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Fox Metro Water Reclamation District
New Building or New Service Design & Review Guidelines
www.foxmetro.org/business/engineering/

Design Engineers: Please include this checklist with your submittal; documenting each item as “completed” or “n/a”. Be sure all applicable items have been addressed as we cannot begin review of your plans until this is complete.

1. Determine if the subject property is annexed to Fox Metro Water Reclamation District. Before the review, the property must be annexed to Fox Metro.
2. Before the permit, the excavator who will install the sanitary service needs to be bonded with Fox Metro. A \$25,000 License & Permit Bond is needed. Call 630-301-6811 for details. If a plumber is to make an external/final connection, the same is required.
3. If the property is a metes & bounds site, the surveyor or engineer will need to provide a property survey. If the property is in a P.U.D. and the lot size is changing, a Plat of Re-subdivision is required.
4. Is there an ultimate service area to be serviced upstream of the proposed lot development? A public main may need to be designed/extended instead of a service only.
5. Only at the final engineering stage can we receive civil plans. Once this is submitted to the city or village, provide flattened pdf sets of the civil, architectural, and plumbing plans to Fox Metro W.R.D. at Submittals@foxmetro.org.
6. A verified property address is required.
7. If no District file exists, the signed & sealed architectural plans need to call out existing fixtures for fee credit. For *small jobs, credit may be issued *at the District’s discretion using photographs, an email from the municipality, a plumber, etc. Where a District file exists, only our records shall apply.
8. A detailed description of the use of any new or re-designed building is required. An “Industrial Waste Survey” may need to be filled out by the applicant, and then provided to Mtucker@foxmetro.org. Confirm Pretreatment’s approval of this discharge.

9. If the TOTAL daily average flow equals or exceeds 1,500 g.p.d., or ANY non-domestic wastewater is proposed, IEPA permit applications (Schedule A/B & WPC-PS-1 **OR** FTP & WPC-PS-1 and any other schedules applicable) are required. Fox Metro signs last on application sets containing original signatures. To avoid delays, this should be done ASAP.
10. If the proposal is an existing building with a new sanitary service, how and where is the roof, on-site drainage, or other stormwater to discharge? If available (inquire with the governing city or village), said flow shall go to a separate storm sewer. If not, then a separate building storm line needs to exit the building, and then be directed to the service. This is so later when a separate sewer is available, they can then be separated.
11. Buildings with non-polluted water discharge (e.g. cloud storage, pools, etc): If condensation lines, humidification "blowdown" lines, or other non-polluted water for equipment are shown, this discharge shall go to a storm sewer.
12. If the building will have cooling towers, will cooling water contain chemical additives for uses such as pipe de-scaling or other use? If yes, direct discharge to sanitary.
13. For dentist offices, a "Mercury Amalgam Waste Survey" shall be filled out, and then provided to Mtucker@foxmetro.org. Confirm Pretreatment's approval of this discharge.
14. If ANY equipment will discharge to sanitary, call its purpose and how many of each type will be installed. In addition, provide the makeup of said waste and then provide the daily average flow calculations for each piece of equipment.
15. All swimming external or internal pools:
 - **Deck, backwash filtration, and main pool drains shall discharge to the storm system.**
 - The civil plan must show a storm drain pipe to the building's pump room location and be called out as an "XX" diameter storm sewer for all pool-related discharge".
 - The pool plan's equipment room shall show one or more discharge points clearly indicated "for pool's deck drains, main drain(s) and backwash filters".
 - For all pool discharges, the plumbing plans shall show an underfloor storm drain discharging to the exterior point of the building that is consistent with the civil plan.
 - Ask what chemicals are to be stored for pools, whether it is a liquid or powder, and in what quantity for each. Speak with Pretreatment about spill containment or elimination of any f.d. in the storage room.
 - The civil, pool, and plumbing engineers shall be coordinated on their individual plans to reflect this.

16. Food Service Establishments:

- Provide Health Department comment & approval letters. This is needed before our permit can be issued. The architect and/or Plumbing Engineer shall incorporate all requirements (discharging fixtures or equipment) of the Health Department into the applicable building plan/plumbing sheets, equipment lists, risers, etc.
- Provide a complete menu
- Fox Metro determines the required size of the grease removal system (grs). After this time, any approved make of grs may be selected from our website.
- On the utility sheet, the specific type and size of grs shall be called out
- Except for the washrooms, be sure to route ALL fixtures into the grs.
- G.r.s units < 1,000 gallons: show dishwasher by-passing the grs to the domestic line.
- On exterior grease and domestic lines, no cleanouts near the building are required. The domestic and grease (after the grs) lines shall converge separately at a Type A manhole.
- For all exterior grs units, call out on the utility plan that "only pickable and gasketed cast iron frames and lids are allowed".
- Where an internal 4" grease line will exit the building, flow through the grs, then discharge back into the building, the grs shall have 4" inlets & outlets.
- For exterior grease trap "retrofit" plans, if no elevations are known, call out "XX l.f. pvc sdr 26 with 3.5' of cover and 1% min. pitch for all sanitary piping". If proper cover depth and slope cannot be achieved, an interior unit may be needed.
- All multi-tenant buildings: the grease line shall discharge to an exterior grs and shall be designed and installed at the time of permit.
- For any single-use non-residential building that *could* become a multi-tenant use (verify with the municipality), the grease line only may be stubbed to 5' on the exterior. If chosen, the grs could be installed at the same time.

