

**CITY OF HEMET
PUBLIC WORKS DEPARTMENT**

STANDARD DRAWINGS

CITY OF HEMET PUBLIC WORKS DEPARTMENT

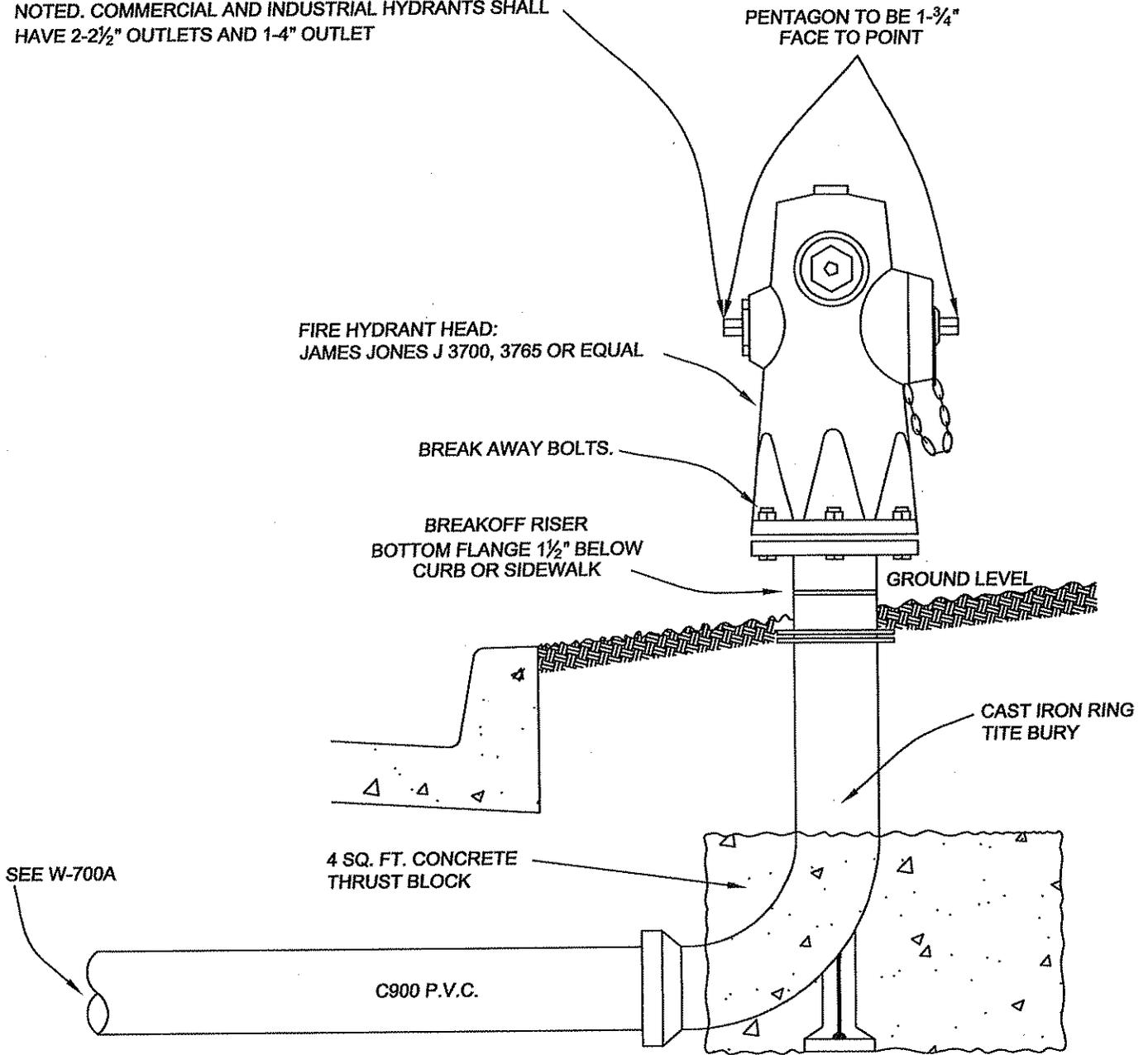
STANDARD DRAWINGS

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Text in ***BOLD ITALICS*** indicates 2011 revisions.

NOTE: RESIDENTIAL HYDRANTS SHALL HAVE 1-2½" OUTLET AND 1-4" STEAMER OUTLET UNLESS OTHERWISE NOTED. COMMERCIAL AND INDUSTRIAL HYDRANTS SHALL HAVE 2-2½" OUTLETS AND 1-4" OUTLET



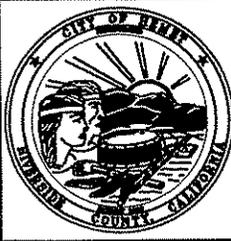
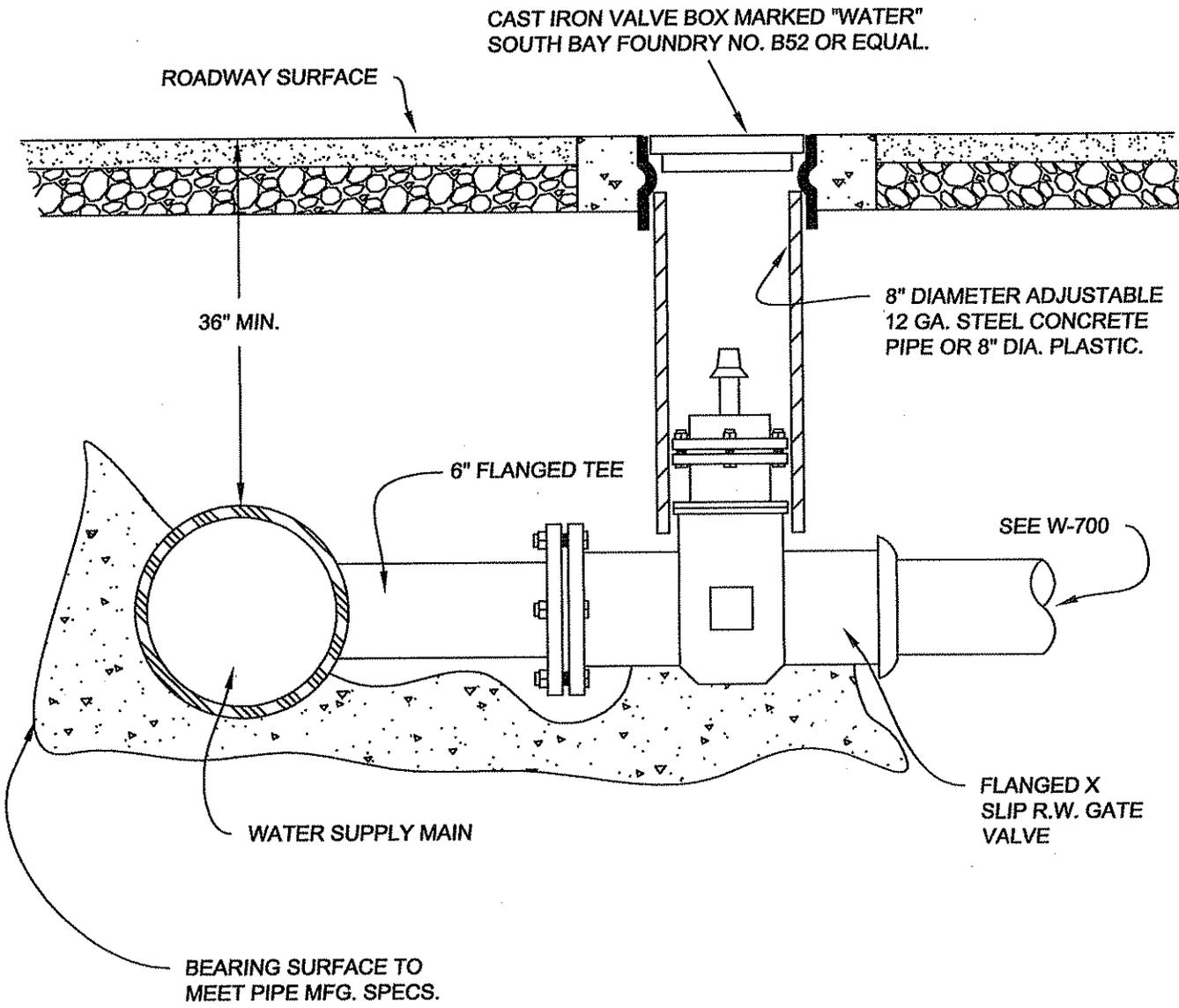
City of Hemet
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
 510 E. FLORIDA AVENUE
 HEMET, CA 92543
 (951) 765-2360

**FIRE HYDRANT
 INSTALLATION**

<i>Michael A. Gow</i>	MAR 2009
MICHAEL A. GOW, PW DIRECTOR/CITY ENG. R.C.E. 54164	DATE
REVISIONS	
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N.Beltran 2009	

1
 OF 3 SHEETS

**STANDARD NO.
 W-700**

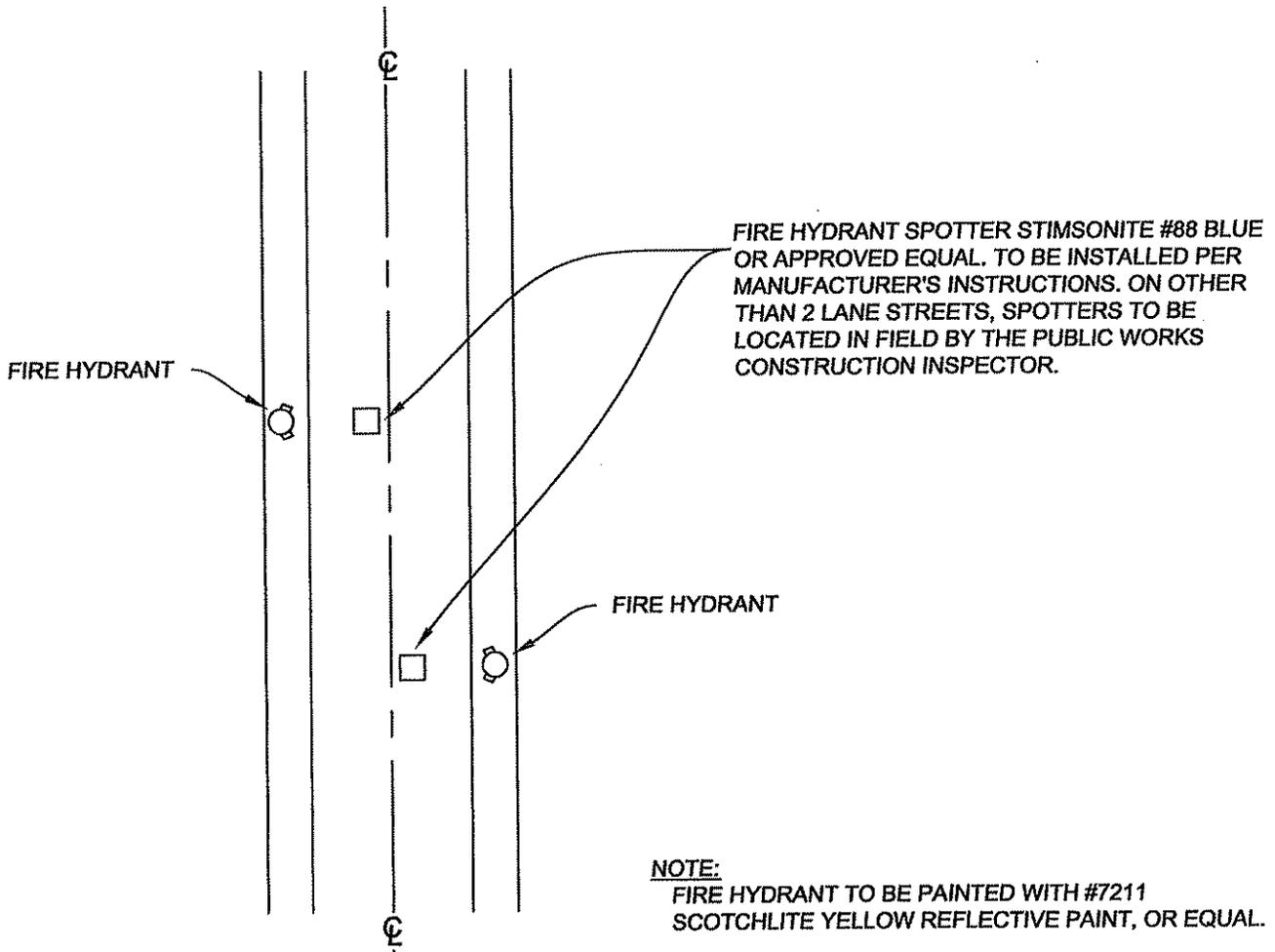
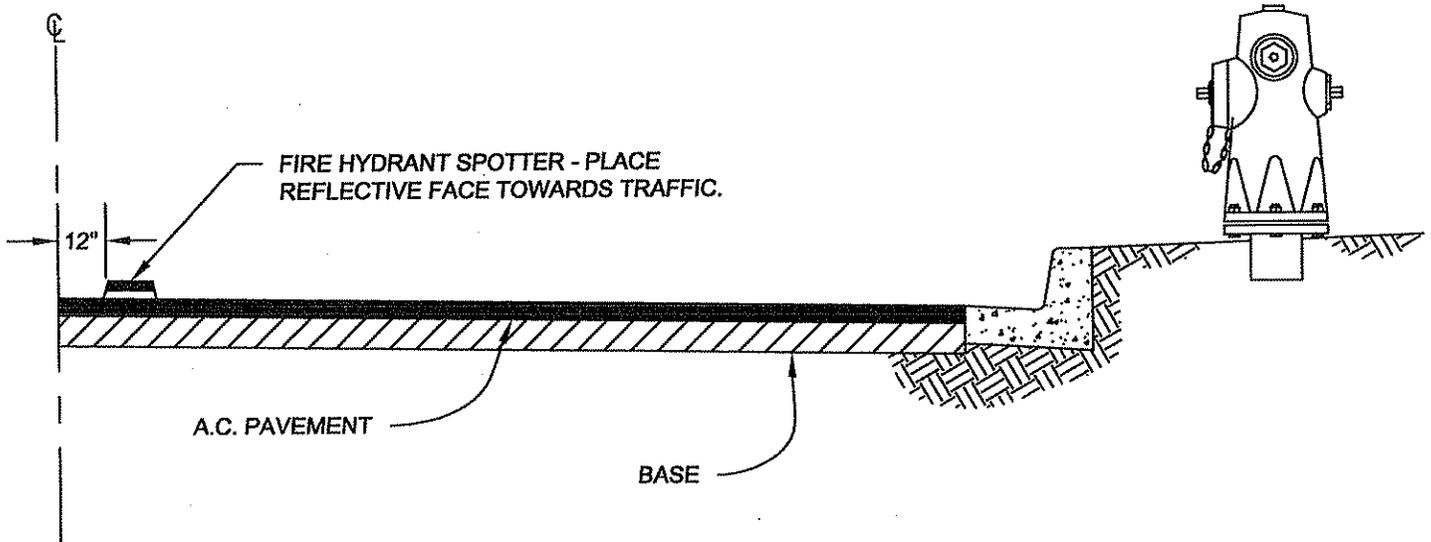


