

**DESERT WATER AGENCY
SEWER PLAN CHECKLIST**

TRACT NO. _____

Listed below are the usual points to be checked on all Contract Drawings:

GENERAL ITEMS

- Cover Sheet (refer to disk)
- North Point
- Scale: Plan & Profile
- Stationing
- Elevation
- Reference Point
(see Plan Check Guidelines & Requirements, Sect. III, "B")
- Revisions Block
- Vicinity or Location Map (on Cover Sheet)
- Legend
- Estimate of Quantities
- DWA to Affix Gen. & Const. Notes
(on Cover Sheet)
- Design Approved by Civil Engineer
- Grade & Alignment

CONTROL

- Curve Data
- Centerline
- Curb & Gutter
- Location & Station of Intersection

STREET DATA

- Property Line or R/W
- Curb Line
- Sidewalks
- Driveways
- Street Widths
- Street Names
- Critical Topo Features
- Groundline on Profile

TITLE BLOCK

- See Plan Check Guidelines & Requirements
Section III, "C"

PIPE APPURTENANCES

- Type, Class & Size of Pipe
- Manholes Numbered
- Cleanouts
- Laterals (Wye)
- Concrete Encasement
- Jacked Casing
- Bedding and Backfill
- Flowline Direction and Invert Elevations
@ inlet and Outlet of the Manhole
- Manhole Depth

UTILITIES AND CROSSINGS

- Relocations, Removals, Abandonments
- Existing Water (Type, Size & Class)
- Power
- Telephone
- Exist Sewer
- Gas
- T.V.
- Storm Drain
- Culverts
- Signal Loops

OTHER DETAILS

- Detail Reference Circle
- Test or Potholes Required
- Grade Change
- Appurtenances on both Plan & Profile
- Account numbers
- Building (Unit) Numbers & Addresses
- Geographic Data (Township, Range & Section)
- Existing & Proposed Structures
- Building & Service Relationship
- % of Slope

**DESERT WATER AGENCY
SEWER PLAN CHECKLIST (ADDENDUM)**

1. No sewers shall be smaller than 8 inches in diameter except for laterals and cleanouts.
2. Unless otherwise directed by Agency, gravity sewers shall be Extra Strength Vitrified Clay (VCP) Bell and Spigot, with Type "G" (polyurethane) joints. Force mains shall be D.I. Class 150 CML push-on rubber-gasketed-Tyton interchangeable with interior asphalt steel coating.
3. Manholes shall be installed on spacing not to exceed 300 feet.
4. Cleanouts may be installed at the end of a sewer if the distance from a manhole is less than 200 feet.
5. Laterals shall be installed to each single family dwelling unit or commercial unit and one lateral to each building complex on multi-unit condos. Multi-story structures and apartments to be analyzed individually by Desert Water Agency.
6. Four-inch diameter laterals shall be installed for single dwelling units and six-inch diameter laterals shall be installed for all others unless otherwise approved by Agency.
7. No four-inch diameter laterals shall be constructed into manholes.
8. Laterals will be allowed out of the end of cleanouts. Also, double-wye laterals or six-inch laterals allowed out of end of cleanouts.
9. Depth of laterals shall be sufficient to provide service to the lowest or furthest point to be served on each lot at a minimum grade of two percent with not less than one foot of cover over the top of the pipe. The minimum depth of the lateral at the property shall be three feet.
10. All laterals shall be permanently located by marking a two-inch "S", imprinted on the curb face.
11. No vertical or reverse curves shall be permitted in the sewer.
12. Minimum radius for curves shall be 100 feet.
13. Oversizing sewer to decrease grade is not permitted. Use of manholes to decrease grade is allowed.
14. In areas owned in common, laterals shall terminate at the wye of the sewer. In areas with paved streets, laterals shall terminate at the property line.
15. Sewers for dwelling units shall be designed based on an average flow of 300 gallons per dwelling unit per day.
16. Different diameter sewers shall be designed to match flowlines at design flows.

**DESERT WATER AGENCY
SEWER PLAN CHECKLIST (ADDENDUM)**

(continued)

17. Changes of flow in manholes or structures shall have a minimum of 0.1 (prefer 0.2) foot drop through the manhole or structure.
18. Sewer should be aligned five feet from centerline on down-hill side of street.
19. Sewer to be minimum of 10' horizontally from water main to outside of sewer or encased on concrete. Encase sewer when crossing water main (or) per County of Riverside standards.
20. All pump stations, siphons or non-standard construction shall be approved in concept by the Agency prior to preparation of drawings.
21. All lift stations will pump through ASTM D-2241, SDR 21, PVC force main to a manhole prior to gravity sewer collection main.
22. Force main velocity shall be 1 cubic foot/minute/inch-diameter of pipe.
23. Acceptance of sewers in newly developed areas shall be after street pavement is complete.
24. Manholes to be eccentric, pre-cast with poured base and step. Covers are standard type with "DWA" cast on lid. Cover will be sealed when installed in conjunction with force mains or any time manhole will be in the path of a water course.

DESERT WATER AGENCY PLAN CHECK GUIDELINES & REQUIREMENTS

Listed below are the usual requirements and guidelines for Contract Drawings to be submitted for checking.

GUIDELINES

I. General

- A. All plans shall be legible and of professional quality.
- B. Sheet material: vellum or mylar unless otherwise approved by Agency; all drawings shall be provided in AutoCAD Drawing File Format (AutoCAD 14, or Land Desktop3 - based on AutoCAD 2002).
- C. Sheet size shall be 24" x 36."
- D. Scale Horizontal, 1" = 40'
Vertical, 1" = 4' unless otherwise specified and approved by DWA
- E. All lettering shall be linear and of uniform height.
- F. Minimum acceptable letter height 0.10."
- G. All water main installations 12" and larger will require plan and profile on profile paper (vellum or mylar). All sewer main installations will require Plan and Profile on profile paper (vellum or mylar).

II. Cover Sheet

- A. A separate cover sheet will be required if:
 - 1. Plans contain more than one sheet.
 - 2. Or, if plans become too cluttered or busy to be clearly followed.
 - 3. The cover sheet, or first sheet, shall be prepared in a format standardized by Desert Water Agency. An AutoCad file disk of this format is available upon written request.

III. Plan Sheets

- A. Unless otherwise directed, no topo lines will be permitted on water/sewer plans submitted to this Agency at any time.
- B. All plans shall reference an established Bench Mark or Survey Monument and describe its location, and show its location on the plan. If the Bench Mark is too far from new construction, show its relationship and location to site map.
- C. Title Block shall be prepared in a format standardized by Desert Water Agency. An AutoCad file disk of this format is available upon written request.

Additional items of requirement for plan check submittal are listed on the attached sheet (Plan Check Guidelines and Requirements). This sheet is to be used as a reference.