications, cultural exclusions, buffer zones and utility services access widths (available from PWC)
- ☐ All water, sewerage and power compilation plans to be provided together on the same sheet for building developments.
- ☐ Master services plan should show all services including; telecom, fuel, gas, stormwater drains and non-potable water in addition to water, sewer and power mains.

- ☐ Ensure that all components of the water, sewer and power services, both new and existing are clearly distinguishable on the drawing. For clarity, make the proposed water, sewer and power mains 'bold' and existing services light weight. Do not use greys or colours.
- ☐ Ensure all pipework and line work is clearly labelled on the plans. For water and sewer show pipe sizes, material, type and class of all proposed pipes. For power show conductor size and type HV and LV, pole size, type, pole top configuration, switching arrangement, earthing, substation size and configuration, transformer details and construction and pole stays.
- ☐ Remove all contours from the drawing. For subdivision drawings contours are to be shown on sewer drawings during planning and early review processing only.
- ☐ When designing new services in existing serviced areas, the designer shall provide a longitudinal section detailing all existing services and levels.
- ☐ Long sections are required for water mains equal or greater than DN250, and for all sewer reticulation and rising mains. Long sections are to show pipe location and chainage, diameter, class, grade, invert and finished surface level, existing and future services crossing, embedment and backfill material types, location of fire hydrants and valves, etc.
- ☐ Provide details of all connections to existing water and sewer infrastructure (excluding services less than 100mm), and typical water branch connection details (i.e. schematic single line diagrams or outline drawings) showing the various applicable valves, tee or bend arrangements. Show all joints (typical and special) and restraints.
- ☐ Provide cross reference to all joint details and long sections.
- ☐ Show thrust and anchor blocks on all water mains and sewer pressure mains.

Inspections

- ☐ For building developments with services 100mm or greater and small extensions (as approved) include PWC's required inspections box as per the template/s below. Large subdivisions are not to use these templates and will instead refer to the PWC Master Specification for inspection hold points.

Minimum required inspections by hydraulic certifier - Water

Inspection 1

Inspect excavated trench and verify bedding type required for the subsoil condition. Take advice of a Geotechnical Engineer before accepting an alternative bedding material. Obtain approval from PWC.

Inspection 2

Main/service completed with connection to existing main and a stainless steel blanking plate (spade) installed between flanged joint, or water main/service completed waiting for connection to existing main. All thrust blocks installed. Verify as constructed information.

Inspection 3

All joints exposed, carry out air test before undergoing pressure test. Inspection 3 is not required for lengths of less than 6m and for all road crossings.

Inspection 4

Witness of disinfection, flushing and water sampling.

Inspection 5

Conduct handover with PWC.

Inspection 6

Final inspection to ensure all outstanding items/defects are completed for clearance.

Minimum required inspections by hydraulic certifier - Sewer

Inspection 1

Inspect excavated trench and verify bedding type required for the subsoil condition. Take advice of a Geotechnical Engineer before accepting an alternative bedding material. Obtain approval from PWC.

Inspection 2

Main/service completed with connection to main/MH with double isolation, or main/service completed waiting for connection to main/MH. All thrust blocks installed (rising mains). Verify as constructed information.

Inspection 3

All joints exposed, carry out air test before undergoing hydrostatic (gravity) or pressure test (rising mains), and CCTV inspection (gravity). Inspection 3 not required if total length is less than 6m and there are no MH/MS's.

Inspection 4

Conduct handover with PWC.

Inspection 5

Final inspection to ensure all outstanding items/defects are completed for clearance.