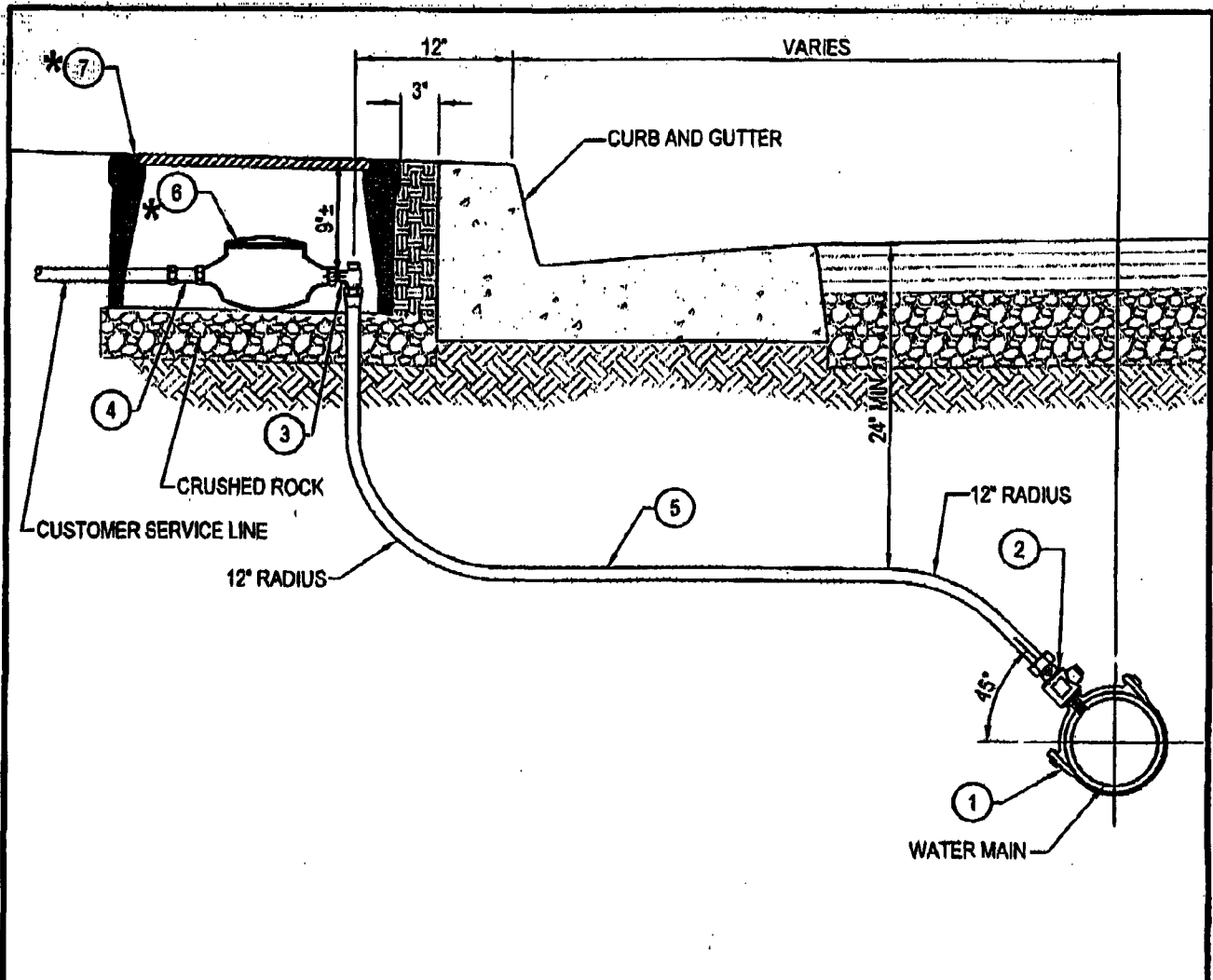


STANDARD	DESCRIPTION	DATE REVISED
W-1	1" SERVICE CONNECTION	AUGUST 2005
W-2	1 1/2" SERVICE CONNECTION	AUGUST 2005
W-3	2" SERVICE CONNECTION	AUGUST 2005
W-4	3" SERVICE CONNECTION WITH 2" METERED BY-PASS	AUGUST 2005
W-5	4" SERVICE CONNECTION WITH 2" METERED BY-PASS	AUGUST 2005
W-6	6" SERVICE CONNECTION WITH 4" D.I.P. BY-PASS	AUGUST 2005
W-7	8" SERVICE CONNECTION WITH 4" D.I.P. BY-PASS	AUGUST 2005
W-8	GATE VALVE AND VALVE COVER ASSEMBLY	AUGUST 2005
W-9	2" BLOW-OFF ASSEMBLY	AUGUST 2005
W-10	1" AIR / VACUUM VALVE RELEASE ASSEMBLY	AUGUST 2005
W-11	FIRE HYDRANT ASSEMBLY	AUGUST 2005
W-12	FIXED POST BARRIER	AUGUST 2005
W-13	THRUST BLOCKS	AUGUST 2005
W-14	PIPE SEWER CASEMENT	AUGUST 2005
W-15	TEMPORARY FLUSH ASSEMBLY	AUGUST 2005
W-16	TYPICAL TRENCH DETAIL	AUGUST 2005