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**FIRE HYDRANT
 INSTALLATION**

	MAR 2009
MICHAEL A. GOW, PW DIRECTOR/CITY ENG. R.C.E. 54164	DATE
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W-700A

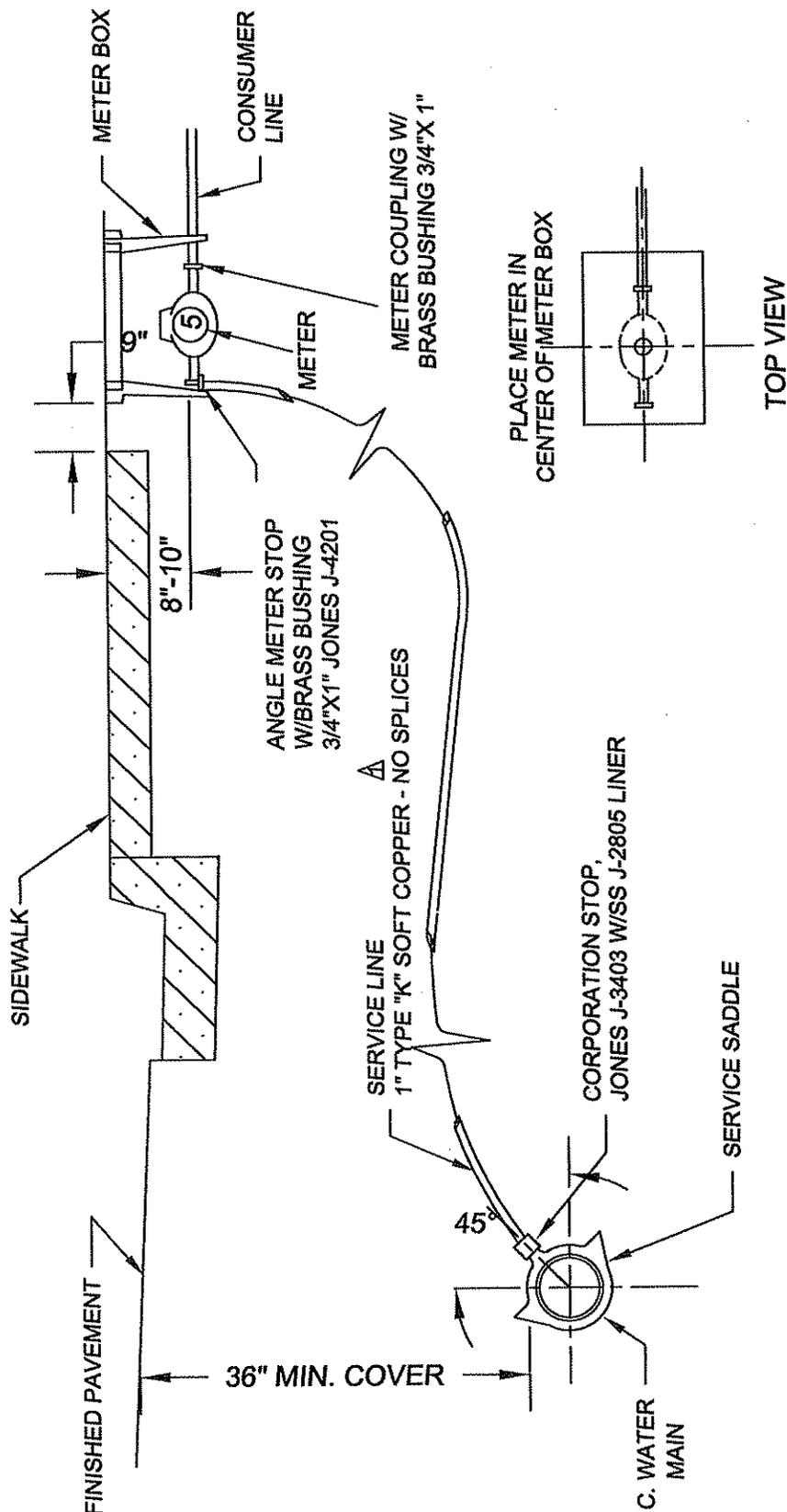


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FIRE HYDRANT SPOTTER

		MAR 2009
MICHAEL A. GOW, PW DIRECTOR/CITY ENG. R.C.E. 54164		DATE
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 OF 3 SHEETS
STANDARD NO.
W-700B



NOTES:

1. WHERE TRADE NAMES ARE SPECIFIED, APPROVED EQUAL ITEMS MAY BE SUBSTITUTED.
2. METER SIZE WILL BE 5/8"X3/4" OR 1" OR 2"
3. METER WILL BE PURCHASED BY CONTRACTOR OR CUSTOMER FROM CITY OF HEMET WATER DEPARTMENT
4. NO 1/2" METERS OR SERVICES TO BE INSTALLED.
5. ALL SERVICES, 2" OR LARGER, SHALL HAVE A SAME METER SIZE.



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STANDARD WATER SERVICE CONNECTION

		MAR 2011	1 OF 5 SHEETS
JORGE L. BIAGIONI, PRINCIPAL ENGINEER R.C.E. 33751		DATE	
REVISIONS			
A	MARCH 2011	REVISED NOTE	STANDARD NO. W-701
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N.Beltran 2011

NOTES:

1. Meter Box cover to be cast iron where box is in sidewalk, alley or driveway.
2. Contractor shall install meter boxes at time angle meter stops are installed.
3. Approved equals to material specified heron are contained in spec. 205.
4. C.I.P. mains shall be tapped with cc threads.
5. C900 P.V.C. mains shall use saddles using latest approved method.
6. On all water mains the contractor shall furnish and install service connections on both sides of the meter and meter box.
7. Both the service and consumer lines shall be furnished and installed by the contractor prior to sidewalk construction.
8. Strict adherence to special provisions for testing and disinfecting A.C. water lines (S.P.-141) shall be enforced.
9. No direct taps shall be made in A.C. main.
10. R.P. Principal backflow prevention required on all new commercial service.
11. 2"-8" Meter installation will be per Standard W-701.

BILL OF MATERIALS			
ITEM		CITY #	QTY
1.	1" HEAVY BRONZE TAPPED, SADDLED FOR A.C.P. OR C900	PER W.O.#	1
2.	1" CORPORATION STOP M.I.P. THREAD - TUBING C.T.S.		1
3.	ANGLE METER STOP TUBING - C.T.S. AND C.T.S COUPLING 1"		1
4.	1" TUBING COPPER TYPE "K"		VAR.
5.	METER INSTALLED BY CITY FORCES		
6.	METER BOX - ARMACAST #A6000485 ▲	4505	1
7.	1" METER COUPLINGS	4713-4700	1

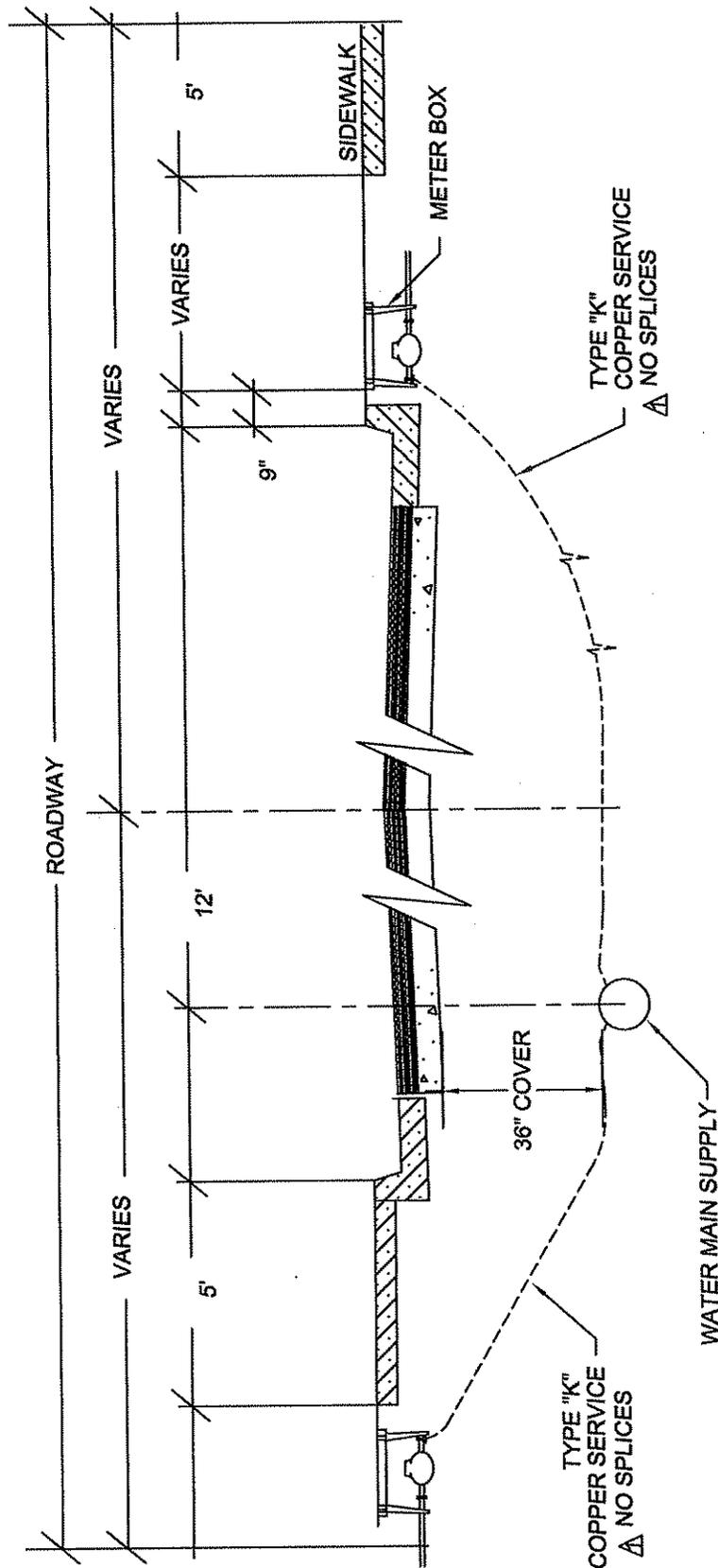


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1" WATER SERVICE COPPER

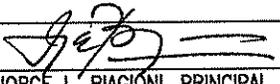
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 JORGE L. BIAGIONI, PRINCIPAL ENGINEER R.C.E. 33751
 MAR 2011
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 REVISIONS
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 OF 5 SHEETS
STANDARD NO.
W-701A



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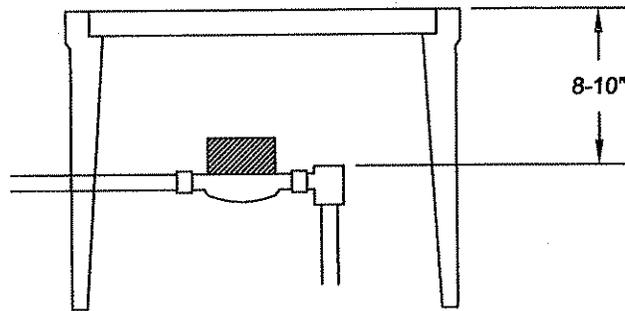
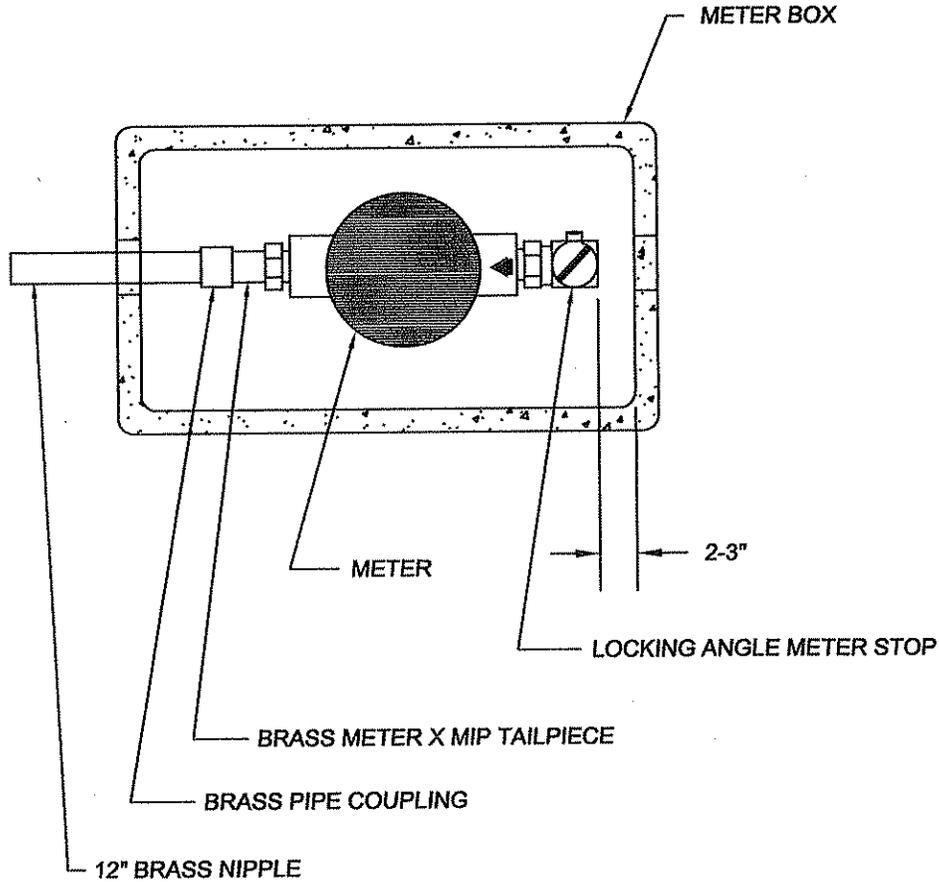
TYPICAL METER BOX LOCATIONS

 JORGE L. BIAGIONI, PRINCIPAL ENGINEER R.C.E. 33751		MAR 2011 DATE
REVISIONS Δ MARCH 2011 REVISED ANNOTATIONS		
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 OF **5** SHEETS
STANDARD NO.
W-701B

NOTE:

INSTALL ANGLE METER STOP 8-10" FROM THE TOP OF THE METER BOX.. THE ANGLE METER STOP MUST BE PLACED LEVEL SO THAT THERE IS NO DEFLECTION OF THE METER OR TAIL PIECE ASSEMBLY. THE METER BOX MUST BE POSITIONED TO WHERE THERE IS FROM 2-3' CLEARANCE BETWEEN THE ANGLE METER STOP AND THE STREET SIDE OF THE SERVICE.



