PREPARING YOUR DETAILED PLAN (DP) SUBMISSION

Please obtain the clearance for the relevant Detailed Plan before commencing the respective sewerage and drainage works.

Here are some tips to help you in preparing for your DP submissions to PUB:

Drainage DP Submission

Works Involving Roadside Drains

- The submission should include:
  - Provide a cover letter with clear caption.
  - Cross sectional details indicating the size and structural details of the drain
  - Longitudinal section of the drain and to indicate drain gradient, invert and cope level (including existing drain connection).
- For new drain/roadside drain/entrance culvert or extension of existing entrance culvert; please take note of the following live loads for design and endorsement on plan submission to PUB:-
  - The entrance culvert is designed to withstand vehicular loading in accordance to Land Transport Authority’s latest standards and relevant code of practices.
  - be considered instead.

- Drains (box drain or open drain) are designed with a nominal live load surcharge of 10kN/m². For drains adjacent to roads and affected by vehicular loading, a live load surcharge of 20kN/m² shall

Covered Linkways/ Bus Shelters (To be submitted under other drainage works)

- The foundation / footings and the support structures of the proposed covered linkways / bus shelters shall be located at least 300 mm away from the existing drainage structures. Please clearly indicate the clearance on all sections and layout plans.
- Clear indication of the clearance on all sections & layout plans.
- If proposed supports/footings are < 300mm from the drainage structures, QP shall clarify the reasons to justify why the minimum clearance cannot be met, and submit technical assessment that the proposed structures do not affect the existing structural integrity of the drain below.
Sewerage DP Submission

Development with new RC Trench

- Layout of proposed RC trench in DP submission shall be in accordance with the approved DC plans.
- Sectional plan indicating internal width of RC trench and depth of sewer.
- The RC trench design calculation shall be formalised with PE stamp.
- No permanent structure shall be sited directly on top of the RC Trench to ensure readily access when maintenance is needed.
- The minimum internal width of RC trench is 750mm for sewers ≤ 3m deep. For sewers > 3m deep, the width of the trench required shall be as advised by Water Reclamation Department, PUB.

Development with new sewer and/or manhole

- Layout of the proposed sewer and/or manhole in DP submission shall be in accordance with the approved DC plans.
- Detailed sewer plan shall include the sewer pipe diameter, gradient, material, type of bedding and piling (if constructed by open cut), top/invert levels of manhole(s) and sewer length.
- Longitudinal plan of the sewer shall include the depth, chainage, pipe diameter, gradient, pipe material, type of bedding and piling.
- Detailed plan of manholes showing netting and intermediate platform (if applicable).

THINGS TO NOTE

Drainage

- Where an entrance culvert / crossing is proposed at a stretch of closed drain, gratings/openings shall be provided at the closed drain sections immediately upstream and downstream of the proposed entrance culvert / crossing.
- The internal width and clear depth of a roadside drain/culvert (including entrance culvert) shall be at least 600mm or align to the size of the existing drain size (whichever is wider).

Sewerage

- Where the sewer will be constructed near a building/structure, the setback distance shall be indicated from the proposed sewers to the proposed buildings/structures.
- All plans shall be endorsed by PE.
Reminder to QPs to Seek PUB's Approval Early when Using Air Admittance Valve (AAV), Shallow Floor Trap, Grease Trap

Reminder to obtain approvals if the followings are used:

- Air admittance valve
- Shallow floor trap
- Grease trap

These projects are required to seek PUB’s approval before installation. For projects that require BCA TOP, submission is to be made using the PUB-SEW-PCWVSEW through corenet, otherwise, submit Form F at https://bpu.pub.gov.sg. This is to ensure that sanitation is not compromised. The lack of these clearances at TOP stage may result in delays due to the need for submission, rectification and re-inspection.

The following documents are required:

**Air admittance valve**
- Only 50mm air admittance valve to be used on 50mm diameteter ventilating pipe for the WCs/Floor Traps to relief the negative pressure in the sanitary discharge stack/pipe.

**Shallow floor trap**
1. Test report and certification complying with EN1253-1
2. Design shall also comply with below requirements:

<table>
<thead>
<tr>
<th>Description</th>
<th>Standard Requirements</th>
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<tbody>
<tr>
<td>Depth of water seal</td>
<td>Min. 50mm</td>
</tr>
<tr>
<td>Passage clearance</td>
<td>Min. 25mm</td>
</tr>
<tr>
<td>Outlet diameter</td>
<td>Min. 75mm</td>
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<tr>
<td>Floor trap (Water Compartment)</td>
<td>Shall be integral type, removable trap is not allowed</td>
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<tr>
<td>Floor trap grating and anti-mosquito valve</td>
<td>Shall incorporate an approved type of floor trap grating and anti-mosquito valve</td>
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<tr>
<td>Service plug in the floor trap (if provided)</td>
<td>To provide permanent instruction label to the service plug</td>
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**Grease trap**
1. Install grease traps that has been approved by PUB
2. If a non-standard grease trap is proposed, provide test report and certification complying with BS-EN1825 or ASME A112.14.3