

SEWER NOTES

1. All sewer construction shall be performed in accordance with the Standard Specifications for Public Works Construction, September 1986, Standard Details for Public Works Construction, September 1984, as amended, of the Department of Public Works, City and County of Honolulu and the Counties of Kauai, Maui and Hawaii, current City practices, the Revised Ordinances of Honolulu, 1990, as amended, and the Design Standards of the Department of Wastewater Management, Vol. 1, July 1993.
2. In the event that any change in alignment or grade for the proposed sewers are required due to unforeseen conflict with other utilities, the engineer in charge or the maker of the plans shall be responsible for the required changes which are to be presented to the Department of Planning and Permitting for approval.
3. The Contractor shall notify the Civil Engineering Branch, Department of Planning and Permitting, at 523-4881 to arrange for inspectional services and submit four (4) sets of approved Construction Plans seven (7) days prior to commencement of construction work.
4. Crushed rock cradle is permitted where soil is stable. In areas of unstable soil, the maker of the plans and the construction engineer will determine the pipe support required.
5. Trees in the road right-of-way shall be situated a minimum of six (6) feet from the city's sewer lines.
6. The underground pipes, cables or ductlines known to exist by the engineer from his research of records are indicated on the plans. The Contractor shall verify the location and depth of the facilities, including and affecting sewer lines, in the presence of the DPP inspector and exercise proper care in excavating the area. The Contractor shall be responsible and shall pay for all damaged utilities.
7. Sewer lateral location measured along the front property line shall be six (6) feet from the property corner unless otherwise noted on the plans and should not straddle electrical transformer pad.
8. Slope for sewer laterals shall be 1.00% unless otherwise noted.
9. Building plumbing facilities shall be controlled by sewer lateral inverts.
10. The Contractor shall be responsible for maintaining continuous sewer service to all affected areas during construction.
11. The consulting engineer shall submit to the Department of Planning and Permitting mylar "as-built" tracings of the construction plans as actually constructed, showing all changes from the original plans.
12. The Contractor shall be responsible for any sewage spills caused during construction. The Contractor shall notify the State Department of Health and utilize appropriate sampling and analyzing procedures. The Contractor shall be responsible for all public notifications and press releases.
13. The Contractor shall install "Rainstopper" manhole inserts in all sewer manholes with Type "SA" frame and cover.
14. All drop and shallow drop sewer manholes shall be lined with plastic liners. Also, if the velocity exceeds ten (10) feet per second (fps), the sewer manhole shall be plastic lined.
15. The Contractor shall obtain approval for advance sewer riser agreement at the Department of Planning and Permitting and obtain building permit for plumbing work before any advance riser is made.
16. All sewer pipe joints within easements shall be wrapped with geotextile root barrier.
17. Sewer pipes thirty (30) inches and larger shall be of corrosion resistant material or protected internally with lining.
18. S4C pipe cradle seals shall be installed ten (10) feet from all sewer manholes to prevent soil migration. See Detail _____.
19. Geotextile fabric to envelop the pipe cradle and select backfill material shall be provided where water or unstable soil conditions are encountered.

20. Confined Space

For entry by City personnel, including inspectors, into a permit required confined space as defined in 29 CFR Part 1910.146(b), the Contractor shall be responsible for providing:

- I. All safety equipment required by the confined space regulations applicable to all parties other than the construction industry, to include, but not limited to, the following:
 - a. Full body harnesses for up to two personnel.
 - b. Lifeline and associated clips.
 - c. Ingress/egress and fall protection equipment.
 - d. Two-way radios (walkie-talkies) if out of line-of-sight.
 - e. Emergency (escape) respirator (10 minute duration).
 - f. Cellular telephone to call for emergency assistance.
 - g. Continuous gas detector (calibrated) to measure oxygen, hydrogen sulfide, carbon
 - h. Personal multi-gas detector to be carried by inspector.
- II. Continuous forced air ventilation adequate to provide safe entry conditions.
- III. One attendant/rescue personnel topside (two, if conditions warrant it).

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