17. For multi-tenant buildings, show separate under-floor grease AND domestic lines to 10' of any exterior wall of any leasable tenant area(s).

18. Non-food-service use building: Show a 6" (full-sized) cleanout 5' from the foundation

19. After any inspection manhole or cleanout at the building's foundation, show cleanout(s) at 100' maximum spacing.

20. If a connection to a manhole on the main is proposed, the total 6" service length to the upstream inspection manhole or cleanout at the building can be up to 200' without an additional cleanout.

21. No sanitary service shall pass through ANY portion of another parcel.

22. Where plans call for adherence to state, local, and other authorities, it needs to be stated in the same area on the plans that "Adherence to the specifications of Fox Metro Water Reclamation District is required".

23. Only the Fox Metro Contractor Notice, General Notes, Manhole/Pipe Specifications, and applicable details from our website shall be on the plans. Others' specs/notes shall be removed and then a reference added in their place to "See Fox Metro WRD specs, notes and details on sheets X, X & X".
24. On all building sewers, "XXX l.f. 6" PVC SDR 26 (min.) at XX% slope" should be indicated. Lines with bends/elbows may be shown as a single-segment callout.
25. Overhead or "hung" sewer services are required for any structure with a basement.
26. Reference the diameter and pipe type of the existing sanitary main(s).
27. If the storm sewer is <1.5' over a sanitary sewer, show DR 18 per our detail.
28. If the horizontal separation between sanitary and water lines is < 10', call out sanitary SDR 21, D-2241, or C-900.
29. 3.5' of cover is required for all services, while 6' of cover is required for public mains.
30. Where an 8" service is verified as necessary (6" preferred), an inspection manhole is required 6'-7' from the foundation, and at all downstream bends.
31. Where a 90-degree turn in a 6" service is needed, call out to "Install two 45-degree fittings with a minimum of 1' of exposed pipe between fittings".
32. At the point of connection to any existing public sewer pipe, an "Inserta-Tee" brand fitting shall be used". An SDR 26 fitting is required where the main is < 20' deep. Where the existing main is > or = 20' deep, a "Deep Bury"/DR 18 fitting is required.
33. For any new building, it is highly preferred that the existing stub is used:
 - If the existing sewer service is pvc, connect the new pvc to any point on the existing service.
 - If the existing stub is a non-pvc material, it shall be removed to 1' away from the main, a non-shear coupling installed, then constructed of new pvc to the building **OR...**
 - ...the non-pvc stub may be lined. If the stub is to be lined, a CLEAR "pre-lining" video shall be provided to determine if the sewer is "lineable". If lineable, a CIPP liner using heat-cure is required (with a repair permit). After lining work is completed, a post-lining video is required. If not lineable, a spot dig repair may be needed before lining, or a complete replacement of the service may be required.
34. Any new 6" building sewer to an existing manhole shall be designed with one 6" connection only. For an existing downstream pipe that is < 15" in diameter, the new 6"

invert shall be established by matching the tops of each pipe. For a *necessary* 8" service, a single connection or "drop" connection may be needed.

35. For a 6" connection to any "deeper" manhole, call out to "Use a 45-degree fitting 3'-5' outside of the manhole, to a maximum 45-degree slope up to a second 45-degree fitting, then to the designed grade elevation".
36. Connection(s) to any manhole(s) shall be proposed so that no upstream connection(s) is constructed at an angle less than 90 degrees to the downstream pipe.
37. When coring into an existing manhole, call out that "The bench shall be cored in conjunction with the manhole wall".
38. If oil/water separator flows join domestic flows on the interior of the building, a cleanout is needed outside. If an exterior separator is proposed, the two domestic and oil/water lines shall converge separately to an inspection manhole.
39. Where any non-mechanical car wash for "common resident" use in any residential subdivision is proposed, the floor drain may ONLY discharge to sanitary if the area is fully enclosed (one side open, with a garage door). If it is an open-air type (two or more sides open permanently), the drain must go to the storm sewer.
40. Add this note where any City or Village manhole is proposed to be connected to or disturbed: "Any portion of any sanitary manhole which is fully exposed around the perimeter shall be adjusted and rehabilitated per Fox Metro specifications. See appropriate notes and details for frame adjustment and/or barrel joint sealing and chimney seal requirements. All lids shall remain at grade unless otherwise directed by the municipality."
41. Add this note if any Fox Metro interceptor pipe or manhole is near: "Extreme care must be taken when working around Fox Metro's XX" interceptor and manholes. See appropriate notes and details for frame adjustment and barrel joint sealing requirements. All interceptor frames shall remain at grade unless directed by Fox Metro. No more than 6% grading (side-to-side) shall be allowed within Fox Metro's easement."