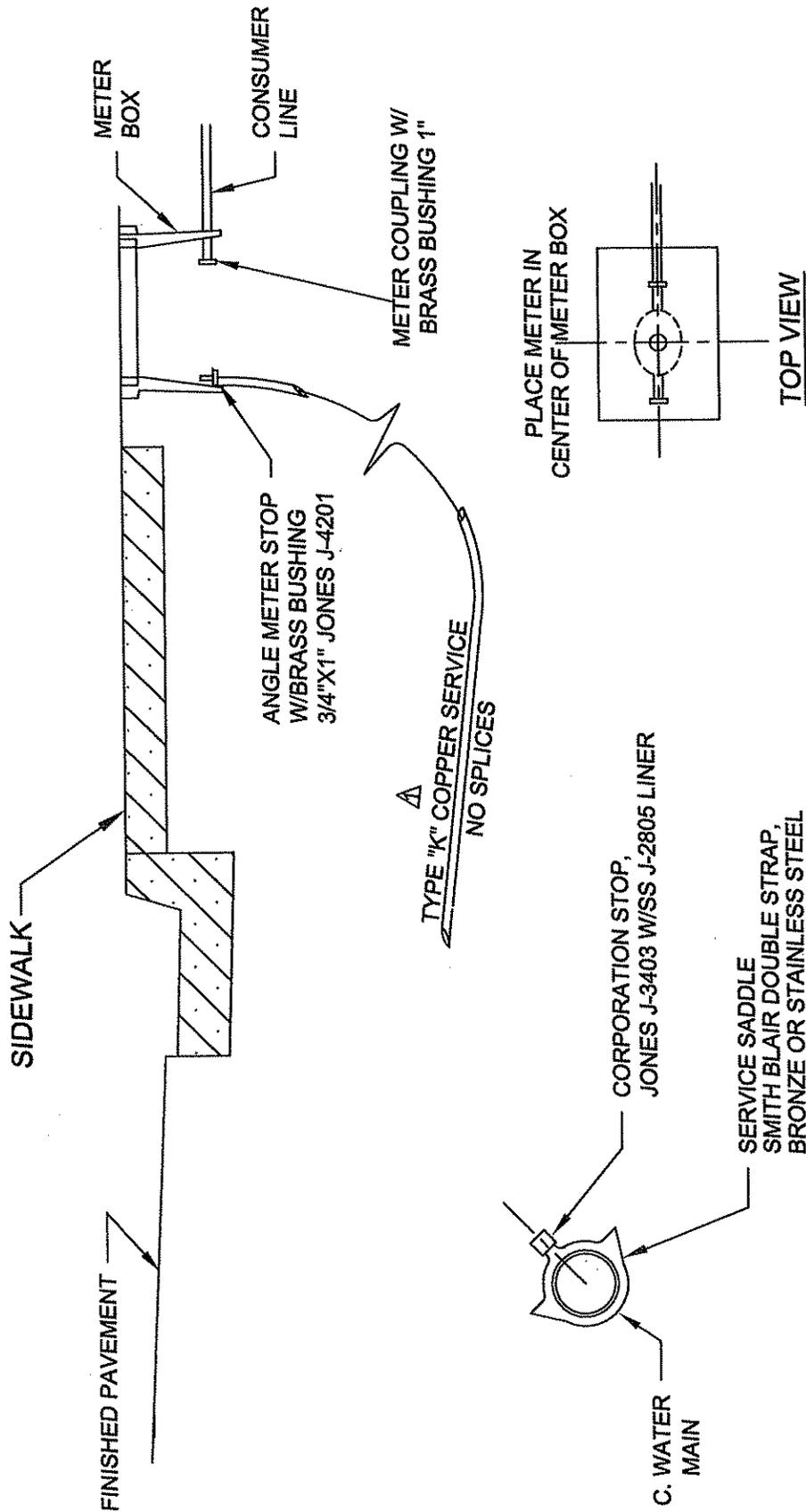
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**STANDARD METER INSTALLATION FOR
 5/8 x 3/4, 1" & 2" METERS**

<i>Michael A. Gow</i>	MAR 2009
MICHAEL A. GOW, PW DIRECTOR/CITY ENG. R.C.E. 54164	DATE
REVISIONS	
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 OF 5 SHEETS

**STANDARD NO.
 W-701C**



NOTES:

TURN OFF CORP STOP AND INSTALL BRASS PIPE CAP. REMOVE SERVICE PIPE FROM CORP STOP SO THAT THERE IS NO CONNECTION WITH WATER MAIN. THE SERVICE LINE WILL THEN BE COMPLETELY REMOVED FROM THE GROUND. THIS PROCEDURE WILL BE FOLLOWED FOR ALL TYPES OF SERVICES, PLASTIC, GALVANIZE OR COPPER FROM 3/4" TO 2" IN DIAMETER.



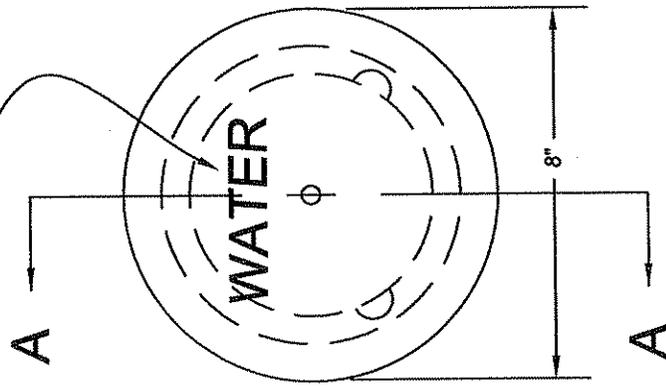
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DELETION OF EXISTING WATER SERVICE

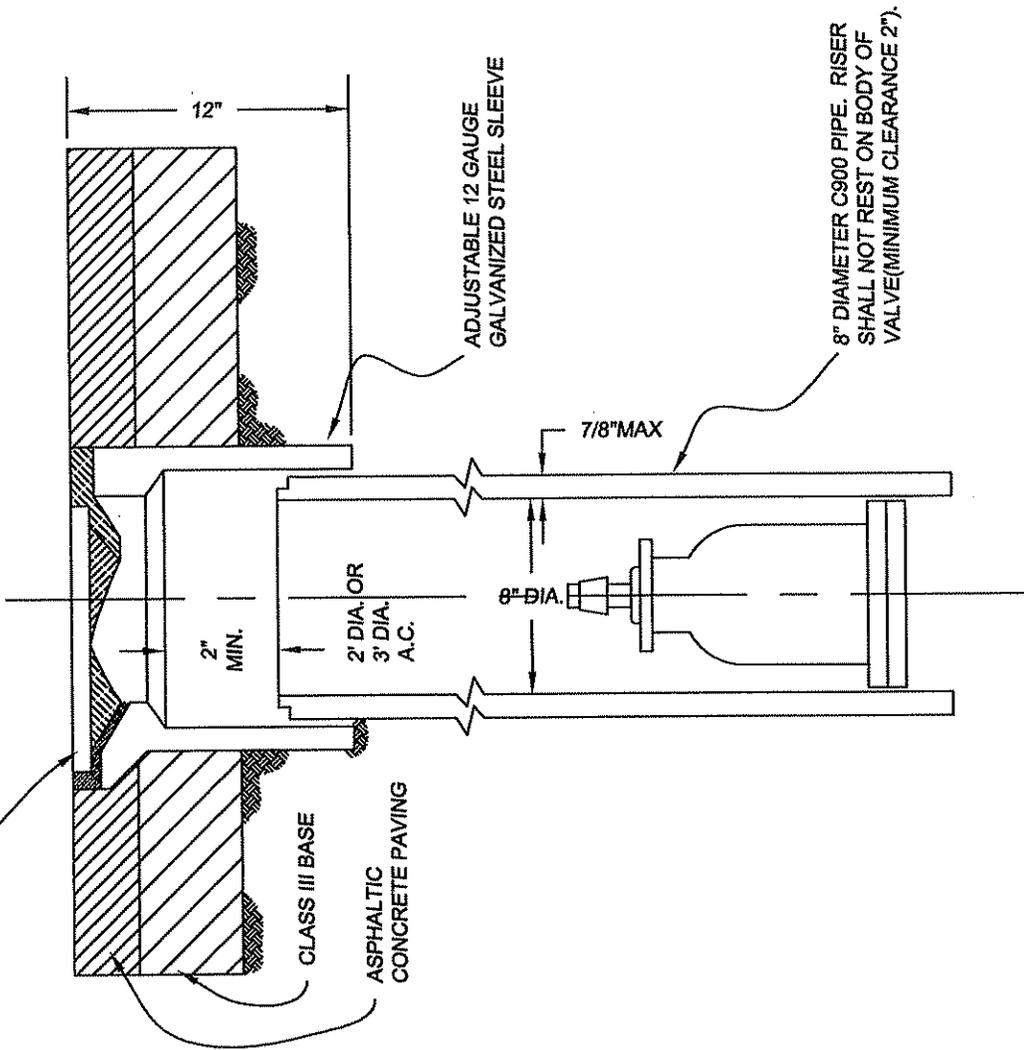
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JORGE L. BIAGIONI, PRINCIPAL ENGINEER R.C.E. 33751		DATE
REVISIONS		
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 OF 5 SHEETS
STANDARD NO.
W-701D

CAST IRON NON-SKID SURFACE
LIFT HOLE, MARKED "WATER",
"SEWER" OR AS REQUIRED.
TRIANGLES ONLY ON FIRE
HYDRANT VALVES.



SOUTH BAY FOUNDRY NO. B52 VALVE BOX & COVER OR EQUAL,
CENTER OVER RISER (INSTALL AFTER PAVING) PAINT UPPER SIDE
OF WATER COVER WITH ONE COAT OF FULLER HEAVY DUTY
ENAMEL NO. 112-14 (1524) BRIGHT YELLOW OR EQUAL.



SECTION A-A

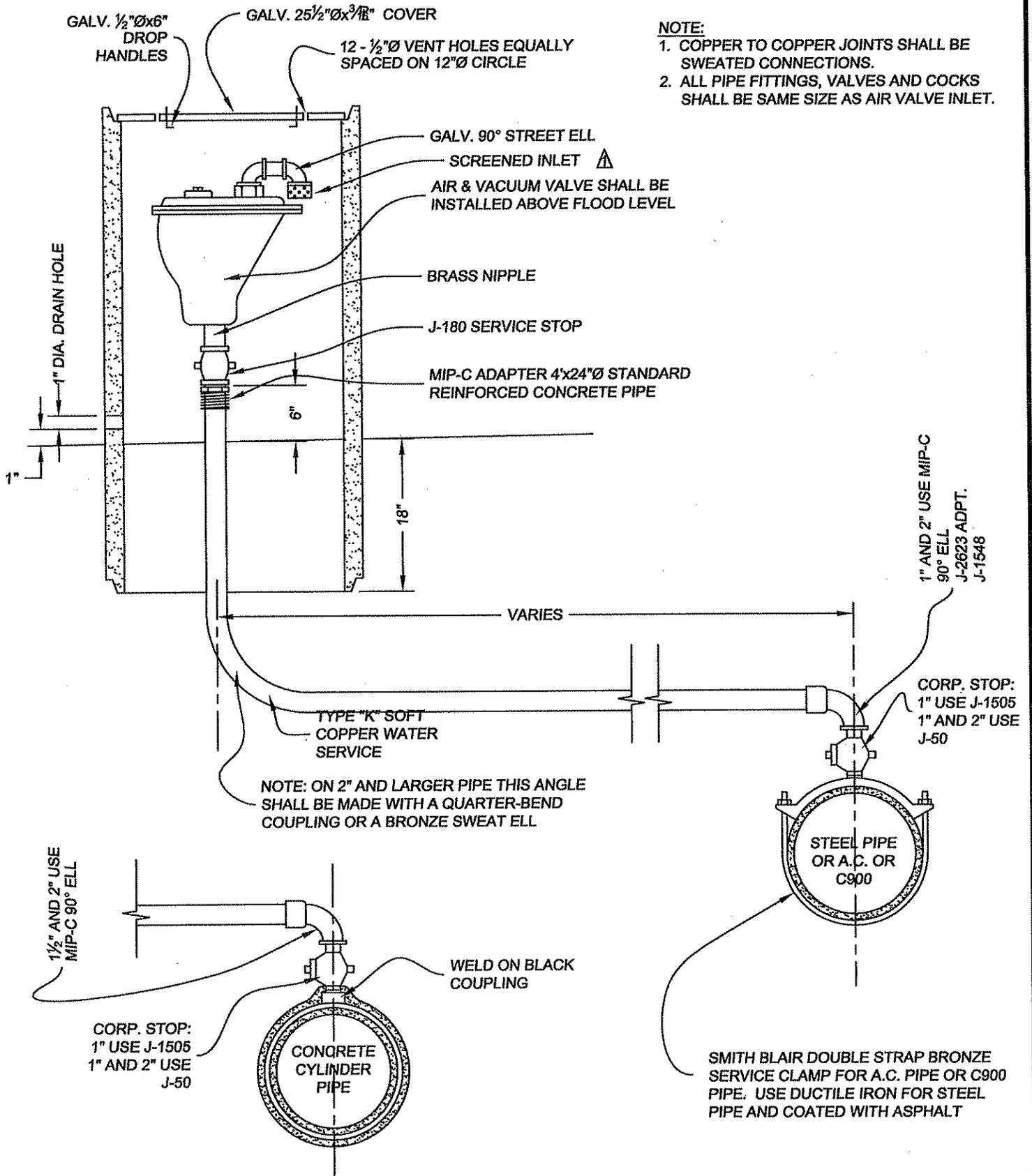


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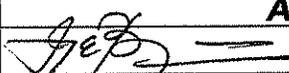
**INSTALLATION OF VALVE BOX ASSEMBLY
FIRE HYDRANT (ONLY)**

