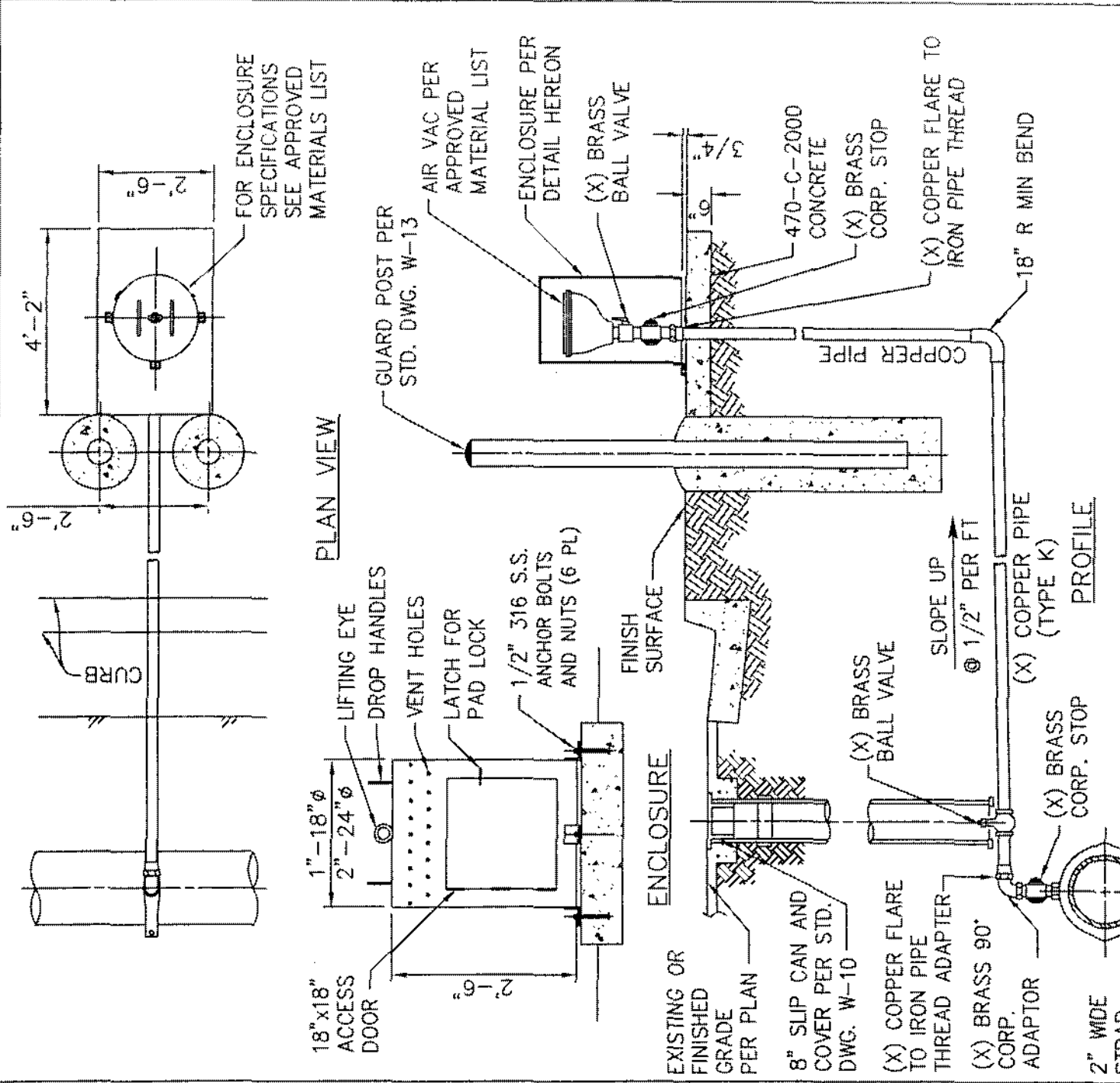


CITY OF COACHELLA
INFRASTRUCTURE DEVELOPMENT STANDARDS

DESCRIPTION	STD. NO.
WATER	
1" and 2" Air Vac & Air Release Assembly	W-1
2" Blow-Off Installation	W-2
4" PVC Blow-Off Installation	W-3
6" Fire Hydrant Installation	W-4
Pipe Bedding and Trench Backfill for Potable Water Mains	W-5
Reduced Pressure Backflow Prevention Device (3/4" Thru 2")	W-6
Reduced Pressure Backflow Prevention Device (4" & Larger)	W-7
Standard Water Service Lateral (Under 2")	W-8
Compact Service Meter Box 4" and Larger	W-9
Fire Detector Check Assembly (4", 6" or 8" D.C.)	W-10
Water Appurtenance Locations	W-11
Water Valve Box Installation	W-12
Concrete Thrust Blocks	W-13.1
Thrust Block Bearing Areas	W-13.2
Water Main Plug Assembly	W-14
Test Station	W-15
Standard Guard Post Installation	W-16



NOTES:

1. ALL GALV. AND BRASS BURIED PIPE OR FITTINGS SHALL BE COATED WITH APPROVED WAX TAPE BEFORE BACKFILLING.
2. LOCATIONS OF AIR VAC AND AIR RELEASE ASSEMBLY SHALL BE PLACED PER STD. DWG. W-9.
3. ACCESS DOOR TO BE PAD LOCKED WITH DISTRICT KEYED, S.S. LOCK.
4. X=1" FOR 1" AIR VALVE, 2" FOR 2" AIR VALVE .

