

SECTION 02700 - SITE UTILITIES
CONSTRUCTION STANDARDS

Site Utilities

1. New storm sewers outside the building shall be television inspected and graded using City of Austin grading forms. Forms are available from the Owner at tel. 512-471-1600. Videotape and completed grading forms shall be turned over to Owner. Video shall be in color, with on-screen footage counter and be supplied to Owner with a site map showing entry and exit locations keyed to on-screen information. Video shall be created by a company regularly engaged in the business of sewer teleinspection. Sanitary and storm sewers shall be recorded on separate tapes or DVD's.
2. New sanitary sewers outside the building shall be television inspected and graded using City of Austin grading forms. Forms are available from the Owner at tel. 512-471-1600. Videotape and completed grading forms shall be turned over to Owner. Video shall be in color, with on-screen footage counter and be supplied to Owner with a site map showing entry and exit locations keyed to on-screen information. Video shall be created by a company regularly engaged in the business of sewer teleinspection. Sanitary and storm sewers shall be recorded on separate tapes or DVD's.
3. New catch basins and trench drains shall have these words imprinted in the concrete during manufacture: "No Dumping - Drains To Creek".
4. Indicate that Contractor shall make repairs to existing utilities if they are damaged.
5. All construction powders and liquids on campus shall be stored in covered storage. Liquids shall be secondarily contained.
6. Install double cleanouts just outside the building on every sanitary and storm sewer line. Cleanouts on lines 6-inch and larger shall be 6-inch size. Cleanout plugs shall be brass.
7. Underground sanitary sewers and storm sewers under 12-inch pipe size that are downstream of a manhole shall be PVC SDR 26 with elastomer-gasketed joints.
8. Underground sanitary sewers and storm sewers under 12-inch that are not downstream of a manhole shall be Schedule 40 DWV with glued or elastomer-gasketed joints.
9. Underground storm sewers 12 inch and larger may be reinforced concrete pipe or PVC SDR 26 with elastomer-gasketed joints.
10. All plastic and concrete sewer line shall be loosely wrapped (1 per 5 ft.) with red-insulated #12 stranded copper wire for tracing purposes. Tracer wire shall come to surface at all manholes and cleanouts, with two turns per foot of pipe length around the cleanout risers. Red plastic warning tape shall be placed 12 inches above plastic sewer piping.
11. Bedding material for plastic pipe shall be clean washed sand, with at least 12 inches of sand below pipe, at least 6 inches of sand on either side, and at least 12 inches of sand above pipe.

SECTION 02700 - SITE UTILITIES
CONSTRUCTION STANDARDS

12. Put geotextile filter fabric over French drain piping.
13. Do not include steps inside sewer manholes.
14. Specify sanitary manholes with flexible rubber connections to sewer lines, to reduce infiltration and exfiltration.
15. Size grease traps using City of Austin standards.
16. Storm drainage systems must be engineered to avoid overland flow and ponding in a 25-year rainfall event.
17. Place no gravel in acid neutralization basins
18. Parking areas shall drain through an oil-water separation device.
19. On-site stormwater detention shall be provided, unless otherwise directed by Owner.
20. Dye test all sinks, lavatories, urinals, water closets, floor drains and all other connections to sanitary sewer, using dye supplied by Owner and procedure approved by Owner. Any fixtures found to be connected to storm sewer shall immediately be disconnected to avoid pollution of the creek during the construction phase and shall be re-piped to connect to the proper type of sewer.
21. The covers and rims of sanitary and storm manhole not owned by the City of Austin shall be 24-inch diameter.
22. When two sewer lines meet in a manhole, match the elevations of their crowns (or inlet crown higher).
23. Design buried sanitary lines with a minimum slope of 0.19%.
24. Design sanitary manholes with a 1/10 ft. drop through the manhole.
25. Architects should participate in the design of outfalls to creek, and should provide drawing(s) depicting the outfall as seen from the creek and/or other likely vantage spots.
26. Domestic water shall be supplied from UT-owned water mains, unless otherwise directed by Owner.
27. Buried water-supply piping shall be ductile iron. Ductile iron water pipe shall have mechanical joints and retaining glands at all fittings and joints. EBAA MegaLug retaining glands are an acceptable brand.

SECTION 02700 - SITE UTILITIES
CONSTRUCTION STANDARDS

28. The minimum available COA water pressure can be assumed to be 60 psi at elevation 550 feet above sea level. This is in the UT mains, before any backflow-prevention devices. Water pressure drops by 1 psi for every 2.3 feet of elevation increase. City water pressure can vary by more than 17 psi over a 3-day period.
29. Include SW Services (716 East Rose Garden Lane, Phoenix, AZ, tel. 800-462-2773) plastic debris caps with blue handles in all new exterior water valve boxes.
30. Buildings shall be supplied by two independent domestic-water feeds.
31. Valve boxes on exterior water-distribution valves shall be adjustable cast-iron type.
32. Buried natural-gas piping shall be cathodically-protected coated / wrapped steel piping, or poly tubing inside coated / wrapped steel piping.
33. Upgrade any undersized or deteriorated utility lines at the site, including water, sanitary sewer, storm sewer, steam and condensate. Project engineer shall size piping to serve the new building. If in doubt about needed size of distribution (main) piping on site, ask Owner.

END OF SECTION 02700