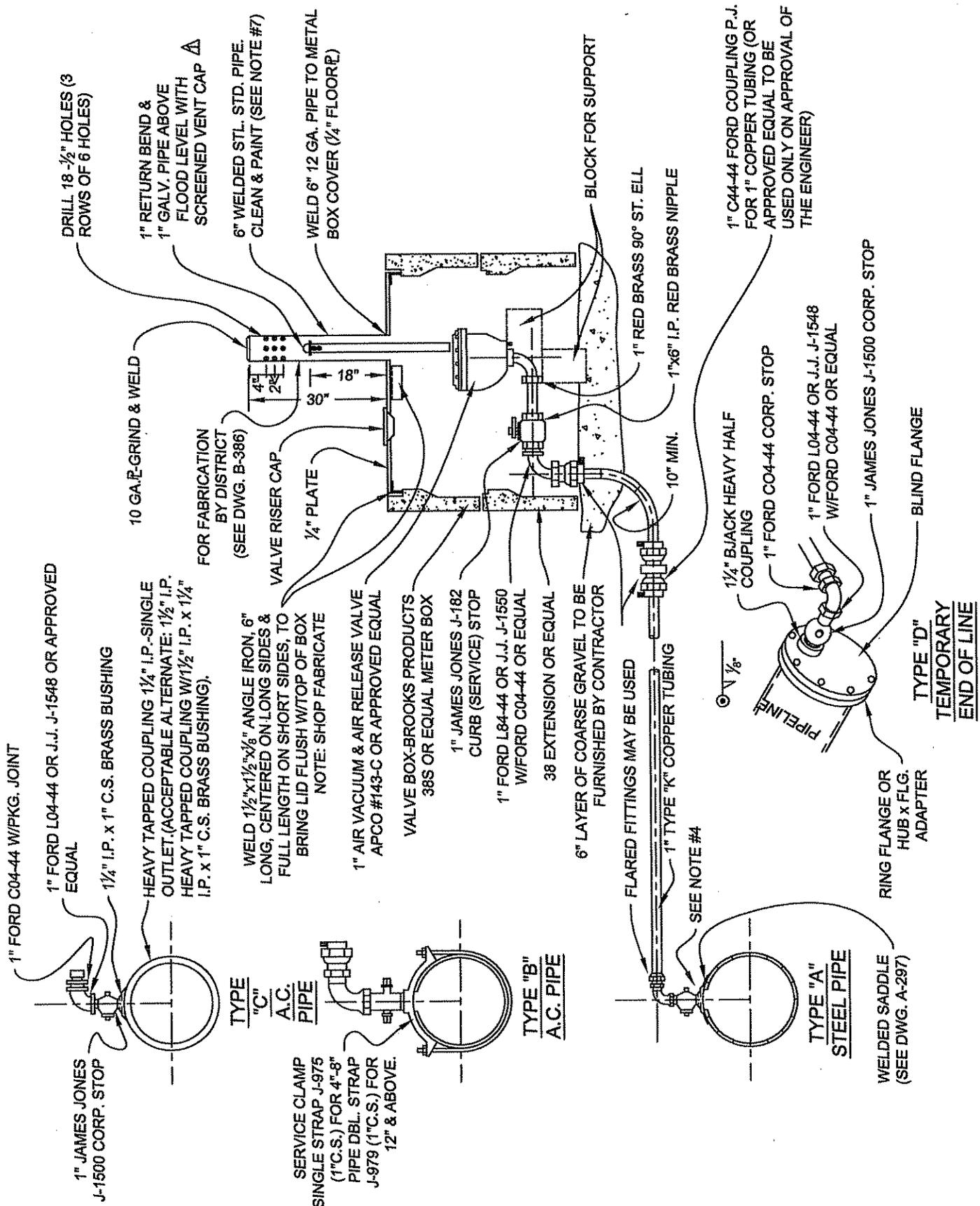
<i>Michael A. Gow</i>	MAR 2009
MICHAEL A. GOW, PW DIRECTOR/CITY ENG. R.C.E. 54164	DATE
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STANDARD NO.
W-702

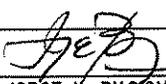


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AIR & VACUUM VALVE ASSEMBLY TYPE "A"		MAR 2011	1
 JORGE L. BIAGONI, PRINCIPAL ENGINEER R.C.E. 33751		DATE	OF 1 SHEETS
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1" AIR VALVE INSTALLATION 1" COPPER TUBING		MAR 2011	1
 JORGE L. BIAGIONI, PRINCIPAL ENGINEER R.C.E. 33751		DATE	OF 2 SHEETS
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A MARCH 2011 REVISED GRAPHIC			
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		N. Beltran 2011	

NOTES:

1. ALL FITTINGS BETWEEN THE CORPORATION STOP AND AIR VALVE SHALL:
 - A. BE MADE OF BRASS OR BRONZE;
 - B. BE MADE OF THE BANDED PATTERN;
 - C. BE DESIGNED FOR A MINIMUM 175 P.S.I. (COLD) WATER WORKING PRESSURE.

2. PRESSURE TEST PRIOR TO WRAPPING & BACK-FILLING.

3. ALTERNATE MATERIALS MAY BE USED UPON APPROVAL OF THE ENGINEER.

4. CORPORATION STOP & FITTINGS AT THE PIPELINE SHALL PRIMED & WRAPPED WITH PROTECTO-WRAP NO.200 COAL TAR RESIN TAPE, OR EQUAL.

5. ALL SERVICE PIPE & TUBING SHALL BE LAID ON A CONSTANT SLOPE UP FROM THE WATER MAIN TO THE METER. NO DIPS OR POCKETS WILL BE PERMITTED.

6. THREAD NOTATION SHOWN THUS:
 - I.P. = IRON PIPE THREAD
 - C.S. = CORPORATION STOP (MUELLER) THREAD
 - P.J. = PAINT JOINT

7. VALVE BOX COVER & RISER TO BE PAINTED SHERWIN-WILLIAMS #BM73-26 TAN OR APPROVED EQUAL.

8. PLACEMENT OF VALVE BOX:
 - A. PLACE FRONT EDGE OF VALVE BOX 1.5' BEHIND EXISTING OR PROPOSED 6' OR 8' SIDEWALKS.
 - B. WHEN PROPOSED OR EXISTING SIDEWALK IS 12' WIDE, PLACE FRONT EDGE OF BOX 1.5' BEHIND CURB USING APPROPRIATE BOX.
 - C. WHEN NO SIDEWALK IS PROPOSED, PLACE FRONT EDGE OF BOX 7.5' BEHIND CURB.
 - D. WHEN NO CURB ARE EXISTING OR TO BE INSTALLED UPON COMPLETION OF THE WATER SYSTEM, PLACE BACK EDGE OF VALVE BOX ON PROPERTY LINE.

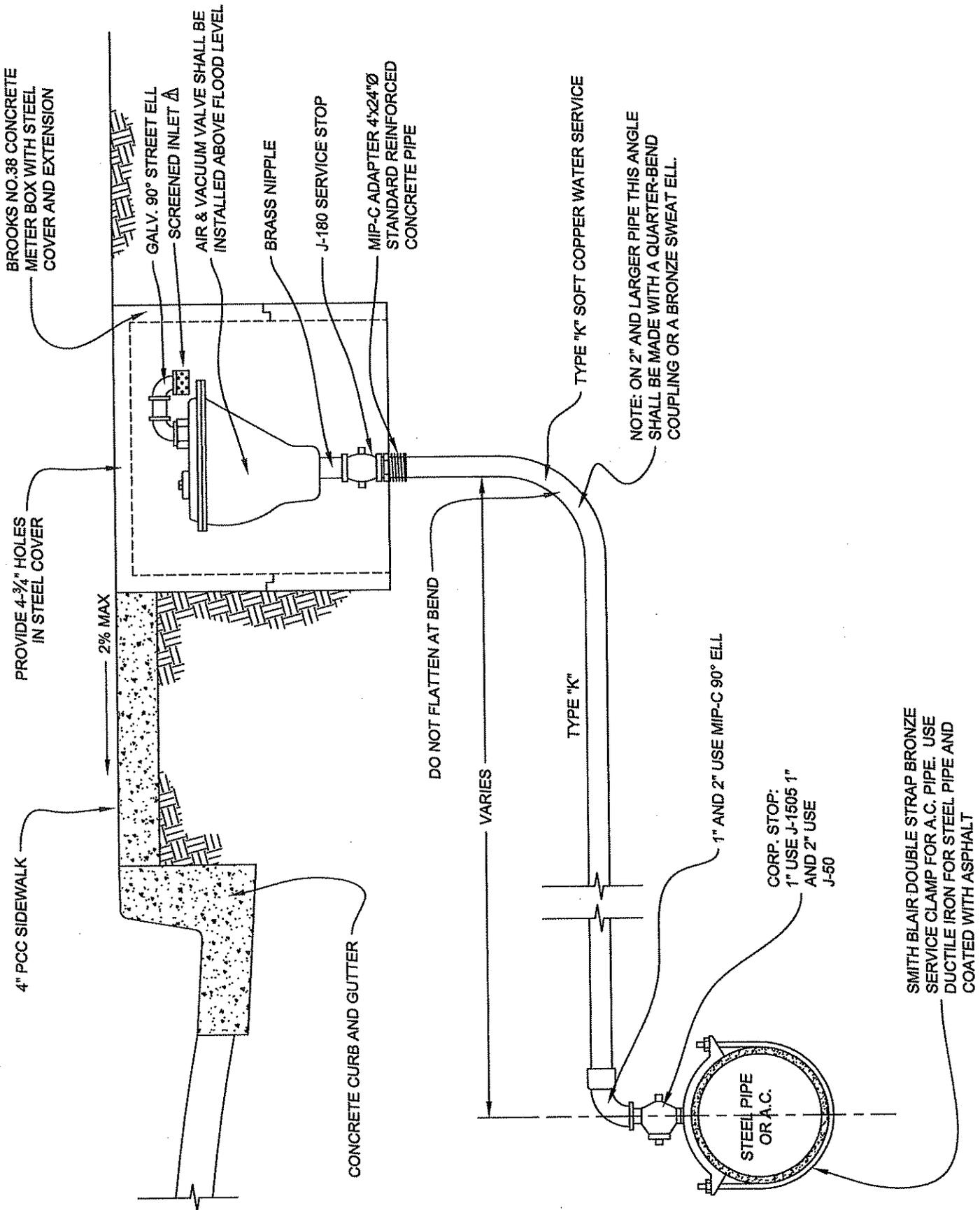


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**1" AIR VALVE INSTALLATION
 1" COPPER TUBING**

 JORGE L. BIACIONI, PRINCIPAL ENGINEER R.C.E. 33751	MAR 2011
	DATE
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2
 OF 2 SHEETS
STANDARD NO.
W-704A



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AIR & VACUUM VALVE ASSEMBLY TYPE "B"

JEP

JORGE L. BIAGIONI, PRINCIPAL ENGINEER R.C.E. 33751	MAR 2011
DATE	
REVISIONS	
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1
 OF 2 SHEETS
STANDARD NO. W-705

1" AND 2" USE
MIP-C 90° ELL

TYPE "K"

WELD ON BLACK
COUPLING

CORP. STOP:
1" USE J-1505
1" AND 2" USE
J-50

CONCRETE
CYLINDER
PIPE

NOTE:

1. COPPER TO COPPER JOINTS SHALL BE SWEATED CONNECTIONS.
2. ALL PIPE FITTINGS, VALVES AND COCKS SHALL BE SAME SIZE AS AIR VALVE INLET.



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**AIR VACUUM VALVE
ASSEMBLY TYPE "B"**

Michael A. Gow

MICHAEL A. GOW, PW DIRECTOR/CITY ENG. R.C.E. 54164

MAR 2009

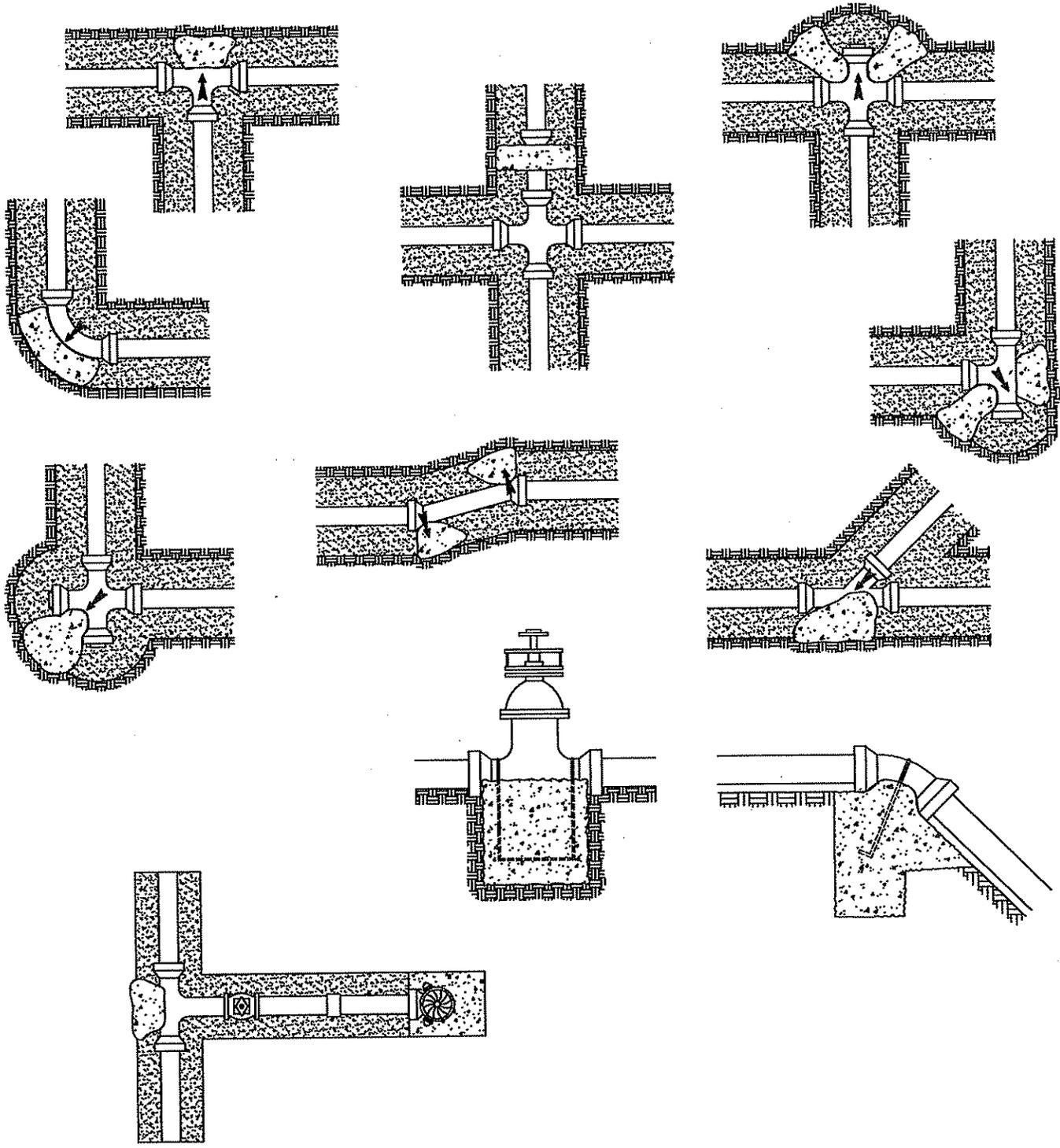
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STANDARD NO.
W-705A



NOTES:

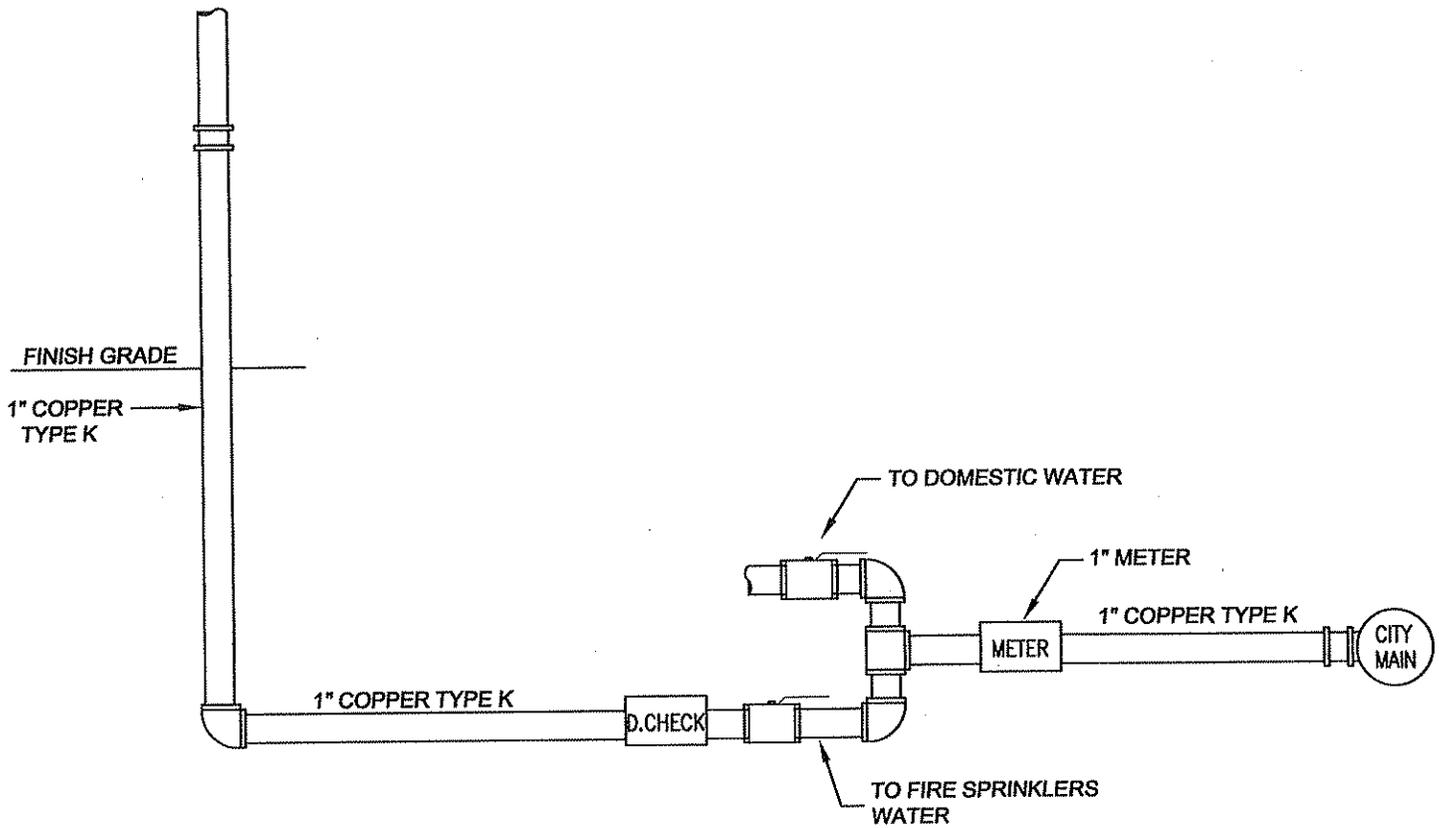
1. THRUST BLOCKS SHALL BE INSTALLED IN ACCORDANCE WITH THE PIPE MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS.
2. CONCRETE THRUST BLOCKS SHALL BE POURED AGAINST UNDISTURBED EARTH.
3. CONCRETE THRUST BLOCKS SHALL BE OF 5½ SACK MIX CONCRETE.
4. ALL CONCRETE SHALL BE POURED TO AVOID INTERFERENCE WITH BOLTED CONNECTIONS.
5. MECHANICAL RESTRAINTS MAY BE REQUIRED BY THE CITY ENGINEER.



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**TYPICAL THRUST BLOCK
 INSTALLATION**

<i>Michael A. Gow</i>		MAR 2009	<u>1</u>	
MICHAEL A. GOW, PW DIRECTOR/CITY ENG. R.C.E. 54164		DATE	OF <u>1</u> SHEETS	
REVISIONS			STANDARD NO. W-706	
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UNDERGROUND DETAIL
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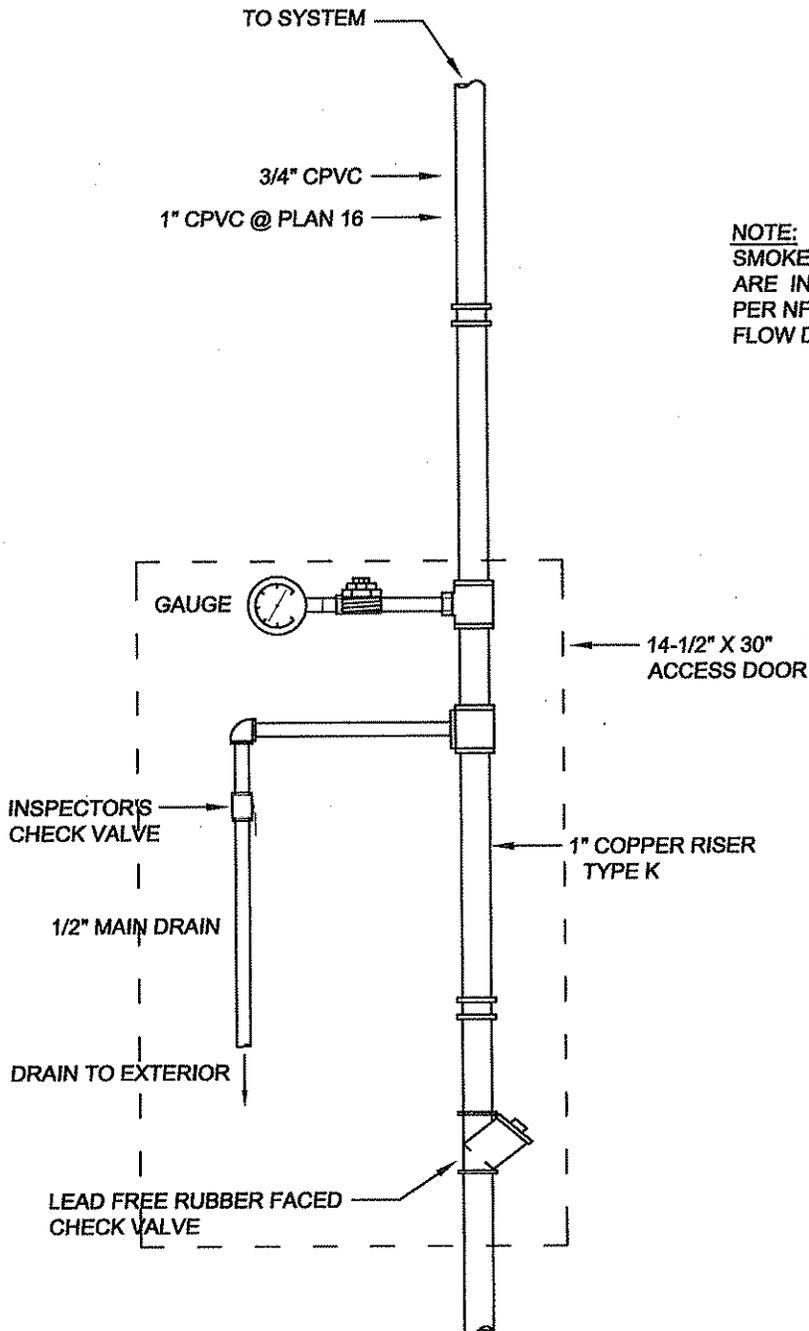


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**FIRE SPRINKLERS
SERVICE CONNECTION**

		MAR 2011
JORGE L. BIAGIONI, PRINCIPAL ENGINEER R.C.E. 33751		DATE
REVISIONS		
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OF **1** SHEETS
STANDARD NO.
W-707A



NOTE:
 SMOKE ALARMS OR DETECTORS
 ARE INSTALLED PER NFPA 72.
 PER NFPA 13D, 2010 ED. - WATER
 FLOW DETECTOR NOT REQUIRED.

RISER DETAIL
 N.T.S.



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**FIRE SPRINKLERS
 SERVICE RISER DETAIL**

Jorge L. Biagioni

JORGE L. BIAGIONI, PRINCIPAL ENGINEER R.C.E. 33751

MAR 2011

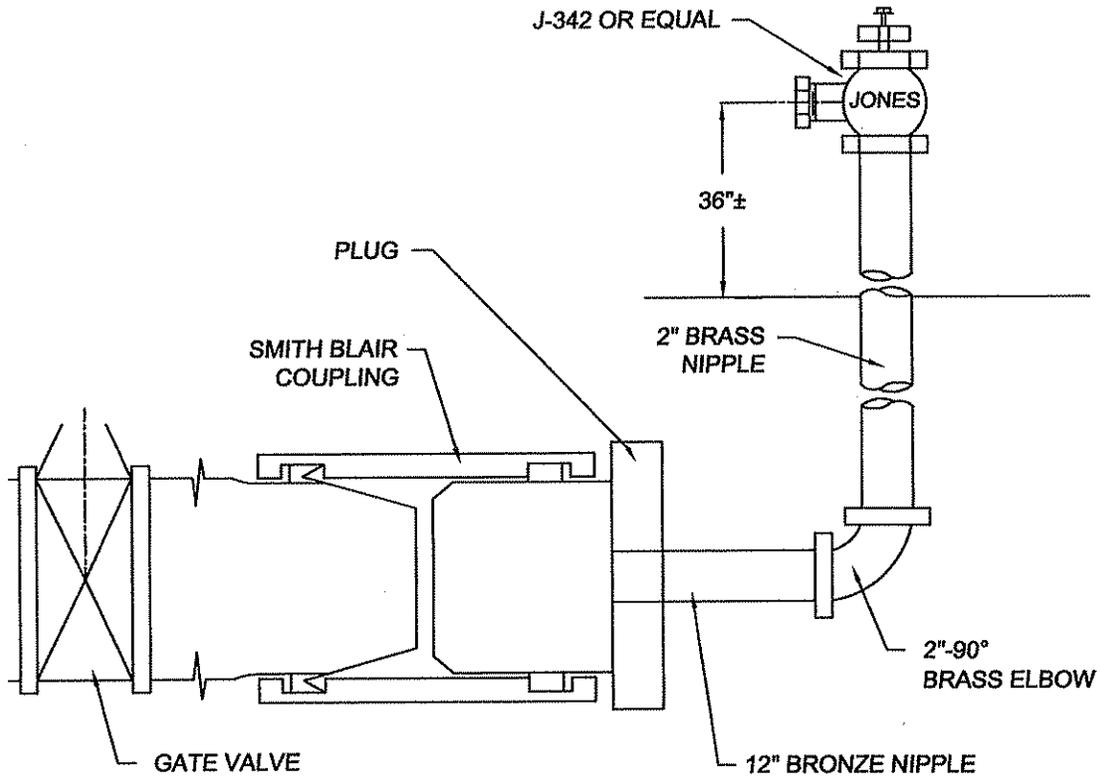
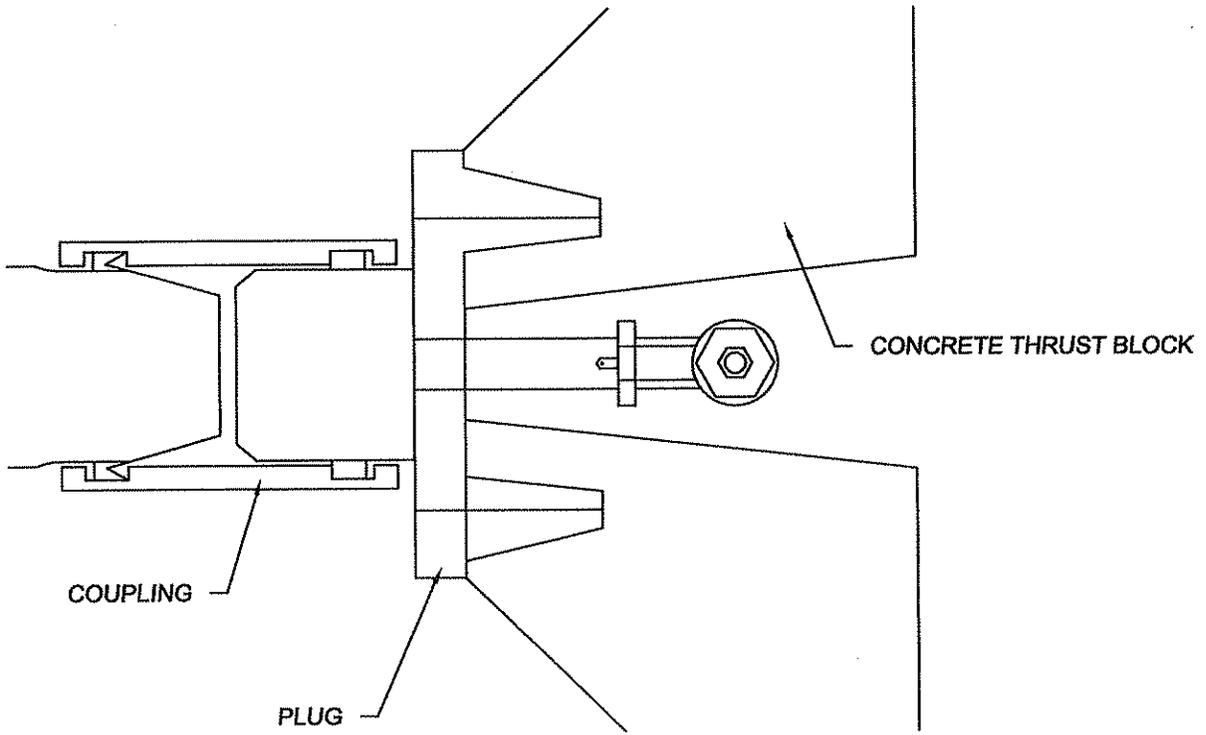
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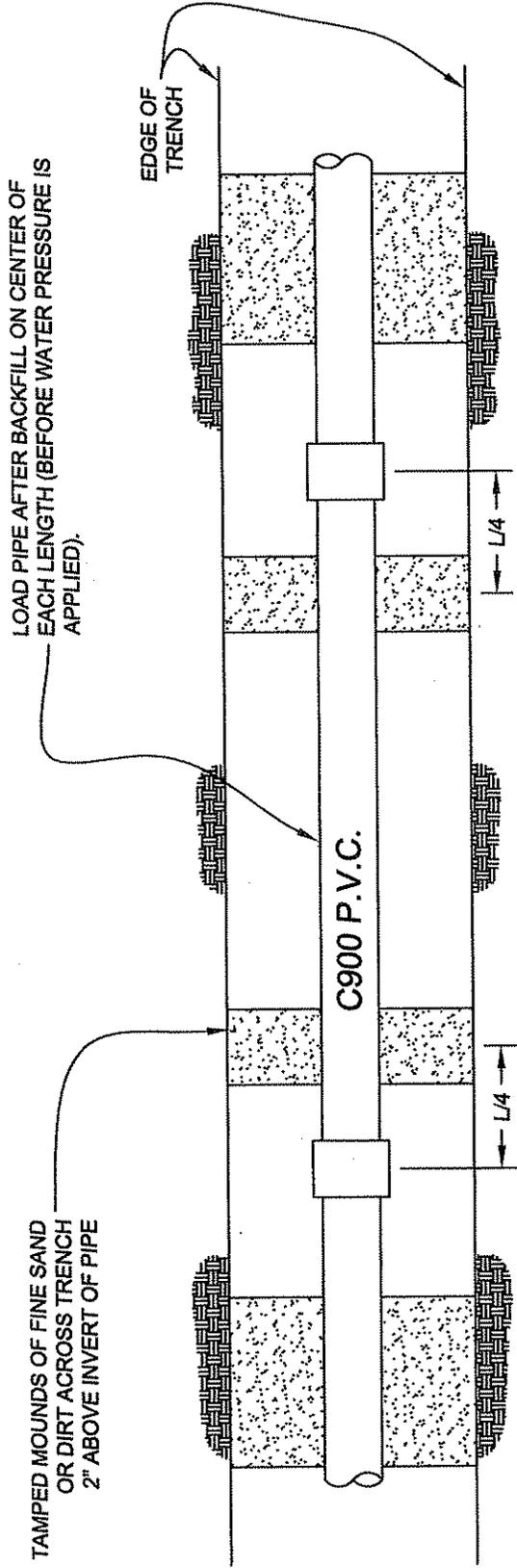
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W-707B