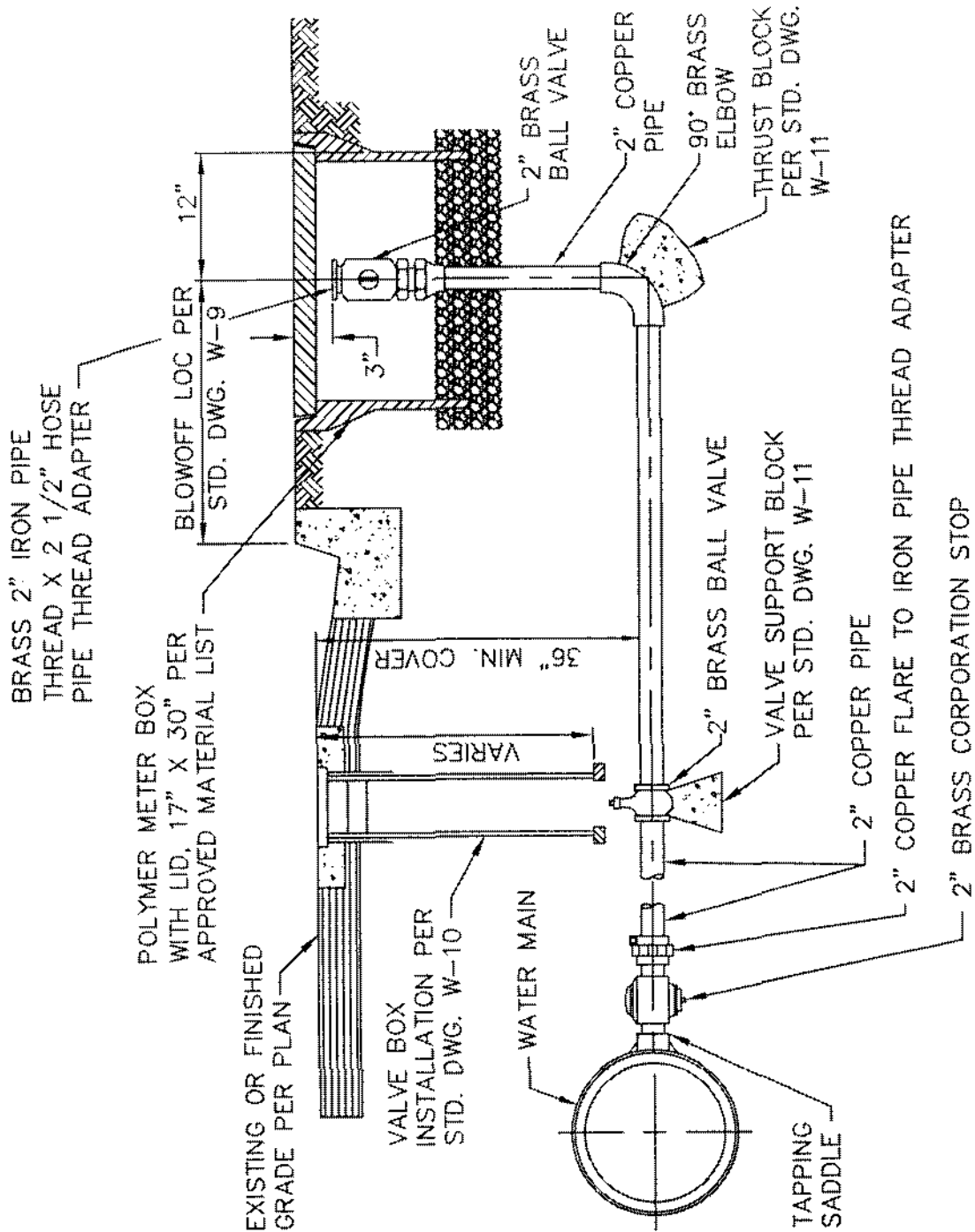
CITY OF COACHELLA

APPROVED: *[Signature]*

RCE 24876 EXP. 12/31/07

REVISION	APPROVED	DATE

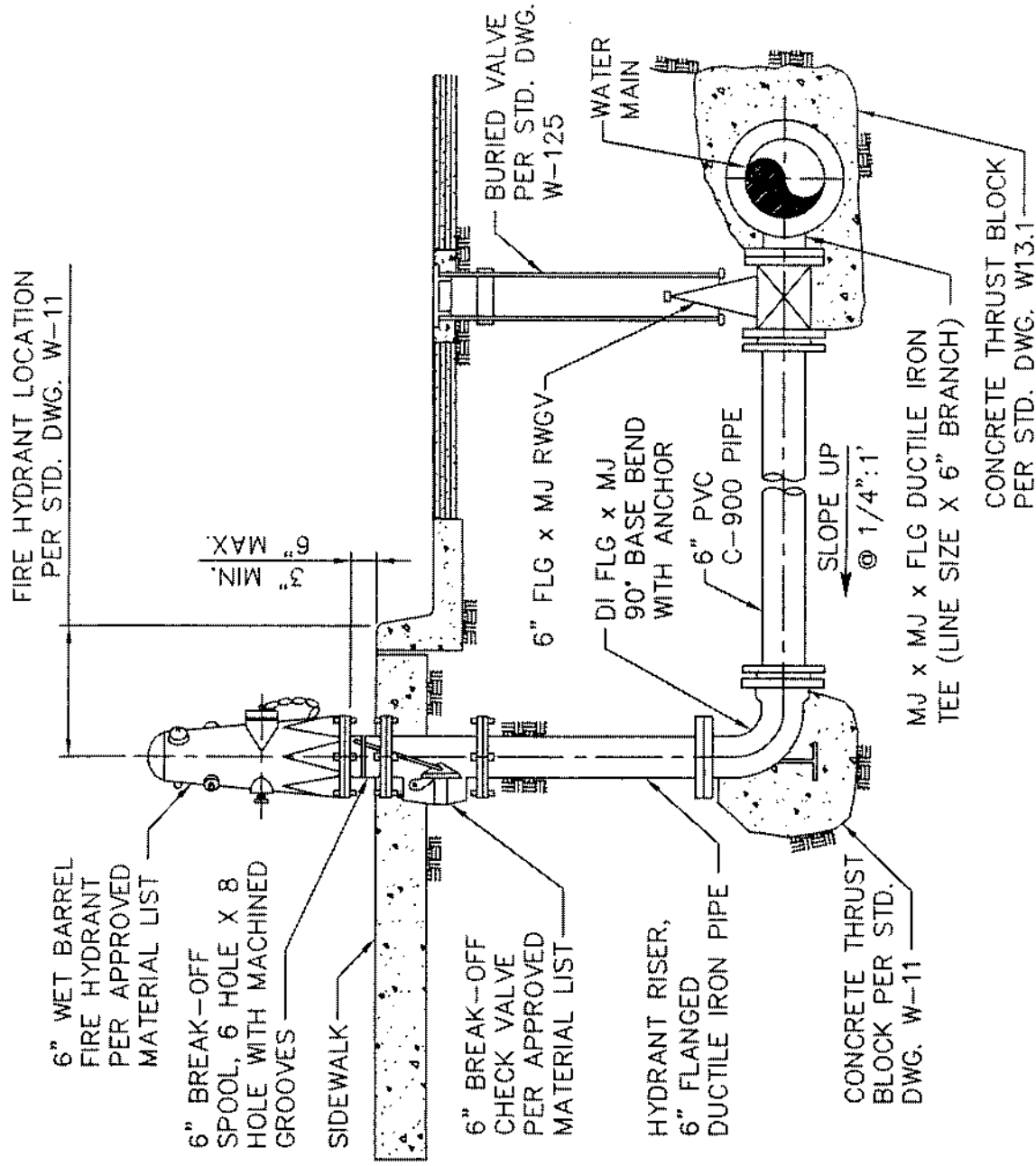
STANDARD DRAWING NO.	W-1
1" AND 2" AIR VAC & AIR RELEASE ASSEMBLY	
JUNE 2007	



W:\PUBWKS\STDN NEW DUDER\Standard Drawings\COA-W2 8/20/2007 2:59 PM

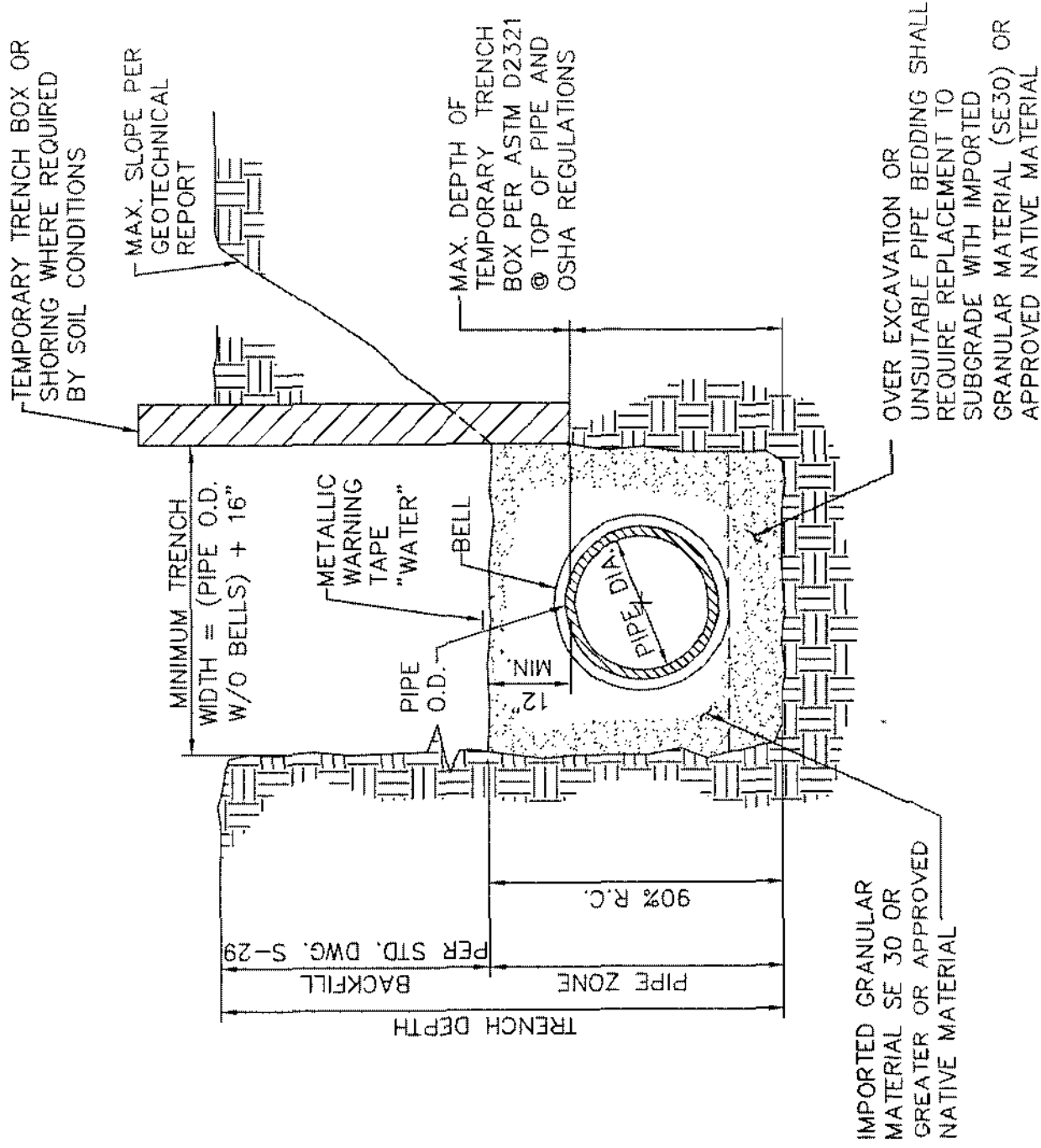
CITY OF COACHELLA

APPROVED:  RCE 24870 EXP. 12/31/07 REVISION APPROVED DATE	STANDARD DRAWING NO. <p style="text-align: center; font-size: 1.2em;">W-2</p> <p style="text-align: center; font-size: 1.2em;">2" BLOW-OFF INSTALLATION</p>
JUNE 2007	