W-17	DOUBLE CHECK DETECTOR ASSEMBLY	AUGUST 2005
W-18	REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION ASSEMBLY	AUGUST 2005
W-19	ADJUSTABLE PIPE SUPPORT ASSEMBLY	AUGUST 2005
W-20	CONNECTION TO EXISTING MAIN LINES	AUGUST 2005
W-21	CONSTRUCTION ZONES - NEW WATER MAIN	AUGUST 2005
W-22	CONSTRUCTION ZONES - NEW SEWER MAIN	AUGUST 2005

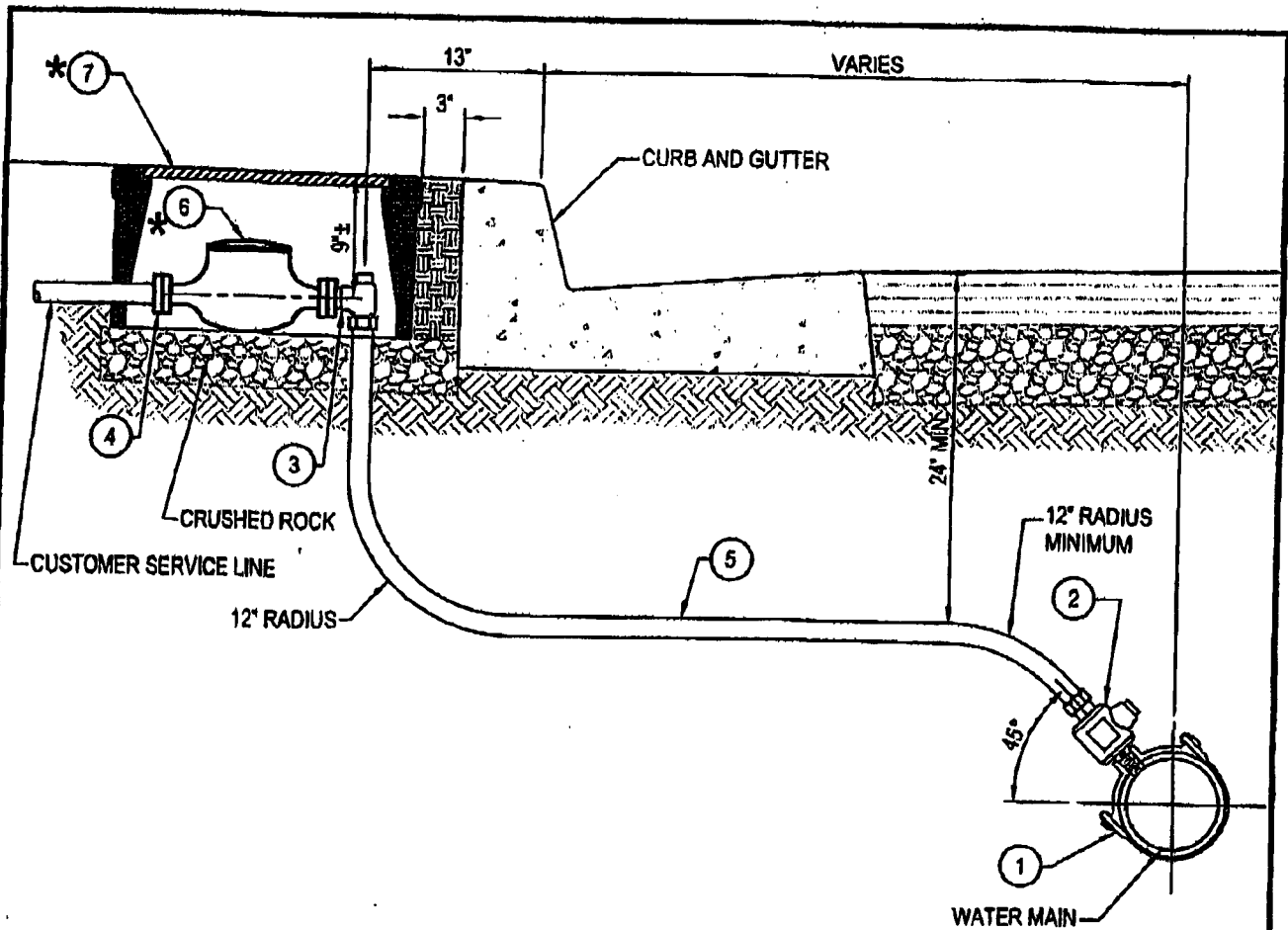
<b>CITY OF ALHAMBRA</b>		REV. No.	DATE	BY/APP.	ITEM
DEPARTMENT OF UTILITIES		APPROVED: <i>[Signature]</i>		11-30-05	
<b>LIST OF STANDARDS</b>		DIRECTOR OF UTILITIES		DATE	
APPROVED: <i>[Signature]</i>	11/2/05	BY	DATE	SCALE:	DWG. No.
DEPUTY DIRECTOR - UTILITIES	DATE	DESIGNED	DRB	AUG. 2005	AS SHOWN
<i>[Signature]</i>	43296	DRAWN	DRB	AUG. 2005	DATE:
CITY ENGINEER	RCE No.	CHECKED	TLK	AUG. 2005	AUGUST 2006
	DATE				W-0
					SHT. 1 OF 1



