CITY OF COACHELLA  
INFRASTRUCTURE DEVELOPMENT STANDARDS

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NOTES:

1. THE SEWER MAIN SHALL BE Laid FOR THE FULL LENGTH AND DEPTH SHOWN ON THE PLAN AND PROFILE TO THE POINT MARKED CLEANOUT.

2. THE TRENCH FOR A CLEANOUT SHALL BE EXCAVATED ONLY TO SUBGRADE, WHICH IS THE BOTTOM OF THE SLOPING PIPE AND FITTINGS. SHOULD THE EXCAVATION FOR ANY REASON BE CARRIED BELOW SUBGRADE, IT SHALL BE REFILLED TO SUBGRADE WITH ROCK OR GRAVEL WHICH SHALL BE TAMPED UNTIL FIRM AND UNYIELDING. SHOULD A FIRM AND UNYIELDING FOUNDATION BE UNOBTAINABLE BY THIS METHOD, A CONCRETE PIPE CRADLE SHALL BE USED.

3. CLEANOUT COLLAR SHALL BE CENTERED IN CONCRETE COLLAR.

CITY OF COACHELLA

MAINLINE
SEWER CLEANOUT

STANDARD DRAWING NO.
D-1

JUNE 2007
STANDARD CAST IRON MANHOLE FRAME AND COVER PER DWG D-7 CEMENT IN PLACE WITH CEMENT MORTAR (CLASS "C")

CONCRETE COLLAR PER D-10

PRECAST CONCRETE RINGS AND ECCENTRIC CONE PER ASTM C-478

2" BUTYL RUBBER GASKET AT ALL JOINTS TO FORM A WATER TIGHT SEAL. GROUT INTERIOR, BRUSHED SMOOTH WHILE PLASTIC.

PRECAST CONCRETE CONCENTRIC BASE RING

NOTES:
1. CONCRETE TO BE 660-C-4000, TYPE V CEMENT, AIR ENTRAINED (7-5 sack)
2. LAY PIPE THROUGH MANHOLE WHEN POSSIBLE.
3. A MINIMUM DROP OF 0.05 FEET SHALL BE PROVIDED FOR STRAIGHT THROUGH LINES AND LINES LESS THAN 45° FROM MAIN FLOW.
4. A MINIMUM DROP OF 0.10 FEET SHALL BE PROVIDED FOR LINES FROM 45° TO 90° FROM MAIN FLOW.
5. MATCH CROWNS IF PIPE DIMENSION DIFFERS.

SECTION A-A

CITY OF COACHELLA

48" DIAMETER

STANDARD MANHOLE

STANDARD DRAWING NO. D-2

JUNE 2007
MANHOLE FRAME COVER PER DRAWING D-6 CEMENT IN PLACE WITH MORTAR (CLASS "C")

FINISHED GRADE IN PAVED AREAS

CONCRETE COLLAR PER D-10

GRADE RING OR RISER

PRECAST CONCRETE SHAFT AND ECCENTRIC CONE PER ASTMC-478

2" BUTYL RUBBER GASKET TO FORM A WATER TIGHT SEAL

3" X 45° MORTAR ALL AROUND

RUBBER WATERSTOP (TYP)

NOTE:

1. CONCRETE BASE SHALL BE 4000 PSI AT 28 DAYS, TYPE V PORTLAND CEMENT (CLASS 660-C-4000).

2. MINIMUM MANHOLE DEPTH IS 5'. SHOULD DESIGN CONSTRAINTS DICTATE SHALLOWER INSTALLATION WITH 5' DIAMETER MANHOLE THEN PRECAST SECTIONS SHALL BE USED WITHIN DIMENSION "A" AS REQUIRED, IN ORDER OF PREFERENCE LISTED:
   A. CONE
   B. 6" TO 18" OF 3' DIAMETER GRADE RINGS/AND/OR RISERS.
   C. 5' DIAMETER SHAFT VARIABLE HEIGHT.