CITY OF COACHELLA

APPROVED:  RCE 24870 EXP. 12/31/07	6" FIRE HYDRANT INSTALLATION	STANDARD DRAWING NO. W-4
		JUNE 2007



NOTE

1. EXCAVATE BELL HOLES AT EACH PIPE JOINT TO PERMIT PROPER ASSEMBLY AND INSPECTION OF THE ENTIRE JOINT.

CITY OF COACHELLA

PIPE BEDDING AND TRENCH BACKFILL FOR POTABLE WATER MAINS

APPROVED:

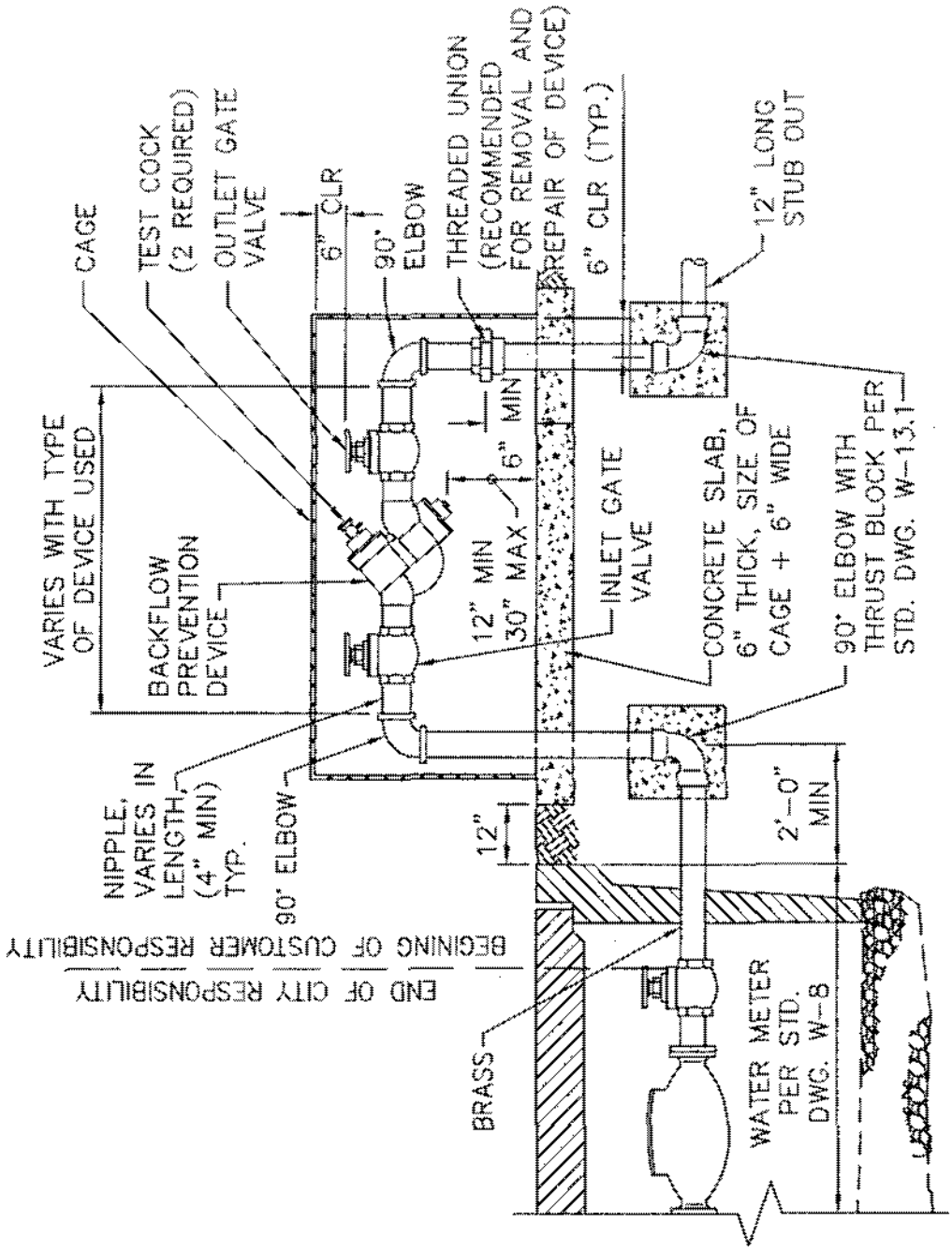
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RCE 24870 EXP. 12/31/07

REVISION	APPROVED	DATE

STANDARD DRAWING NO.

W-5

JUNE 2007



NOTES

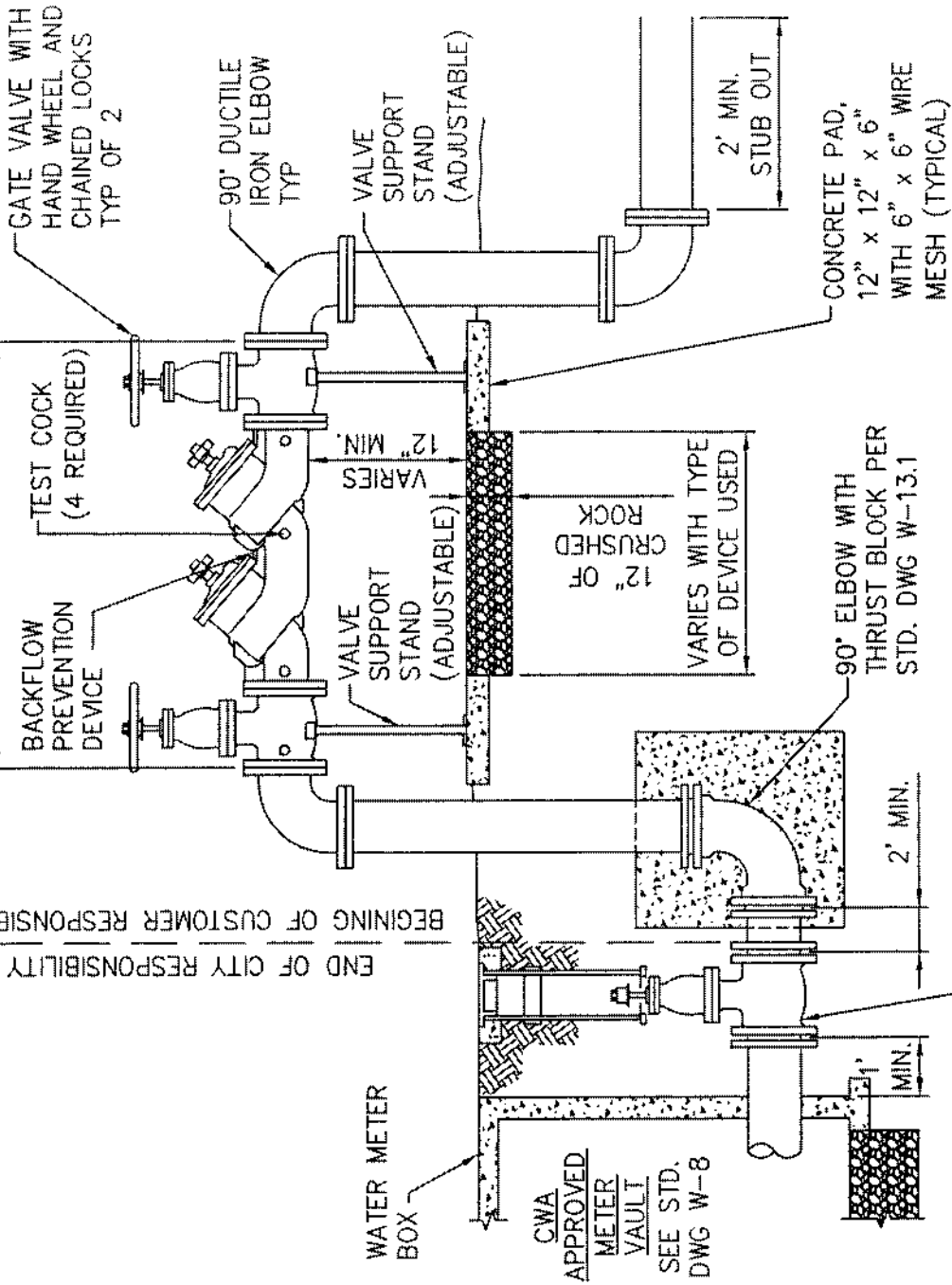
1. ALL INSTALLATIONS SHALL BE ABOVE GROUND.
2. ALL BACKFLOW PREVENTION DEVICES SHALL BE AS CLOSE TO THE WATER METER AS POSSIBLE. MAXIMUM DISTANCE TO BE 5 FEET.
3. THE BACKFLOW PREVENTION DEVICE SHALL BE SELECTED FROM THE APPROVED MATERIALS LIST.
4. NO CONNECTIONS SHALL BE MADE BETWEEN THE WATER METER AND THE BACKFLOW DEVICE.
5. APPROPRIATE TEST COCKS SHALL BE IN PLACE AT ALL TIMES.
6. CITY SHALL HAVE ACCESS TO BACKFLOW PREVENTION DEVICE AT ALL TIMES.
7. PIPING MATERIAL SHALL BE RED BRASS OR "L" HARD COPPER, PIPING INSTALLATION SHALL BE PER CURRENT UNIFORM PLUMBING CODE, WITH WAX TAPE WRAPPED JOINTS.
8. ALL EXPOSED PIPE, FITTINGS, AND VALVES TO BE EPOXY COATED.