CONSTRUCTION NOTES			
NO.	DESCRIPTION	JAMES JONES	CAMBRIDGE BRASS
①	DOUBLE STRAP SERVICE SADDLE	J-979	SERIES 810
②	1" CORPORATION MAIN STOP, M.I.P. x COMP.	J-1935SG	301-M4H4
③	ANGLE INVERTED KEY METER VALVE, COMP. x SWIVEL NUT	J-1963WSG	210-H4T4
④	1" STRAIGHT METER COUPLING, M.I.P. x SWIVEL NUT	J-130	417-T4M4
⑤	1" TYPE 'K' COPPER TUBING		
*⑥	1" WATER METER, SENSUS MODEL OR NEPTUNE MODEL		
*⑦	POLYMER CONCRETE METER BOX BY ARMORCAST		

\*TO BE PROVIDED BY THE CITY OF ALHAMBRA

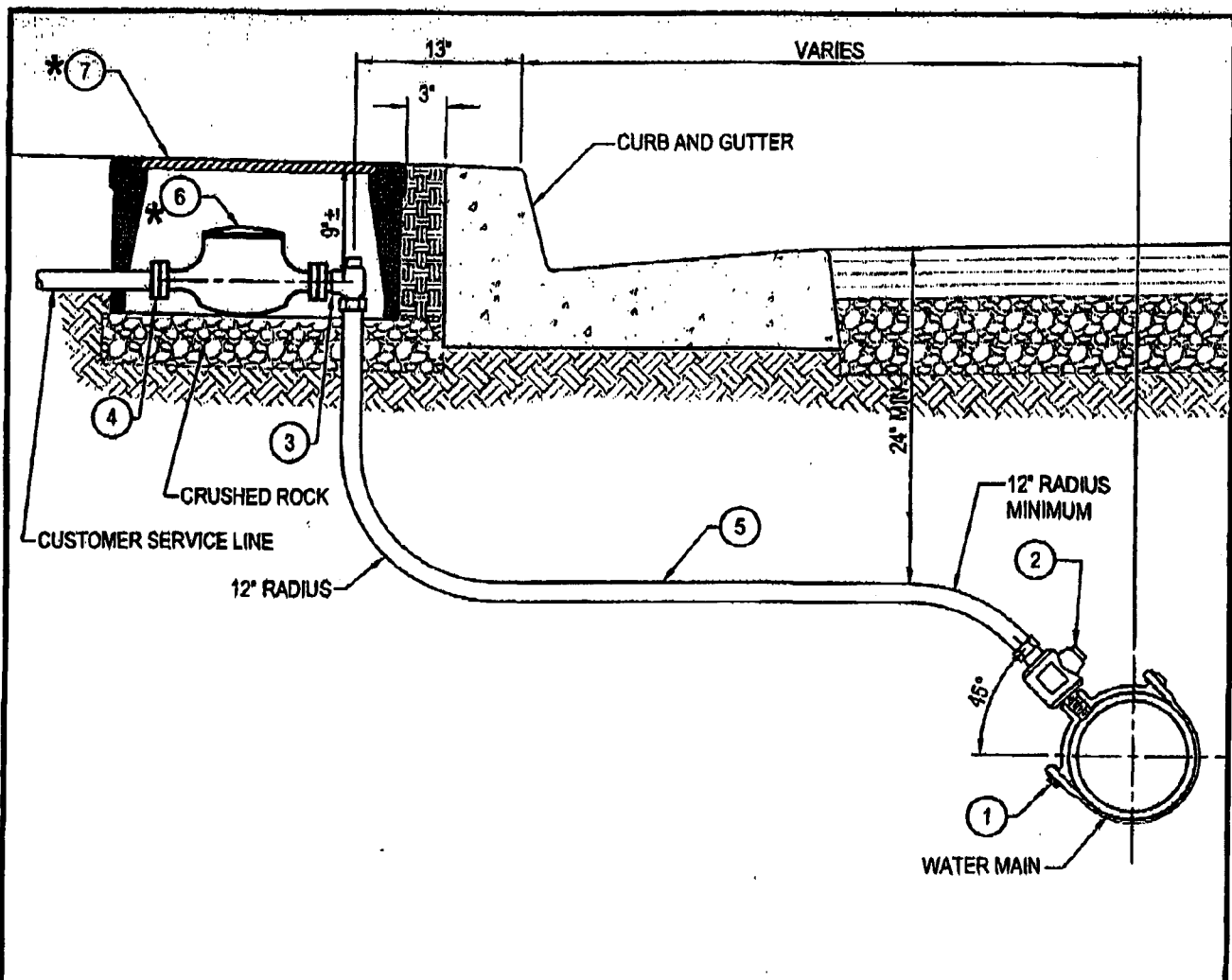
<b>CITY OF ALHAMBRA</b> DEPARTMENT OF UTILITIES <b>1" SERVICE CONNECTION</b>		REV. No.	DATE	BY/APP.	ITEM
		APPROVED: <i>[Signature]</i> DIRECTOR OF UTILITIES			DATE: 11.30.05
APPROVED:	DATE:	BY:	DATE:	SCALE:	DWG. No.
<i>[Signature]</i>	11/2/05	DRB	AUG. 2005	AS SHOWN	W-1
DEPUTY DIRECTOR - UTILITIES	DATE	DRB	AUG. 2005	DATE:	
<i>[Signature]</i>	43296	TLK	AUG. 2005	AUGUST 2005	SHT. 1 OF 1