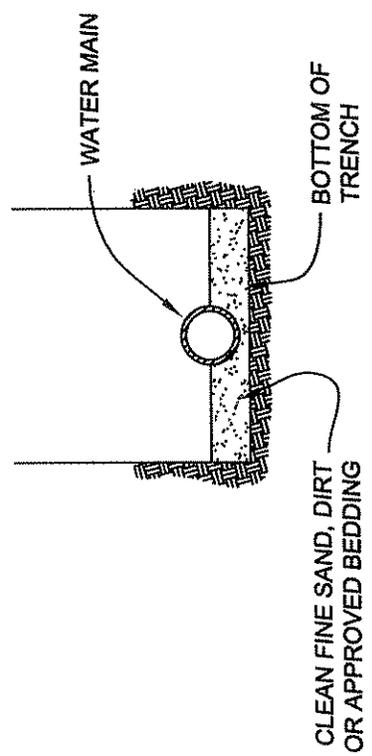
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WATER MAIN FLUSHER ASSEMBLY	
<i>Michael A. Gow</i>	MAR 2009
MICHAEL A. GOW, PW DIRECTOR/CITY ENG. R.C.E. 54164	DATE
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 OF 1 SHEETS
**STANDARD NO.
 W-708**



TYPICAL WATER MAIN INSTALLATION



END VIEW

TRENCH WIDTHS AT TOP LEVEL OF PIPE

PIPE SIZE (IN INCHES)	TRENCH WIDTH (IN INCHES)	MINIMUM	* MAXIMUM
4	18	28	
6-8	20	32	
10-12	24	36	
14-16	30	42	

* WIDTHS SHOULD BE MAINTAINED WITHIN THESE LIMITS. WHEREVER, IT SEEMS NECESSARY TO EXCEED THESE LIMITS, PROVISION SHOULD BE MADE FOR THE ADDITIONAL LOAD IMPOSED ON THE PIPE.



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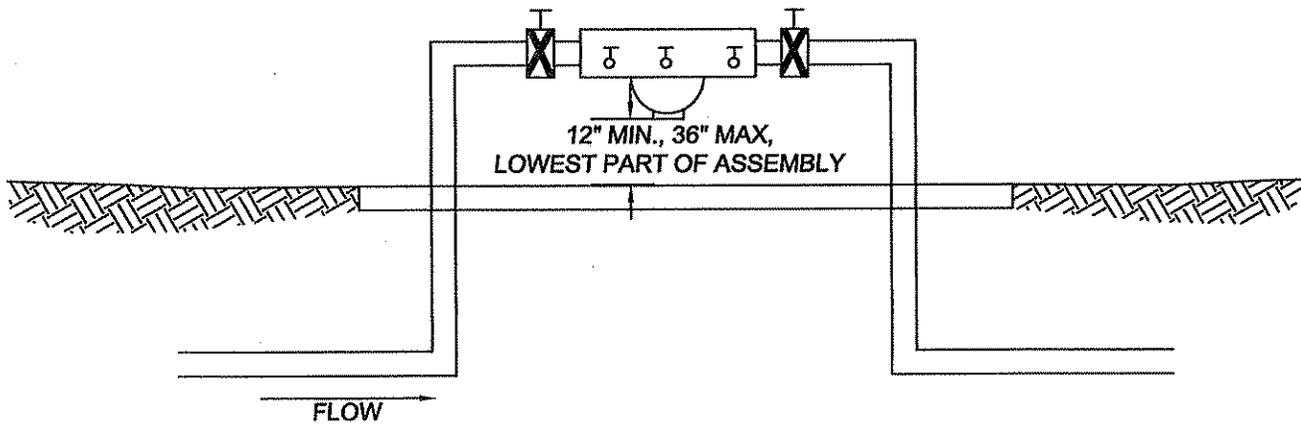
TYPICAL WATER MAIN INSTALLATION

Michael A. Gow
 MICHAEL A. GOW, PW DIRECTOR/CITY ENG. R.C.E. 54164
 MAR 2009
 DATE

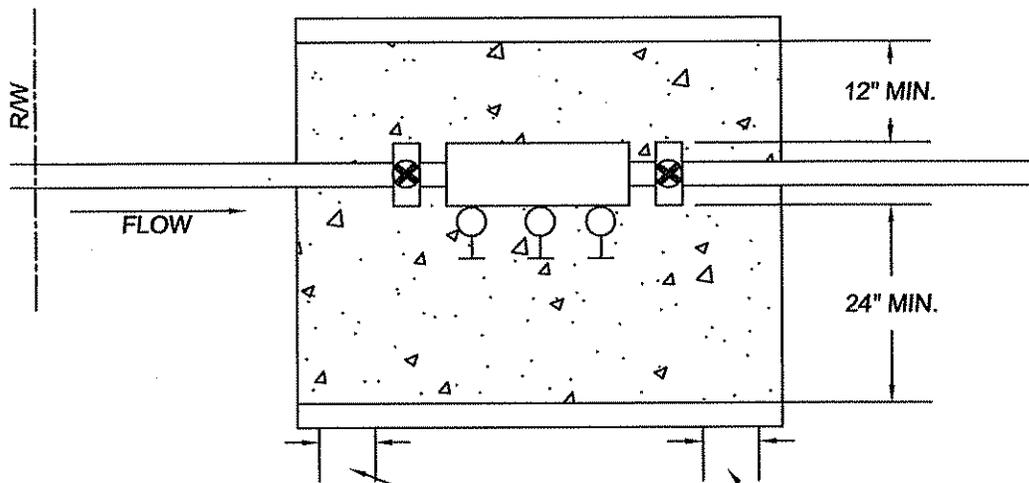
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 N.Beltran 2009

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STANDARD NO.
W-709



PROFILE



PLAN VIEW

ADEQUATE CLEARANCE FOR OPERATION OF VALVES

NOTES:

1. CURRENT CITY OF HEMET APPROVED LIST MAY BE OBTAINED FROM THE PUBLIC WORKS OPERATIONS DEPARTMENT.
2. MINIMUM REQUIREMENTS ACCEPTED WILL BE A REDUCED PRESSURE PRINCIPLE ASSEMBLY.
3. FIRE SERVICE SHALL HAVE REDUCED PRESSURE DEVICE ASSEMBLY.



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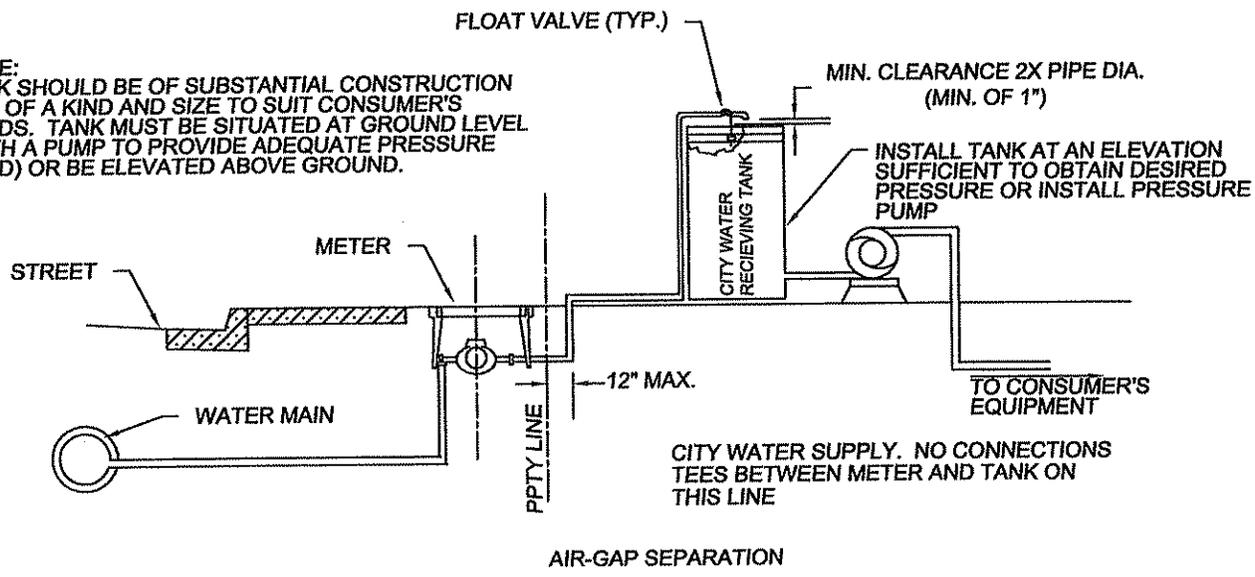
INSTALLATION OF BACKFLOW ASSEMBLIES

	MAR 2009
MICHAEL A. GOW, PW DIRECTOR/CITY ENG. R.C.E. 54164	DATE
REVISIONS	
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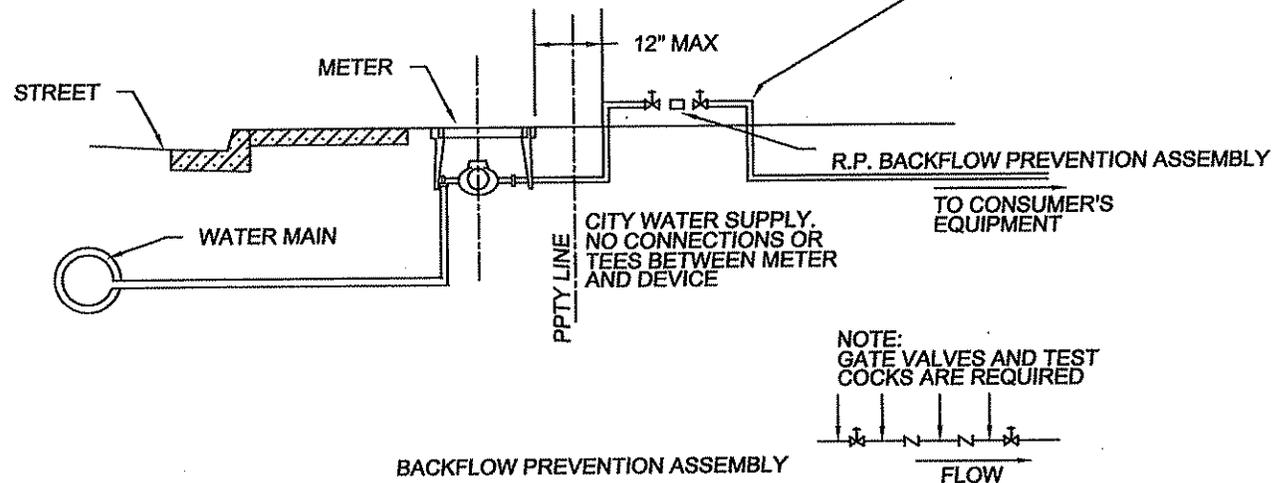
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W-710

NOTE:
TANK SHOULD BE OF SUBSTANTIAL CONSTRUCTION AND OF A KIND AND SIZE TO SUIT CONSUMER'S NEEDS. TANK MUST BE SITUATED AT GROUND LEVEL (WITH A PUMP TO PROVIDE ADEQUATE PRESSURE HEAD) OR BE ELEVATED ABOVE GROUND.



PLACE VALVE 12" MIN. 36" MAX ABOVE HIGH WATER LEVEL OF SURROUNDING GROUND



NOTES:

THE AIR-GAP SEPERATION OR THE MECHANICAL BACKFLOW PREVENTION ASSEMBLY SHALL BE INSTALLED SUBJECT TO APPROVAL OF WATER SUPERINTENDENT OR HIS OR HER AGENT. ANY DEVIATIONS FROM THE METHODS DESCRIBED MUST BE APPROVED PRIOR TO INSTALLATION. ALL MECHANICAL BACKFLOW PREVENTION ASSEMBLIES APPROVED BY WATER SUPERINTENDENT OR HIS OR HER AGENT FOR INSTALLATION AT THE SERVICE CONNECTION HAVE BEEN EVALUATED AND BY THE FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH, UNIVERSITY OF SOUTHERN CALIFORNIA AND APPROVED BY THE STATE OF CALIFORNIA DEPARTMENT OF HEALTH SERVICES. ALL WATER FACILITIES AND DEVICES SHALL BE TESTED AND APPROVED FOR USE PRIOR TO PROTECT FINAL ACCEPTANCE REMOVAL OF ANY APPROVED WATER FACILITY MAY RESULT IN A FINE. THE ONLY ACCEPTED ASSEMBLY FOR SERVICE PROTECTION WILL BETHE REDUCED PRESSURE ASSEMBLY OR AIR GAP.