CITY OF COACHELLA

APPROVED: RCE 24870 EXP 12/31/07 REVISION APPROVED DATE	STANDARD DRAWING NO. <p style="text-align: center;">W-6</p>
REDUCED PRESSURE BACKFLOW PREVENTION DEVICE (3/4" THRU 2")	
JUNE 2007	

END OF CITY RESPONSIBILITY

VARIES WITH TYPE OF DEVICE USED



NOTES:

1. ALL INSTALLATIONS SHALL BE ABOVE GROUND.
2. ALL BACKFLOW PREVENTION DEVICES SHALL SET AS CLOSE TO THE WATER METER AS POSSIBLE.
3. THE BACKFLOW PREVENTION DEVICE SHALL BE SELECTED FROM THE APPROVED MATERIALS LIST.
4. NO CONNECTIONS SHALL BE MADE BETWEEN THE WATER METER AND THE BACKFLOW DEVICE.
5. APPROPRIATE TEST COCKS SHALL BE IN PLACE AT ALL TIMES.
6. CITY SHALL HAVE ACCESS TO BACKFLOW PREVENTION DEVICE AT ALL TIMES.
7. ALL EXPOSED PIPE, FITTINGS, SUPPORT STANDS, AND VALVES TO BE EPOXY COATED.
8. ALL PIPES AND FITTINGS SHALL BE RESTRAINED.

VALVE SUPPORT DETAIL
N.T.S.

CITY OF COACHELLA

APPROVED:

Don J. Luero

RCE 24800 EXP. 12/31/07

REVISION	APPROVED	DATE

REDUCED PRESSURE BACKFLOW PREVENTION DEVICE (4" & LARGER)

STANDARD DRAWING NO.

W-7

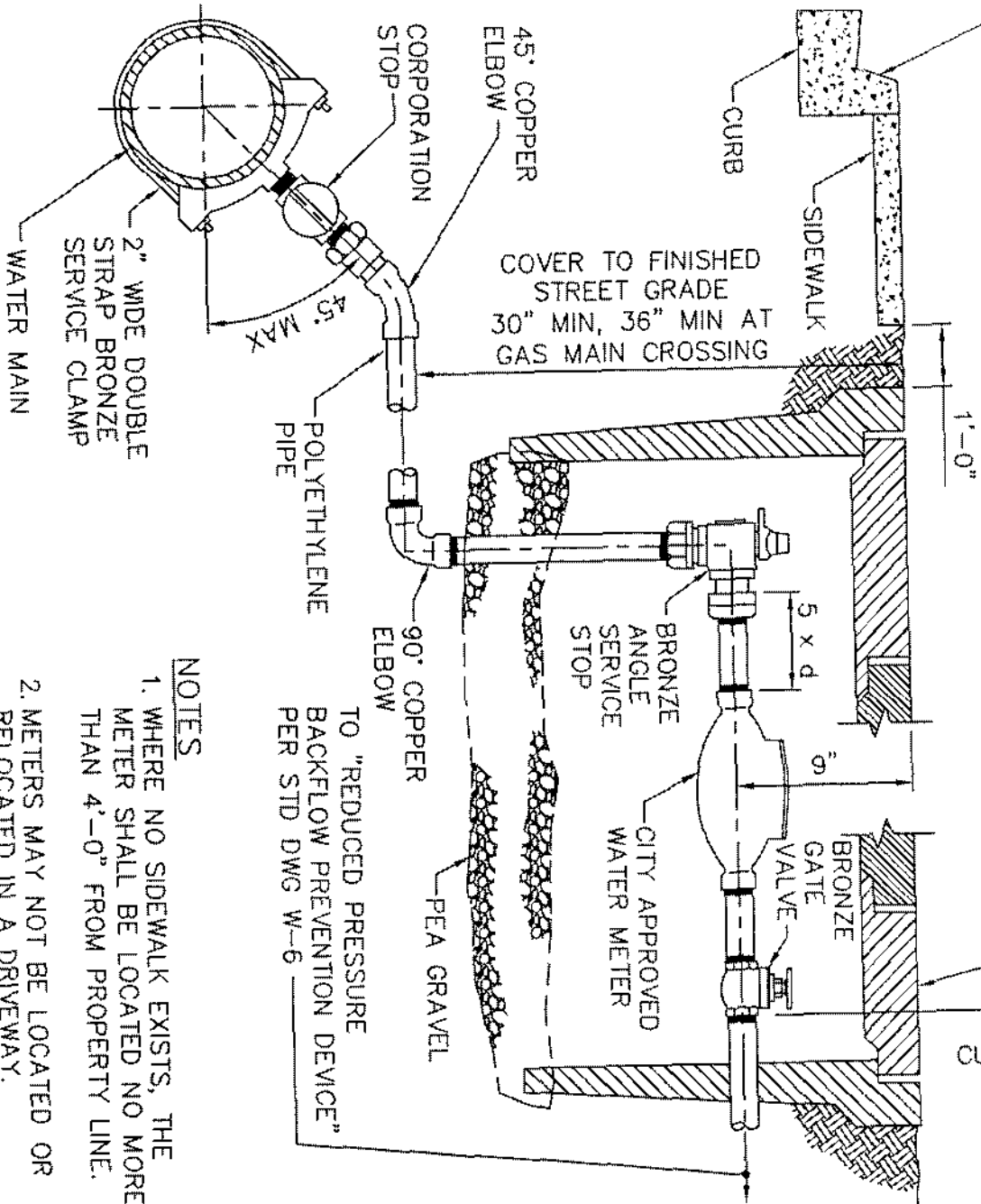
JUNE 2007

LETTER "W" STAMPED OR CHISELED IN
 FACE OF CURB NOT LESS THAN 2"
 HIGH AND 3/16" DEEP

METER BOX WITH COVER & LID
 PER APPROVED MATERIALS LIST

END OF CITY
 RESPONSIBILITY

BEGINNING OF
 CUSTOMER RESPONSIBILITY



NOTES

1. WHERE NO SIDEWALK EXISTS, THE METER SHALL BE LOCATED NO MORE THAN 4'-0" FROM PROPERTY LINE.
2. METERS MAY NOT BE LOCATED OR RELOCATED IN A DRIVEWAY.
3. IF METER BOX IS TO BE INSTALLED IN SIDEWALK, WRAP BOX WITH 1/4" BLACK FELT.