CITY ENGINEER	RCE No.	DATE			



CONSTRUCTION NOTES			
NO.	DESCRIPTION	JAMES JONES	CAMBRIDGE BRASS
①	DOUBLE STRAP SERVICE SADDLE	J-979	SERIES 810
②	1 1/2" CORPORATION MAIN STOP, M.I.P. x COMP.	J-1935SG	301-M6H6
③	1 1/2" FLANGED ANGLE METER STOP, COMP. x FLANGE	J-1975WSG	210-H6MF6
④	1 1/2" METER COUPLING, FLANGE x I.P.T.	J-129	421-6
⑤	1 1/2" TYPE "K" COPPER TUBING		
* ⑥	1 1/2" WATER METER, SENSUS MODEL OR NEPTUNE MODEL		
* ⑦	POLYMER CONCRETE METER BOX BY ARMORCAST		

\* TO BE PROVIDED BY THE CITY OF ALHAMBRA

<b>CITY OF ALHAMBRA</b> DEPARTMENT OF UTILITIES 1 1/2" SERVICE CONNECTION		REV. No.	DATE	BY/APP.	ITEM
		APPROVED: <i>[Signature]</i> 11-30-05 DIRECTOR OF UTILITIES			
APPROVED:	DATE	BY	DATE	SCALE	DWG. No.
<i>[Signature]</i> DEPUTY DIRECTOR - UTILITIES CITY ENGINEER	11/2/05 DATE	DRB	AUG. 2005	AS SHOWN	W-2
43216 RCE No.	9/2/05 DATE	DRB	AUG. 2005	DATE	
		TLX	AUG. 2005	AUGUST 2005	
					SHT. 1 OF 1