3. ALL PATCHING WITHIN MANHOLE BASE SHALL BE EPOXY MORTAR.

4. A MINIMUM DROP OF 0.05 FEET SHALL BE PROVIDED FOR LINES ENTERING AT LESS THAN 45° FROM MAIN FLOW.

5. A MINIMUM DROP OF 0.10 FEET SHALL BE PROVIDED FOR LINES ENTERING AT 45° FROM MAIN FLOW.

CITY OF COACHELLA

60" DIAMETER MANHOLE

STANDARD DRAWING NO.

D-3

JUNE 2007
NOTES:

1. ALL PIPING SHALL BE INSTALLED IN ACCORDANCE WITH GREENBOOK, SECTION 306.

2. ANY SHORING REQUIRED BELOW TOP OF PIPE SHALL BE PERMANENT AND ONLY AS ALLOWED BY THE DISTRICT ENGINEER.

3. TRENCH SHALL BE EXCAVATED TO SUBGRADE AND PIPE SHALL BE INSTALLED ON FIRM UNYIELDING TRENCH BOTTOM. OVEREXCAVATION SHALL BE REQUIRED WHEN TRENCH BOTTOM IS UNSUITABLE. ALL OVER EXCAVATION SHALL BE BRIDGED WITH A MINIMUM 4" OF 1/2" CRUSHED ROCK.

4. SEE STD. DWG. D-5 FOR CONCRETE ENCASEMENT, WHEN REQUIRED.

5. OVEREXCAVATED TRENCH SHALL BE BACKFILL AND COMPACTED TO 90% BEFORE LAYING PIPE.

CITY OF COACHELLA

STANDARD SEWER PIPE INSTALLATION

STANDARD DRAWING NO. D-4

JUNE 2007
SMOOTH MACHINE FINISH

26 1/2" DIA
24 1/2"
24" DIA
22" DIA
1 1/2"
1 5/8" 6/8"
1 1/8"
3"
1 3/8"
1 1/4"

SECTION A-A

23 3/4" DIA
30 3/4" DIA
3 1/2"

FRAME
12 RIBS, EQUALLY SPACED

COVER BOTTOM
6" 3 1/2"
3/4" 3/4"
6 RIBS 3/4" 3/4"

COVER

FRAME AND COVER TO BE MANUFACTURED BY:
- RIVERSIDE FOUNDRY
- SOUTHBAY FOUNDRY

CITY OF COACHELLA

STANDARD MANHOLE FRAME AND COVERS

STANDARD DRAWING NO. D-7

APPROVED: JUNE 2007
NOTES:

1. DROP MANHOLE SHALL BE IDENTICAL TO STANDARD CONCRETE MANHOLE, EXCEPT FOR PIPE DETAILS AS SHOWN.

2. THE DROP MANHOLE TEE SHALL ENTER THE 4' DIA. RING.

3. CLEAN AND ROUGHEN OUTSIDE SURFACE OF RINGS AND APPLY BONDING AGENT CEMENT PRIOR TO POURING SUPPORT FOR DROP SECTION.

4. NO MANHOLE STEPS ALLOWED.

5. CONCRETE SHALL BE 4000 PSI, TYPE V PORTLAND CEMENT (CLASS 660-C-4000)

CITY OF COACHELLA

STANDARD PRECAST CONCRETE DROP MANHOLE

STANDARD DRAWING NO. D-8

JUNE 2007
NOTES:

1. GREASE INTERCEPTOR SIZE SHALL BE IN ACCORDANCE WITH THE 2006 EDITION UNIFORM PLUMBING CODE (UPC) REQUIREMENTS. MINIMUM SIZE SHALL BE 1,500 GALLONS, UNLESS OTHERWISE APPROVED BY CITY ENGINEER.