CITY OF COACHELLA

**STANDARD WATER SERVICE
 (UNDER 2")**

STANDARD DRAWING

W-8

JUNE 2007

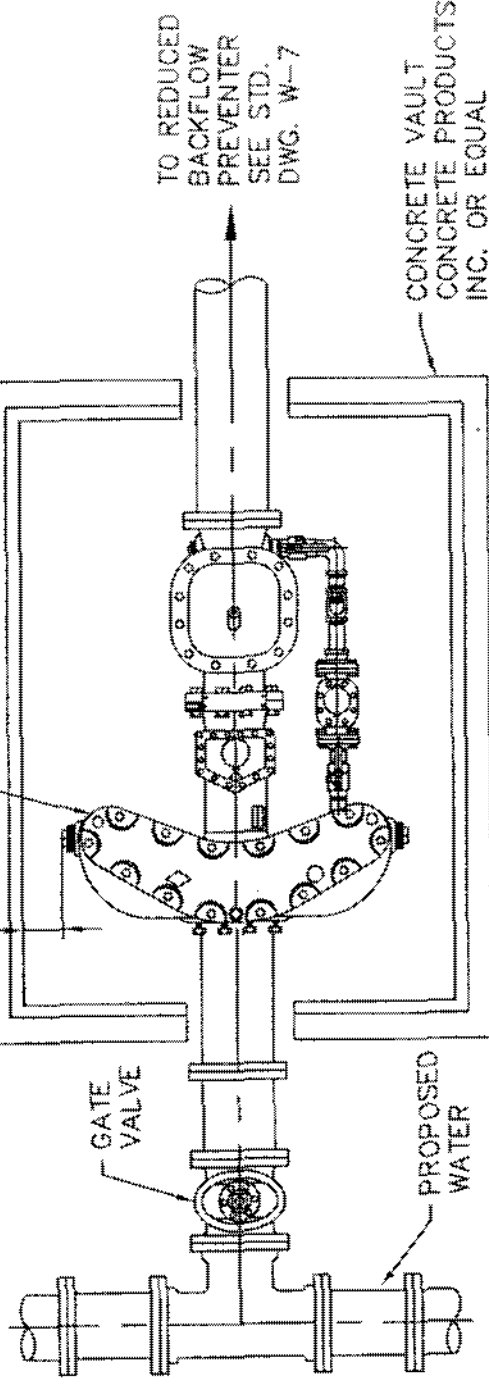
APPROVED:

RCE 24878 EXP 12/31/07

REVISION APPROVED DATE

8" MIN
(TYPICAL)

"SUNSUS COMPACT"
SERVICE WATER METER
ASSEMBLY



TO REDUCED
BACKFLOW
PREVENTER
SEE STD.
DWG. W-7

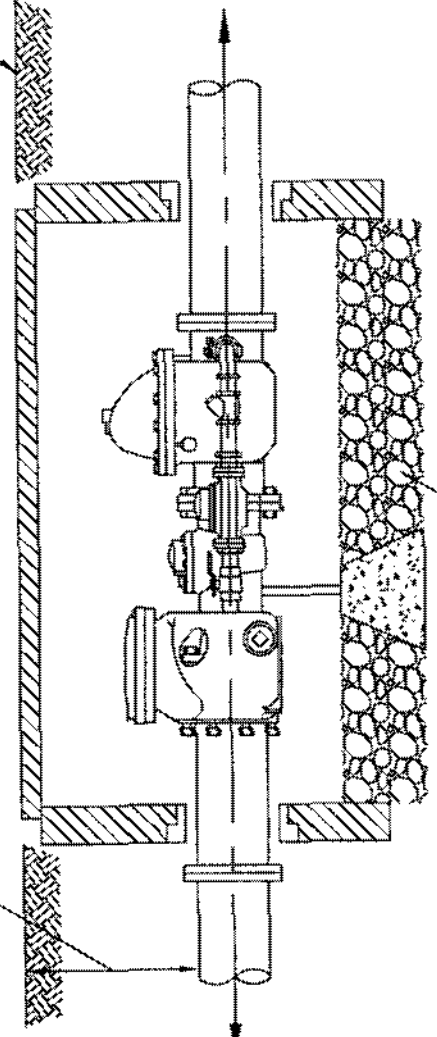
CONCRETE VAULT
CONCRETE PRODUCTS
INC. OR EQUAL

PLAN

COVER TO FINISHED
STREET GRADE 30" MIN,
36" MIN AT GAS
- MAIN CROSSING

CONCRETE VAULT WITH
TWO PIECE STEEL BOLT
DOWN COVER

F.S.



TO REDUCED
BACKFLOW
PREVENTER
SEE STD.
DWG. W-7

12" ROCK
BASE BEDDING

PROFILE

NOTES:

1. WHERE NO SIDEWALK EXISTS, THE METER SHALL BE LOCATED NO MORE THAN 4'-0" FROM PROPERTY LINE.
2. METERS MAY NOT BE LOCATED OR RELOCATED IN A DRIVEWAY.
3. IF METER BOX IS TO BE INSTALLED IN SIDEWALK, WRAP BOX WITH 1/4" BLACK FELT.

CITY OF COACHELLA

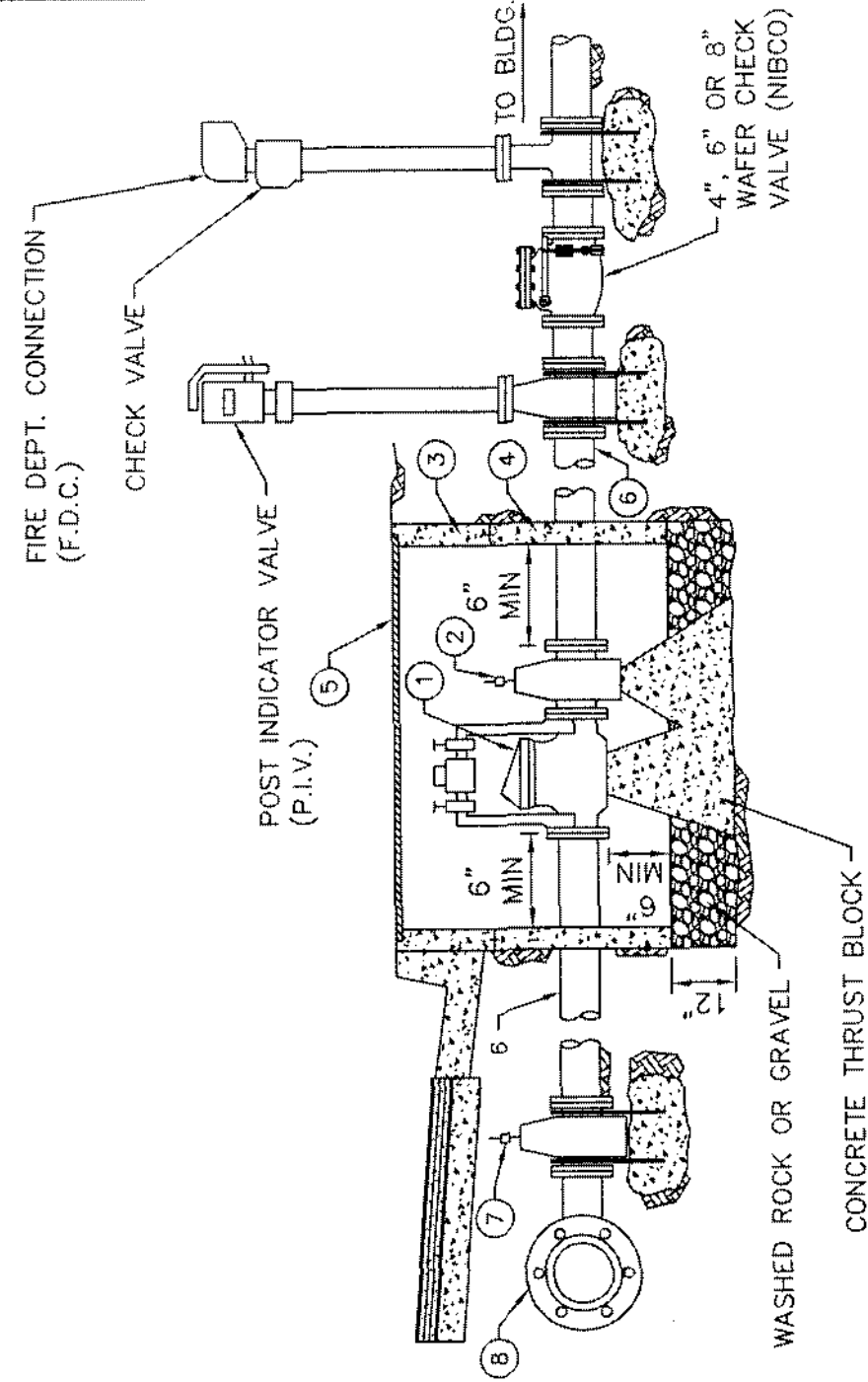
APPROVED:	<i>[Signature]</i>
RCE 24876	EXP. 12/31/07
REVISION	APPROVED DATE

**COMPACT SERVICE
METER BOX
4" AND LARGER**

STANDARD DRAWING NO.