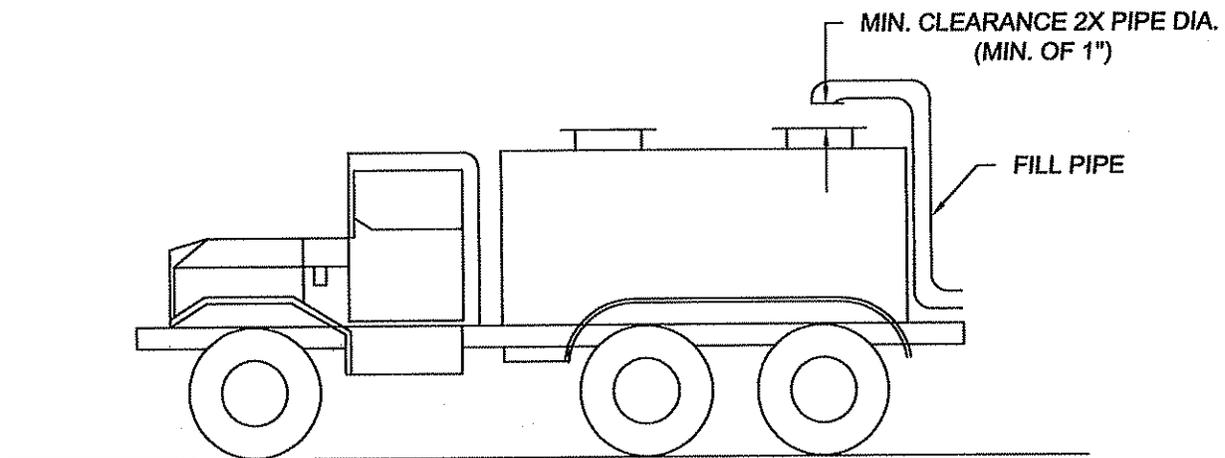
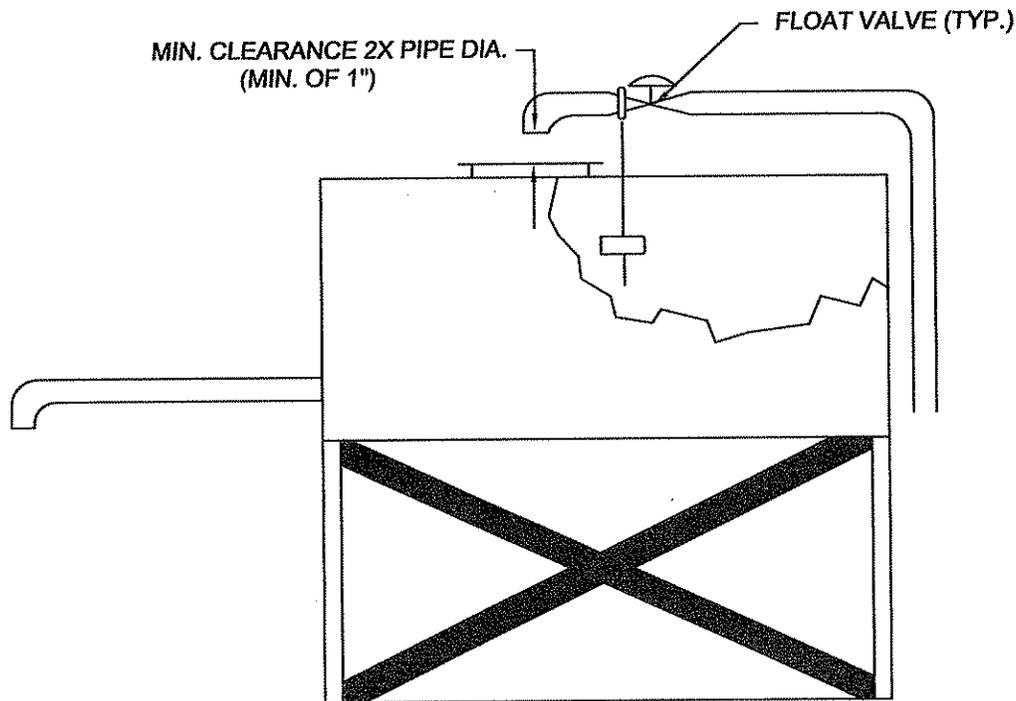


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INSTALLATION OF AIR GAP SEPERATION OR BACKFLOW PREVENTION DEVICE

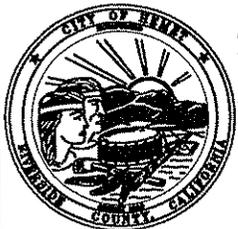
<i>Michael A. Gow</i>	MAR 2009
MICHAEL A. GOW, PW DIRECTOR/CITY ENG. R.C.E. 54164	DATE
REVISIONS	
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N.Beltran 2009	

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NOTES:

1. ALL WATER TRUCKS AND TANKS USING CITY OF HEMET FIRE HYDRANTS WILL BE REQUIRED TO BE INSPECTED BY UTILITY DEPARTMENT FOR PROPER AIR GAP.



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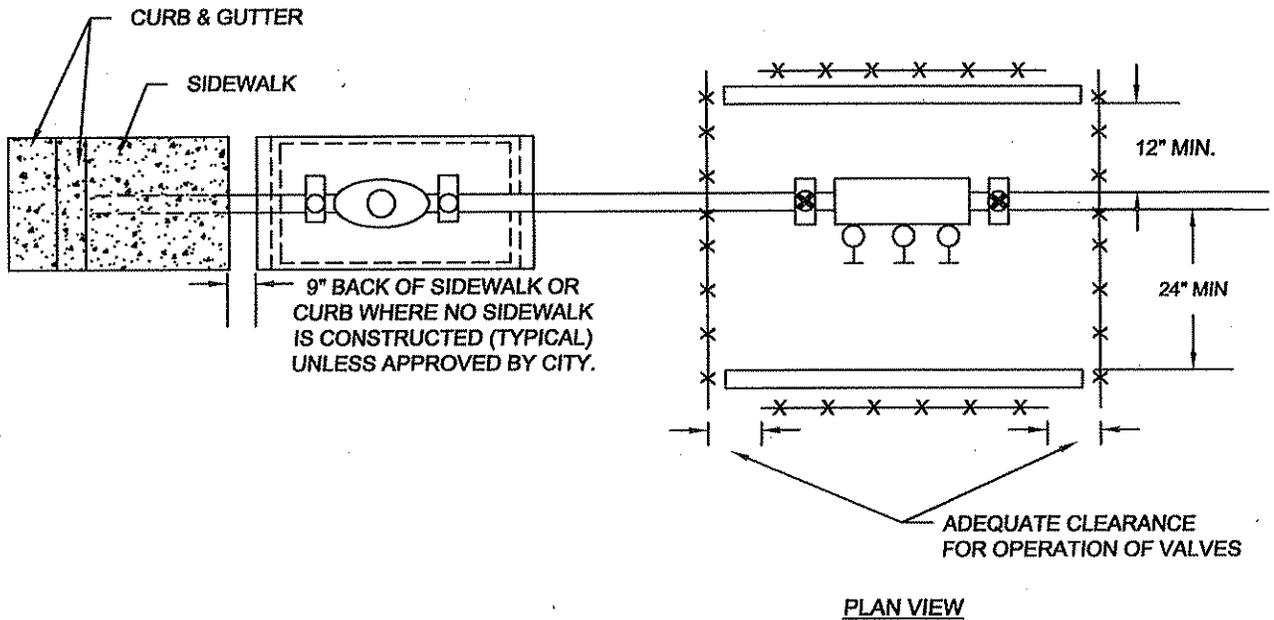
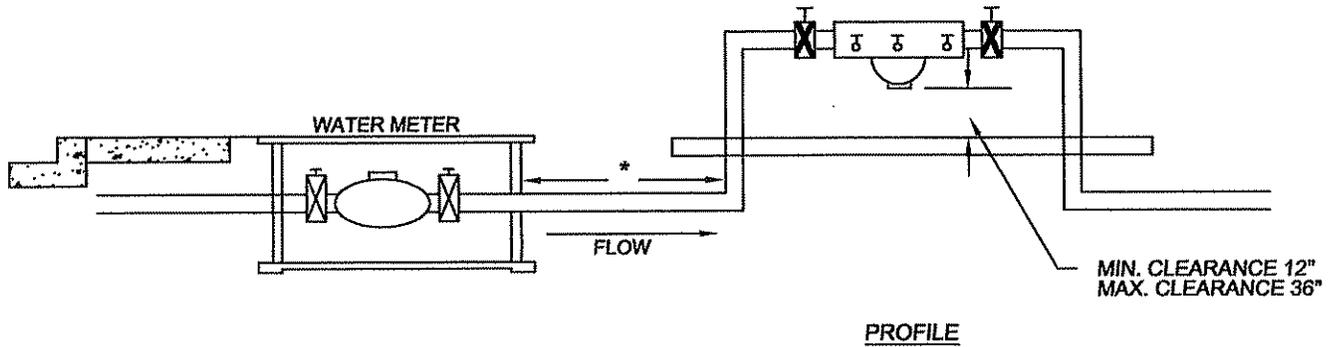
**AIR GAP SEPARATION
 FOR WATER TANKS**

	MAR 2009
MICHAEL A. GOW, PW DIRECTOR/CITY ENG. R.C.E. 54164	DATE
REVISIONS	
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 W-712**

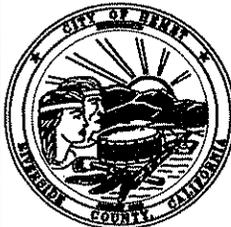
REDUCED PRESSURE PRINCIPLE ASSEMBLIES



NOTES:

PIPELINE BETWEEN THE METER AND THE ASSEMBLY MUST BE WRAPPED AND ENCASED IN 1 SACK CEMENT SLURRY, IF NOT WITHIN 1 FOOT OF METER BOX.

SEPARATE FIRE SERVICE SHALL HAVE A REDUCED PRESSURE DEVICE ASSEMBLY (RPDA).



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**INSTALLATION OF BACKFLOW ASSEMBLIES
 RESIDENTIAL AND COMMERCIAL**

		MAR 2011
JORGE L. BIAGIONI, PRINCIPAL ENGINEER R.C.E. 33751		DATE
REVISIONS		
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		N.Beltran 2011

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LANDSCAPE AND IRRIGATION REQUIREMENTS

IN ALL PARKWAYS, MEDIAN STRIPS AND OTHER AREAS OF PUBLIC RIGHT-OF-WAY WHERE LANDSCAPING AND/OR IRRIGATION INSTALLATION IS REQUIRED, THE FOLLOWING REQUIREMENTS APPLY UNLESS SPECIFICALLY MODIFIED IN WRITING BY THE CITY ENGINEER.

1. PRIOR TO INSTALLATION OF ANY IRRIGATION SPRINKLER SYSTEM OR LANDSCAPING, PLANS SHALL BE SUBMITTED TO THE CITY ENGINEER FOR REVIEW AND APPROVAL.
2. UNLESS OTHERWISE STATED, ALL INSTALLATION OF LANDSCAPING AND IRRIGATION EQUIPMENT WITHIN THE PUBLIC RIGHT-OF-WAY SHALL CONFORM TO SECTION 308 OF THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION," CURRENT EDITION.
3. ALL IRRIGATION SYSTEMS PIPE ON THE DISCHARGE SIDE OF THE CONTROL VALVE SHALL BE A MINIMUM OF SCHEDULE 40 CLASS.
4. ALL IRRIGATION SYSTEM PIPE ON THE CONTINUOUSLY PRESSURIZED SIDE OF THE CONTROL VALVE SHALL BE A MINIMUM OF SCHEDULE 80 CLASS.
- △ 5. THE IRRIGATION SYSTEM SHALL CONTAIN A REDUCED PRESSURE PRINCIPLE ASSEMBLY, ON A SEPARATE HOT TAP AT THE WATER MAIN.
6. ALL SPRINKLERS INSTALLED IN THE PARKWAY MUST BE INSTALLED ADJACENT TO A WALL OR FENCE AND NOT TO THE SIDEWALK.
7. ALL AUTOMATIC CONTROLLER SHALL BE RAINBIRD R.C. SERIES OR TORO SERIES IN VANDAL PROOF BOXES.
8. PARKWAYS MUST BE FREE OF ALL DEBRIS (ASPHALT, ROCKS, CONCRETE, TRASH), AND EXISTING SOIL MUST BE ROTOTILLED TO A DEPTH OF 4"-6" PRIOR TO ANY APPLICATION OF SOIL FUMIGANT (VAPAM) AND INSTALLATION OF PLANT MATERIAL.
9. PRIOR TO INSTALLATION OF ANY PLANT MATERIAL A "WARRANTY OF APPLICATION" OF SOIL FUMIGANT (FROM THE APPLICATOR) MUST BE COMPLETED AND SUBMITTED TO THE PARK SUPERVISOR.
10. DEVELOPER OR PROPERTY OWNER IS RESPONSIBLE FOR MAINTENANCE AND REPLACEMENT (IF NECESSARY) OF TREES, LANDSCAPING AND IRRIGATION EQUIPMENT, WITHIN THE PARKWAY FOR ONE YEAR AFTER THE DATE OF ACCEPTANCE BY THE CITY COUNCIL.
11. SERVICE PEDESTAL SHALL BE PER CITY STD. G-808A.



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LANDSCAPE AND IRRIGATION REQUIREMENTS

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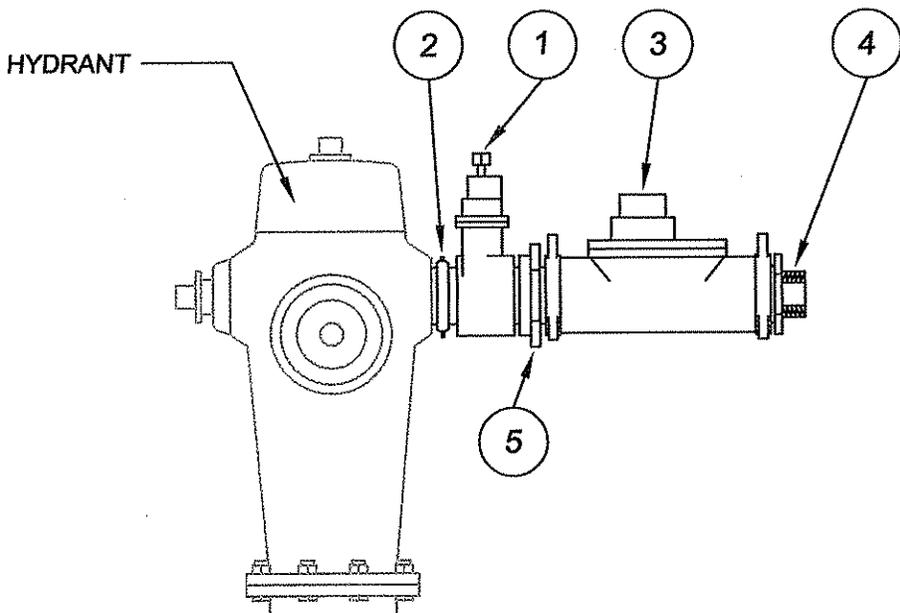
JORGE L. BIAGIONI, PRINCIPAL ENGINEER R.C.E. 33751	MAR 2011	DATE
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△ MARCH 2011 REVISED NOTE 5.		
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STANDARD NO.
W-714

LIST OF MATERIAL

DESCRIPTON (SIZE DEPENDS ON SIZE OF METER)

1. FIRE PLUG VALVE, 2-1/2" MALE HOSE THD OUTLET x 2-1/2" FEMALE HOSE THD INLET, J. JONES CO. NO. J356 - 1 REQUIRED.
2. SWIVEL ADAPTER, 2-1/2" FEMALE HOSE THD SWIVEL x 2-1/2" HOSE THD, BRASS, HALPRIN SUPPLY CO. NO. SA9 - 1 REQUIRED.
3. FIRE HYDRANT METER, 2-1/2", 3" FEMALE I.P. THD - BOTH ENDS, SPARLING NO. CF-246-2 - 1 REQUIRED.
4. HOSE NIPPLE, 3" MALE I.P. THD x 2-1/2" MALE HOSE THD, HEX TYPE, BRASS, HALPRIN SUPPLY CO. NO. B207 - OPTIONAL.
5. BUSHING, HEXAGON, BRASS, 2-1/2" FEMALE HOSE THD x 3" MALE I.P. THD, HALPRIN SUPPLY CO. NO. B117 W/3 STRAIGHTENING VANES.