2. GREASE INTERCEPTORS SHALL BE DESIGNED, CONSTRUCTED, TESTED, AND MARKED IN ACCORDANCE WITH THE IAPMO PS-118-2000 PROPERTY STANDARD FOR FOG DISPOSAL SYSTEMS. SUBMIT SHOP DRAWINGS SHOWING COMPLIANCE.

3. ALL GREASE INTERCEPTORS SHALL BE PROVIDED WITH SAMPLE BOX, AS SHOWN.

CITY OF COACHELLA

STANDARD GREASE INTERCEPTOR

STANDARD DRAWING NO.

D-9

JUNE 2007
UNPAVED AREAS

APPROVED MANHOLE FRAME AND COVER SET IN CLASS "C" MORTAR

2" (TYP)

R = 12

12" (TYP)

FINISHED GRADE

560-C-3250 CONCRETE FOR COLLAR (TYP)

PAVED AREAS

12" MIN.-18" MAX. SEE NOTE 1

3/8"-1/2" LIP

15" MIN

12" (TYP)

FINISHED GRADE IN PAVED AREA

#4 HOOP HORIZONTAL @ 6" O.C., #4 VERTICAL @ 18" O.C. (TYP)

90% COMPACTION ALL AROUND

NOTES:
1. UNIFORM RADIUS AROUND CENTER OF MANHOLE LID. VARIANCE IN RADIUS BY MORE THAN 1/2" WILL BE UNACCEPTABLE.

CITY OF COACHELLA

CONCRETE MANHOLE COLLAR

APPROVED:

STANDARD DRAWING NO.

D-10

JUNE 2007
DISTANCE "A" TO BE SHOWN ON IMPROVEMENT PLANS. DEPTH SHALL BE 36" MIN WITHOUT CONCRETE ENCASEMENT.

LETTER "S" STAMPED OR CHISELED IN FACE OF CURB (2" HIGH AND 3/16" DEEP).

PROPERTY LINE

CONCRETE CLEANOUT BOX (5" ø)

METAL COVER, PLACE 3" BELOW CONCRETE LID

METALLIC WARNING TAPE

11' MIN

2% (1/4"/FT) MIN

11'

PVC COMBO WYE

PIPE BEDDING OF 3/4" CRUSHED ROCK (1" BELOW BELL) OR APPROVED NATIVE MATERIAL

SECTION A--A

4" (MIN.) PVC PIPE (SCH. 40)

45°

11'-1/4' BEND

DROP TO MAIN

2' SPOOL

5' MINIMUM SEPARATION

PLAN

CITY OF COACHELLA

NEW INSTALLATION
PVC SEWER LATERAL

JUNE 2007
WATER & SEWER MAINS SHALL BE INSTALLED IN SEPARATE TRENCHES. SEWERS SHALL BE INSTALLED AT LEAST 10- FEET HORIZONTALLY FROM EXISTING OR NEW WATER MAINS.

**Parallel Construction**

![Diagram of Parallel Construction]

**Perpendicular Construction**

![Diagram of Perpendicular Construction]

**Notes:** Dimensions are from outside of water main to outside of sewer.

Sanitary sewers are not permitted within any of the above indicated zones unless constructed in conformance with the special requirements as shown below.

<table>
<thead>
<tr>
<th>Zone</th>
<th>Special Sewer Construction Requirements</th>
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<td>A</td>
<td>Sewer lines will not be permitted in this zone without special written permission from the Department of Health.</td>
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<tr>
<td>D</td>
<td>Extra-strength vitrified clay with compression joint; or rubber gasketed plastic pipe.</td>
</tr>
<tr>
<td>C</td>
<td>Sewer pipe within a continuous steel casing, which casing shall have a thickness of not less than one-fourth inch and with all voids between sewer pipe and casing pressure grouted with sand cement grout.</td>
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**City of Coachella**

**Pipeline Separation Requirements**

**Standard Drawing No.** D-12

**June 2007**