W-9

JUNE 2007

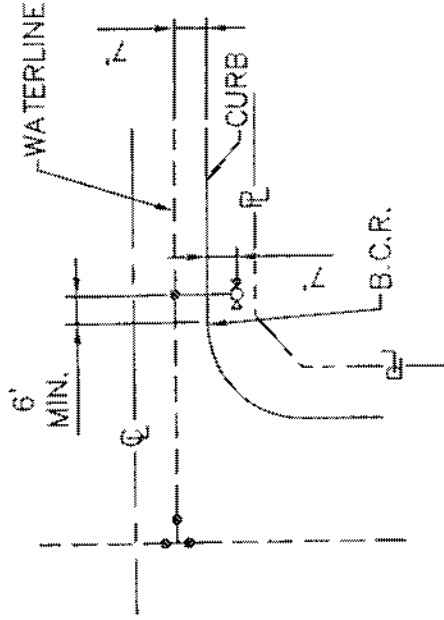


ITEM NO.	SIZE AND DESCRIPTION	MATERIAL SPECIFICATIONS
①	4", 6" OR 8" DETECTOR CHECK WITH 5/8" BY-PASS METER	MUELLER A-2130-6 OR APPROVED EQUAL
②	4", 6" OR 8" RESILIENT SEAT GATE VALVE, FLANGED x MECHANICAL JOINT	MUELLER A-2370-16 OR APPROVED EQUAL
③	2'-6" x 4'-0" (4" OR 6") OR 3'-0" x 5'-0" (8") UTILITY BOX TOP SECTION	BROOKS W-200 T. OR W-400 T.
④	2'-6" x 4'-0" (4" OR 6") UTILITY BOX WITH 4" WALLS OR 3'-0" x 5'-0" (8") WITH 4 1/2" WALLS	BROOKS W-200 OR W-400 SERIES
⑤	2'-6" x 4'-0" (4" OR 6") OR 3'-0" x 5'-0" (8") UTILITY BOX COVER	BROOKS W-200 -20
⑥	4", 6" OR 8" x REQUIRED LENGHT OF PIPE, FLANGED AND/OR MECHANICAL JOINT EACH END	PVC, CML/CMC, DUCTILE IRON PIPE
⑦	4", 6" OR 8" RESILIENT SEATED GATE VALVE, FLANGED x MECHANICAL JOINT	MUELLER A-2370-16 OR APPROVED EQUAL
⑧	MAIN SIZE x 4", 6" OR 8" TEE	DUCTILE IRON OR APPROVED EQUAL

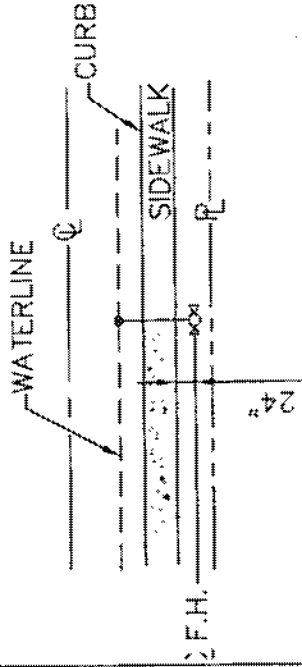
CITY OF COACHELLA

APPROVED:	STANDARD DRAWING NO.
<i>Darryl J. Sweeney</i>	W-10
RCE 24670 EXP. 12/31/07	JUNE 2007
REVISION APPROVED DATE	

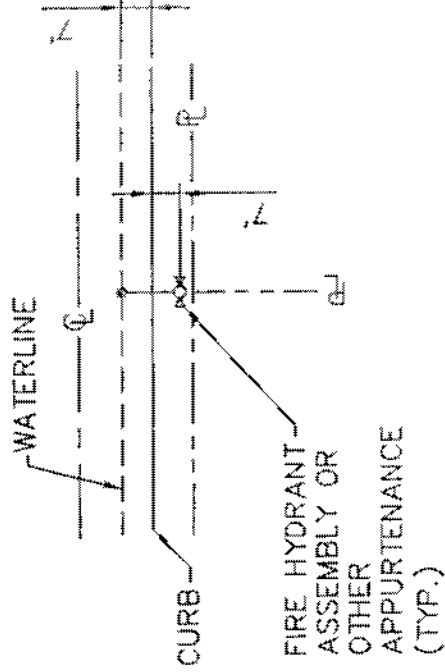
FIRE DETECTOR CHECK ASSEMBLY (4", 6" OR 8" D.C.)



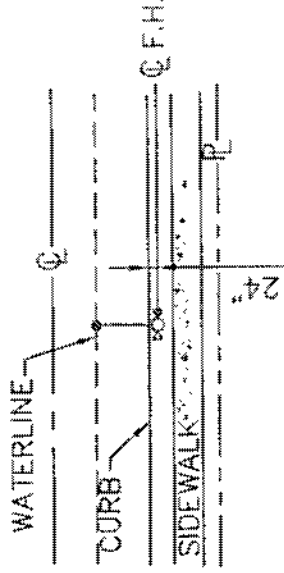
INTERSECTIONS



CURB & SIDEWALK
ADJACENT



NO SIDEWALK



CURB & SIDEWALK
SEPARATED

NOTES

1. ALL APPURTENANCES WILL BE STAKED FOR LOCATION AND ELEVATION.
2. GUARD POSTS ARE NOT REQUIRED WHERE FIRE HYDRANTS ARE ADJACENT TO SIDEWALKS OR CURB AND GUTTER.
3. APPURTENANCES SHALL MEAN THE FOLLOWING, BUT ARE NOT LIMITED TO, AIR VAC/RELEASE ASSEMBLIES, BLOW OFF ASSEMBLIES, AND TEST STATIONS.

CITY OF COACHELLA

APPROVED:

Tom J. Linder

RCE 24870 EXP. 12/31/07

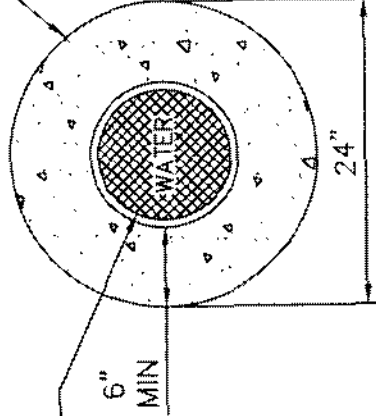
REVISION	APPROVED	DATE

STANDARD DRAWING NO.	W-11
	JUNE 2007

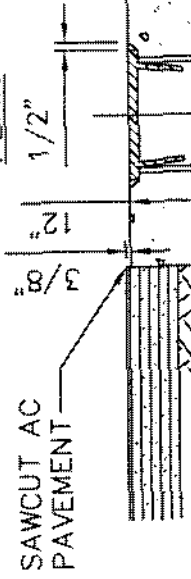
**WATER
APPURTENANCE
LOCATIONS**

CAST IRON LID
 LABELED "WATER"
 PAINT BLUE

CONCRETE TO
 RECEIVE A LIGHT
 "BROOM" FINISH



PLAN



SAWCUT AC
 PAVEMENT

FINISHED
 PAVEMENT

SAWCUT AC
 PAVEMENT

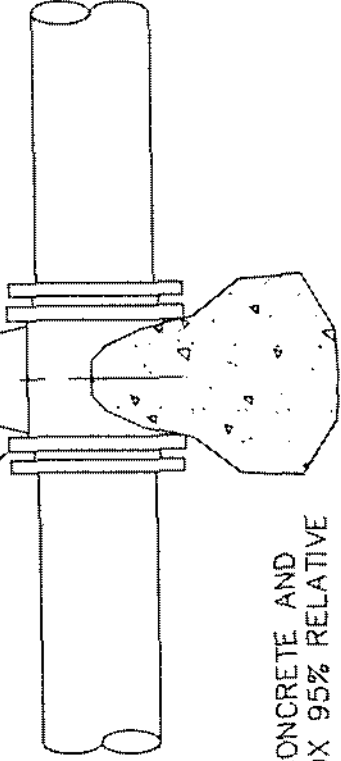
95% COMAPCTION

6 5/8" ϕ
 VALVE BOX,
 RICH SLIP
 TYPE (10
 GAUGE STEEL)

CONCRETE COLLAR TYPE V
 PORTLAND CEMENT (CLASS
 520-C-2500)

6" ϕ VALVE BOX
 EXTENSION, SLIP
 TYPE (10 GAUGE
 STEEL)