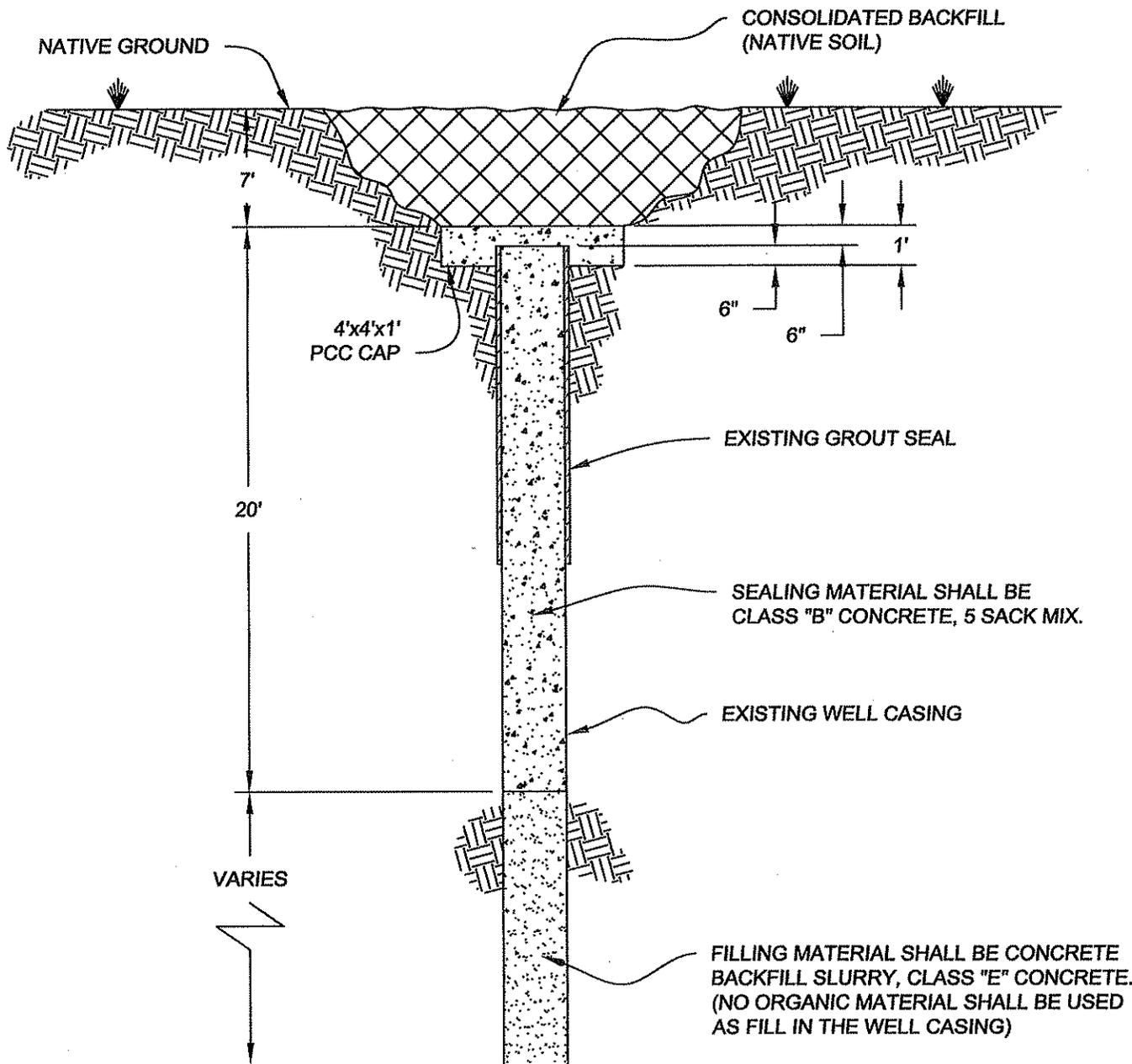
NOTES:

1. OPENING AND CLOSING OF HYDRANT IS PERMITTED ONLY WITH A HYDRANT WRENCH.
2. SERVICE MAY BE MOVED FROM ONE LOCATION TO ANOTHER WITH THE APPROVAL OF THE WATER DIVISION.
3. BACKFLOW DEVICES MAY BE REQUIRED FOR CERTAIN USES.
4. SERVICE CONNECTIONS MAY BE TERMINATED AT ANY TIME AT THE DESCRETION OF THE WATER DIVISION.
5. CHARGES FOR LOSS OR DAMAGE TO ANY SERVICE MATERIAL WILL BE BASED UPON CURRENT PRICES.
6. WATER TRUCKS SHALL HAVE AN APPROVED AIR GAP.

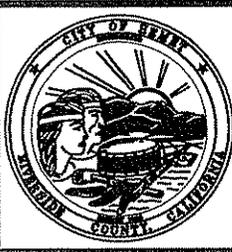


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TEMPORARY WATER SERVICE		MAR 2009	<u>1</u>
 MICHAEL A. GOW, PW DIRECTOR/CITY ENG. R.C.E. 54164		DATE	OF <u>1</u> SHEETS
REVISIONS			STANDARD NO. W-715
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THIS STANDARD COMPLIES WITH THE STATE OF CALIFORNIA, DEPARTMENT OF WATER RESOURCES BULLETIN 74-81. THE CITY ENGINEER WILL CONTACT THE CHINO BASIN MUNICIPAL WATER DISTRICT PRIOR TO THE DESTRUCTION TO INITIATE THE "NOTICE OF INTENT". A "WATER DRILLERS' REPORT" MUST BE SUBMITTED TO THE DEPARTMENT OR WATER RESOURCES FOLLOWING THE DESTRUCTION OF ANY WELL.



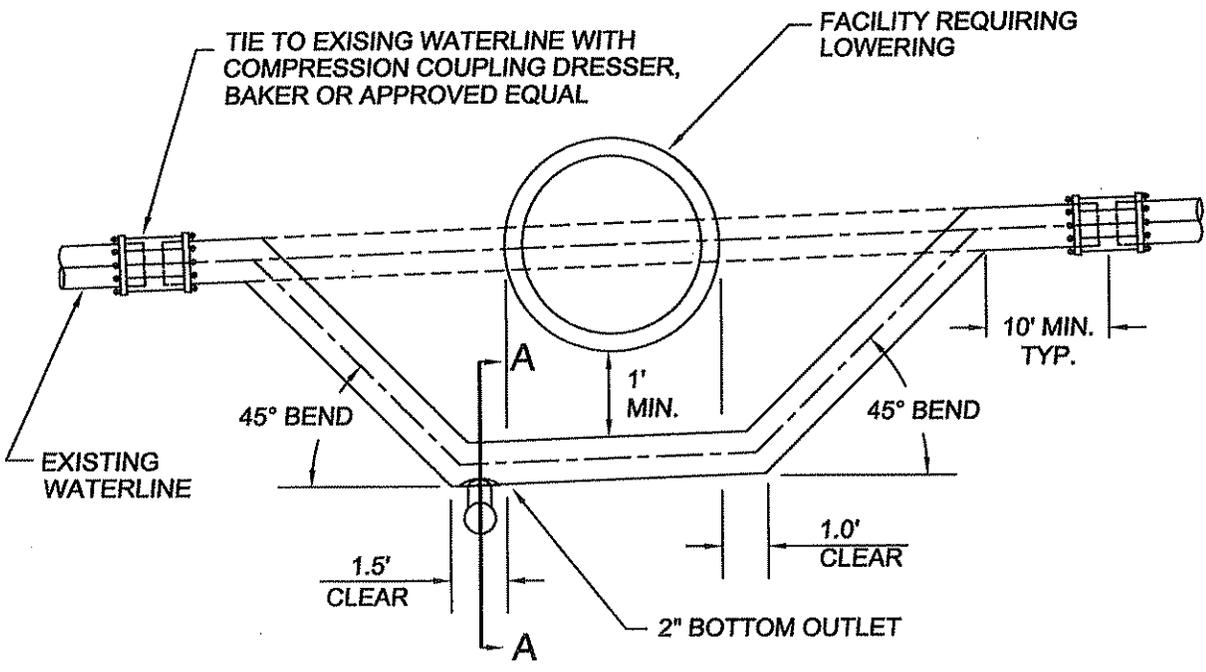
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DESTRUCTION OF WELLS

<i>M. A. Gow</i>	MAR 2009
MICHAEL A. GOW, PW DIRECTOR/CITY ENG. R.C.E. 54164	DATE
REVISIONS	
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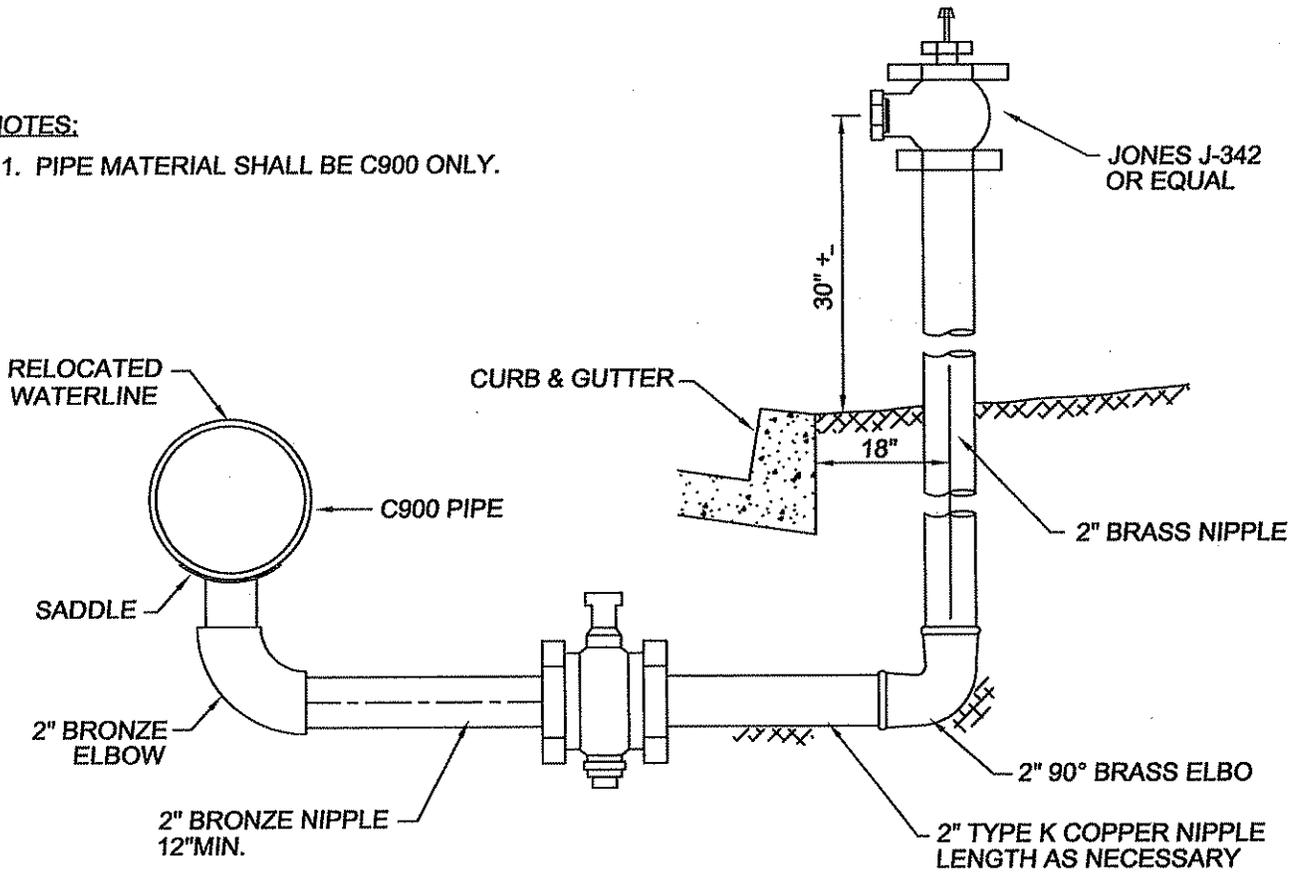
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NOTES:

- 1. PIPE MATERIAL SHALL BE C900 ONLY.



SECT. A-A



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**WATER MAIN DROP
 FLUSHER ASSEMBLY**

<i>Michael A. Gow</i>	MAR 2009
MICHAEL A. GOW, PW DIRECTOR/CITY ENG. R.C.E. 54164	DATE
REVISIONS	
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AIR/WATER OUTLET
AIR INLET

TEMPORARY CASING FOR HOLE PROTECTION IF DESIRED BY THE CONTRACTOR. IT WILL BE REMOVED FOR THE REAMING PROCESS

1 1/4" AIR INJECTION STRING

SAMPLING STRING-MINIMUM 6" I.D. WITH PERFORATED PIPE SAMPLING TOOL

18" DIA. BOREHOLE

BENTONITE SEAL AS APPROVED BY ENGINEER.

FINE SAND

GRAVEL TO BE 5' ABOVE SEPARATION BETWEEN AQUIFER AND AQUICLUDE

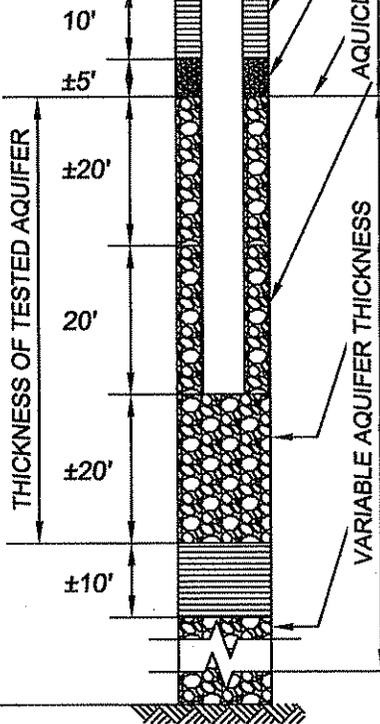
20' OF 0.060 MIL SLOT PERFORATIONS WITH OPEN AREA APPROX. 5.5 SQ. IN. PER FT

PEA GRAVEL

BENTONITE

VARIES

STATIC WATER LEVEL

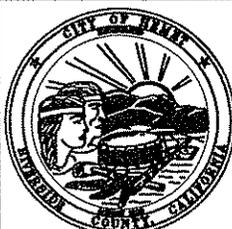


AQUIFER ISOLATION TEST PROCEDURE

THE AQUIFER ISOLATION TEST PROCEDURE STARTS AFTER THE COMPLETION OF THE PILOT HOLE TO DEPTH AND CONSISTS OF THE FOLLOWING:

1. RUN THE ZONE SAMPLING STRING AND SUBMERSIBLE PUMP TO DEPTH, PLACING THE 20' PERFORATED SECTION IN THE LOWEST ZONE DESIRED TO BE SAMPLED.
2. PLACE 10' OF BENTONITE SEAL OR APPROVED EQUAL 20' BELOW THE PERFORATIONS.
3. PLACE PEA GRAVEL TO 20' ABOVE THE PERFORATIONS.
4. PLACE 5' OF FINE SAND.
5. PLACE 10' OF BENTONITE SEAL OR APPROVED EQUAL.
6. INJECT COMPRESSED AIR TO INITIATE PUMPING. PUMP CONTINUOUSLY UNTIL THE EFFLUENT IS CLEAR.
7. PUMP WITH SUBMERSIBLE PUMP CONTINUOUSLY UNTIL ELECTRICAL CONDUCTIVITY STABILIZES, AND TAKE WATER QUALITY SAMPLES.
8. PULL THE STRING TO THE NEXT HIGHEST DESIRED SAMPLING ZONE AND REPEAT ITEMS 2 THROUGH 7.

DETAIL
AQUIFER ISOLATION TEST



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AQUIFER ISOLATION TEST

 MICHAEL A. GOW, PW DIRECTOR/CITY ENG. R.C.E. 54164	MAR 2009	<u>1</u> OF 1 SHEETS
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