VALVE PER PLAN



SECTION

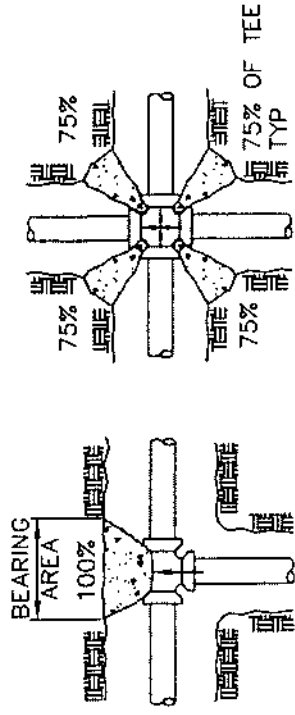
NOTES:
 BACKFILL BELOW CONCRETE AND
 AROUND VALVE BOX 95% RELATIVE
 COMPACTION

CITY OF COACHELLA

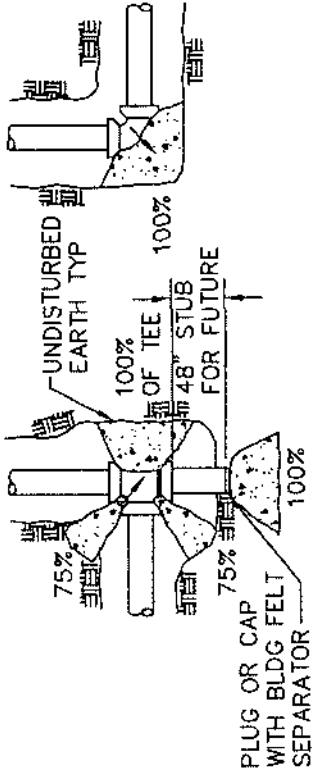
APPROVED:	<i>[Signature]</i>
RCE 24870	EXP. 12/31/07
REVISION	APPROVED DATE

STANDARD DRAWING NO.	W-12
	JUNE 2007

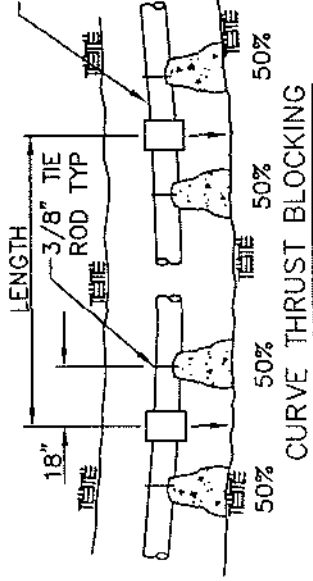
WATER VALVE BOX
 INSTALLATION



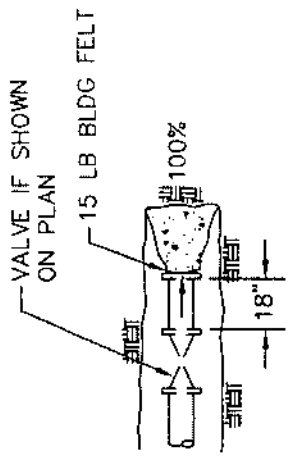
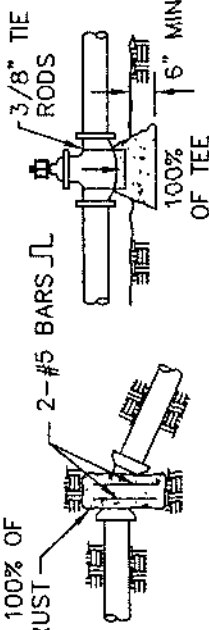
PLANS



5" MAXIMUM DEFLECTION/JOINT FOR PIPES 3"-12" AND 3" MAXIMUM FOR 14"-24"



WEIGHT OF CONCRETE TO RESIST 100% OF TOTAL THRUST



VERTICAL BEND

VALVE

DEAD-END

NOTES:

1. SEE STD. DWG. W-14 FOR BEARING AREAS.
2. SEE SOILS REPORT FOR BEARING STRENGTH OF SOIL.
3. ARROWS (—) INDICATE THRUST DIRECTION.
4. FIGURE (100%) AT THRUST BLOCK INDICATES PER CENT OF TOTAL THRUST TO BE APPLIED FOR BEARING AREA.
5. CONCRETE FOR THRUST BLOCKS TO BE 450-C-2000.
6. CONCRETE THRUST BLOCK TO BE POURED AGAINST UNDISTURBED EARTH.

APPROVED:

[Signature]
 RCE 24876 EXP. 12/31/07

REVISION APPROVED DATE

CITY OF COACHELLA

CONCRETE THRUST BLOCKS

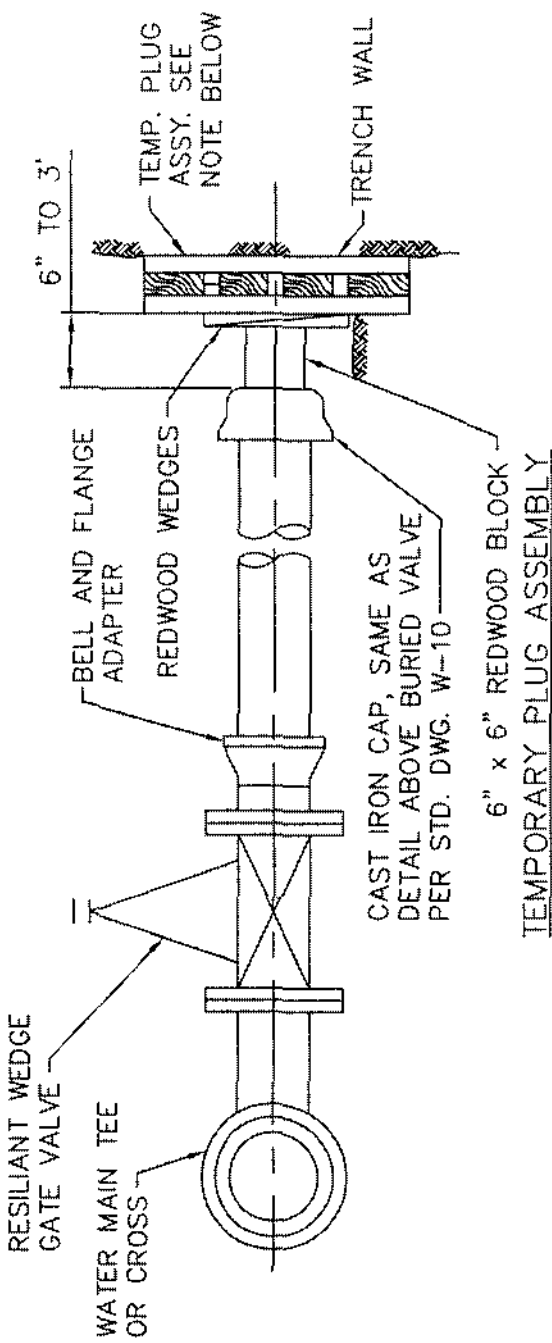
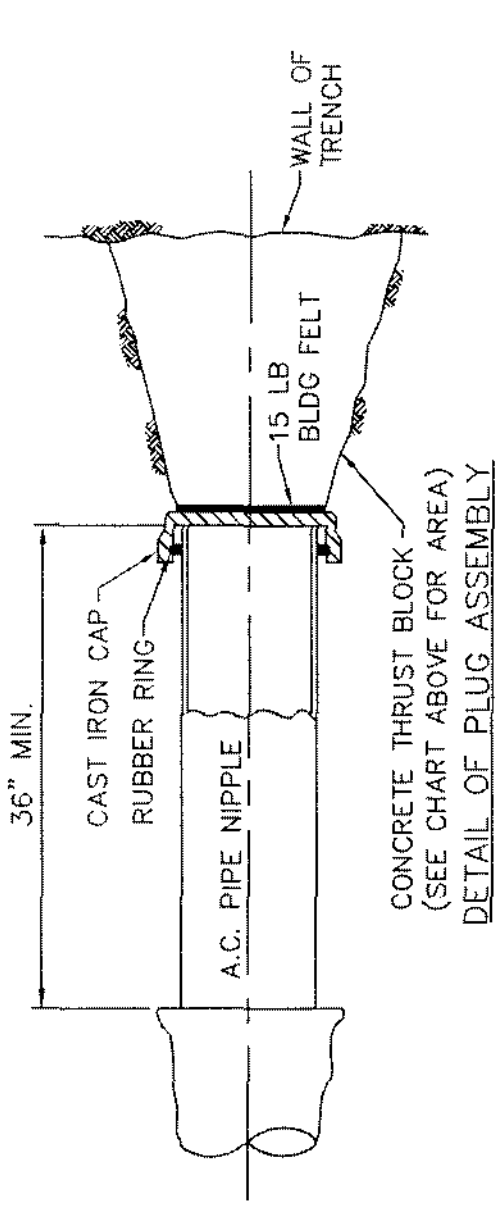
STANDARD DRAWING NO.

W-13.1

JUNE 2007

SIZE OF PIPE	4"	6"	8"	10"	12"
BEARING AREA IN SQUARE FEET	3	5	8	12	17

THRUST BLOCK DATA



NOTE:

AT TEMPORARY PLUG INSTALLATIONS, IN PLACE OF CONCRETE THRUST BLOCK, USE GRILLAGE MADE OF 2" x 6" REDWOOD BLOCKS, DIMENSIONS AS FOLLOWS:

- WIDTH = WIDTH OF TRENCH PLUS 16"
- THICKNESS = 6"
- HEIGHT =
 - 6" PIPE = 1'-3"
 - 8" PIPE = 2'-0"
 - 10" PIPE = 3'-0"

CITY OF COACHELLA

APPROVED: *[Signature]*
 RCE 24870 EXP. 12/31/07
 REVISION APPROVED DATE

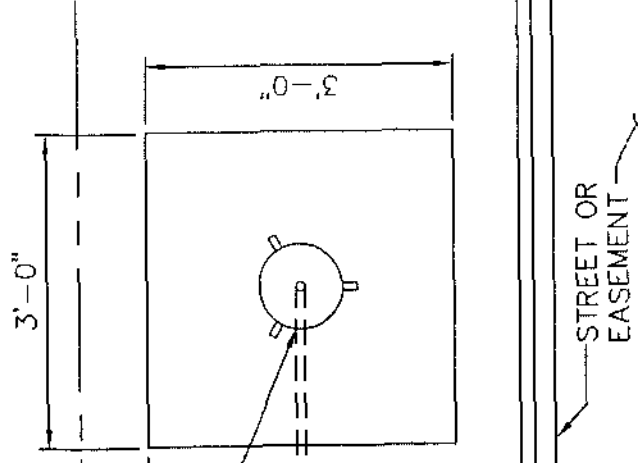
**WATER MAIN
 PLUG ASSEMBLY**

STANDARD DRAWING NO.
W-14
 JUNE 2007

WATER TEST STATION: CENTERED IN 3' x 3' x 6" CONCRETE PAD. LEG SUPPORT FOR TEST STATION COVER TO BE EMBEDDED 1/2" IN CONCRETE PAD. TEST STATION AND CONCRETE PAD TO BE LOCATED PER STD. DWG. W-9. COVER PER APPROVED MATERIALS LIST

METER BOX TO BE LOCATED AT 90° ROTATION TO STANDARD METER BOX DETAIL

CONCRETE CURB AND GUTTER/A.C. BERM/EDGE OF EASEMENT BERM



PLAN
N.T.S.

NOTES

1. TEST STATION TO BE LOCATED BEHIND SIDEWALK WHERE APPLICABLE. IF WITHIN SIDEWALK, PLACE AS PER STD. DWG S--25

2. METER BOX AND CONCRETE PAD WILL BE SET TO FINISHED GRADE OR FLUSH WITH CONCRETE CURB OR SIDEWALK.

3/4" THREADED HOSE BIB

1" THREADED MALE x 3/4" THREADED FEMALE REDUCER
1" THREADED 90° ELL
1" METER BUSHING
#3 @ 10" O.C., E.W.

METER BOX

1" ANGLE INLET VALVE W/ LOCKWING

THREAD TO FLARE ADAPTOR

PEA GRAVEL (12" THICK)

1" TYPE "K" COPPER TUBING

SEE STD. DWG. W-8 FOR CONNECTION TO WATER MAIN (SIMILAR)

6"

9"

SLAB

3" CLR TYP

3/4" CRUSHED ROCK

1" SWT 90° ELL

1" TYPE "K" COPPER TUBING, WRAP BURIED COPPER IN 10 MIL CALPICO TAPE OR POLYETHYLENE ENCASEMENT

CROSS SECTION
N.T.S.

CITY OF COACHELLA

APPROVED:

Tom J. Jucaro

RCE 24870 EXP. 12/31/07

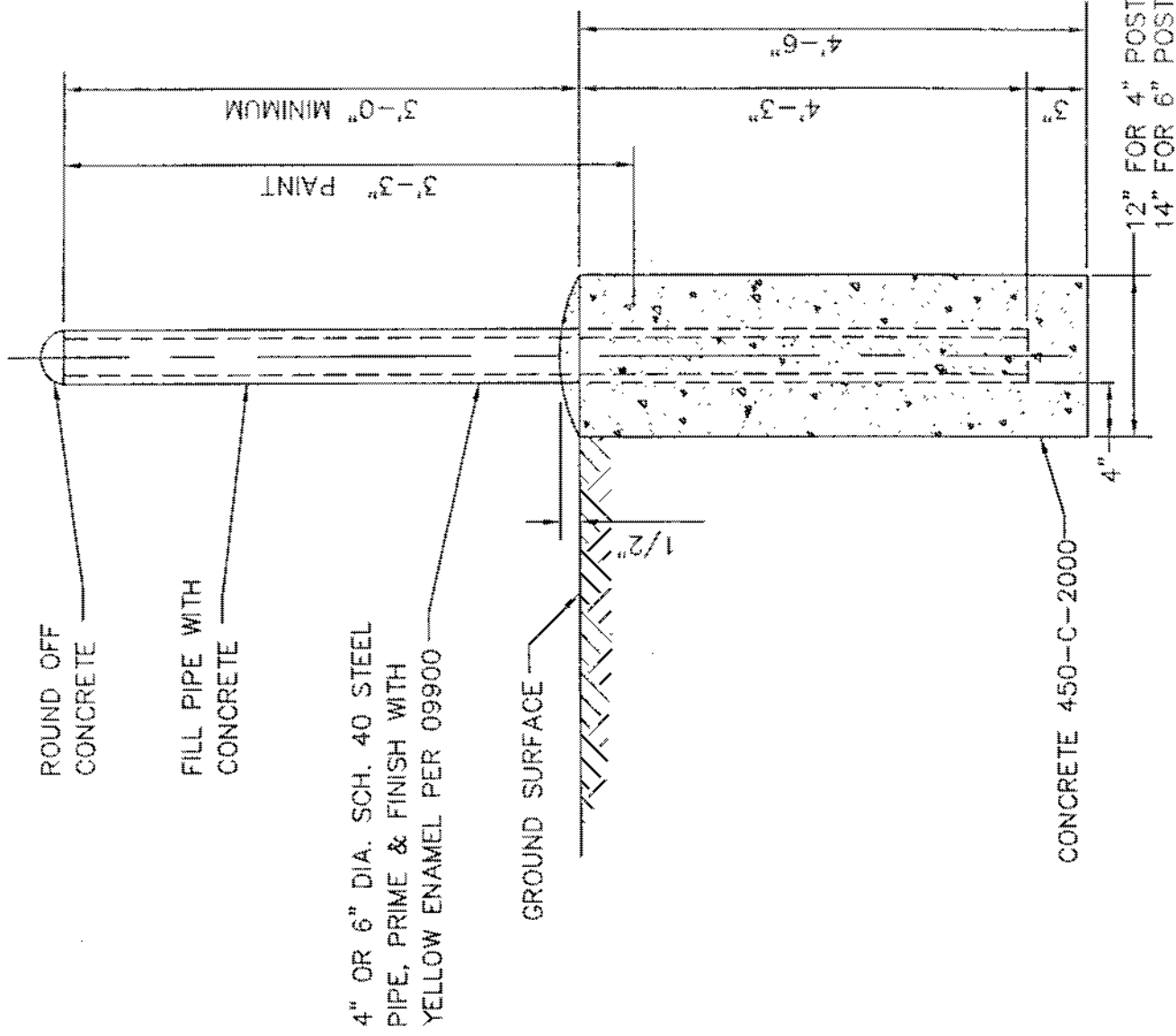
REVISION APPROVED DATE

STANDARD DRAWING NO.

W-15

TEST STATION

JUNE 2007



NOTES:

1. LOCATION SHALL BE AS SHOWN ON PLAN VIEW, OR AS DIRECTED IN THE FIELD BY CITY ENGINEER.
2. FOR AREAS OF 25 MPH OR LESS 4" DIA. POSTS SHALL BE USED, FOR SPEED GREATER THAN 30 MPH 6" DIA. POSTS SHALL BE USED.

CITY OF COACHELLA

APPROVED:

Tom Lucero
RCE 24878 EXP. 12/31/07
REVISION APPROVED DATE

**STANDARD GUARD POST
INSTALLATION**

STANDARD DRAWING NO.

W-16

JUNE 2007