CONSTRUCTION NOTES			
NO.	DESCRIPTION	JAMES JONES	CAMBRIDGE BRASS
(1)	DOUBLE STRAP SERVICE SADDLE	J-979	SERIES 810
(2)	2" CORPORATION MAIN STOP, I.P.T. x COMP.	J-1935SG	301-M7H7
(3)	2" FLANGED ANGLE METER STOP, COMP. x FLANGE	J-1975WSG	210-H7MF7
(4)	2" METER COUPLING, FLANGE x I.P.T.	J-129	421-7
(5)	2" TYPE "K" COPPER TUBING		
* (6)	2" WATER METER, SENSUS MODEL OR NEPTUNE MODEL		
* (7)	POLYMER CONCRETE METER BOX BY ARMORCAST		

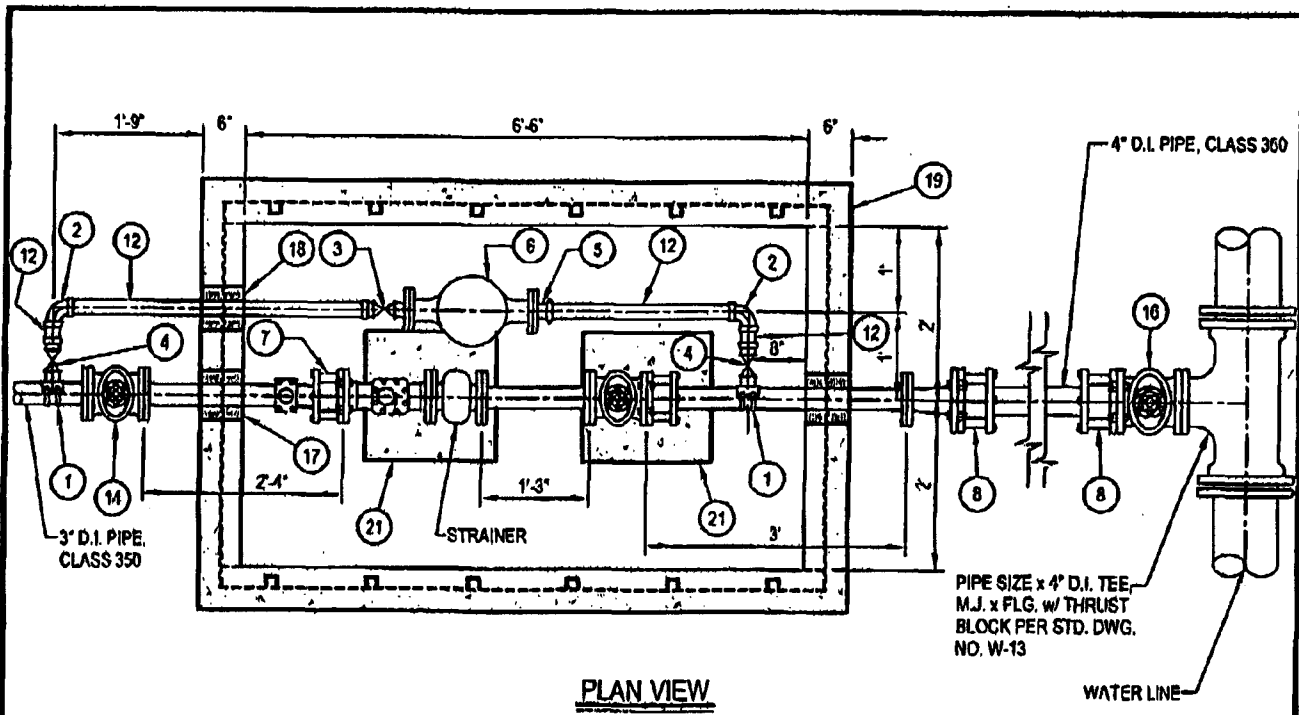
\*TO BE PROVIDED BY THE CITY OF ALHAMBRA

**CITY OF ALHAMBRA**  
 DEPARTMENT OF UTILITIES  
 2" SERVICE CONNECTION

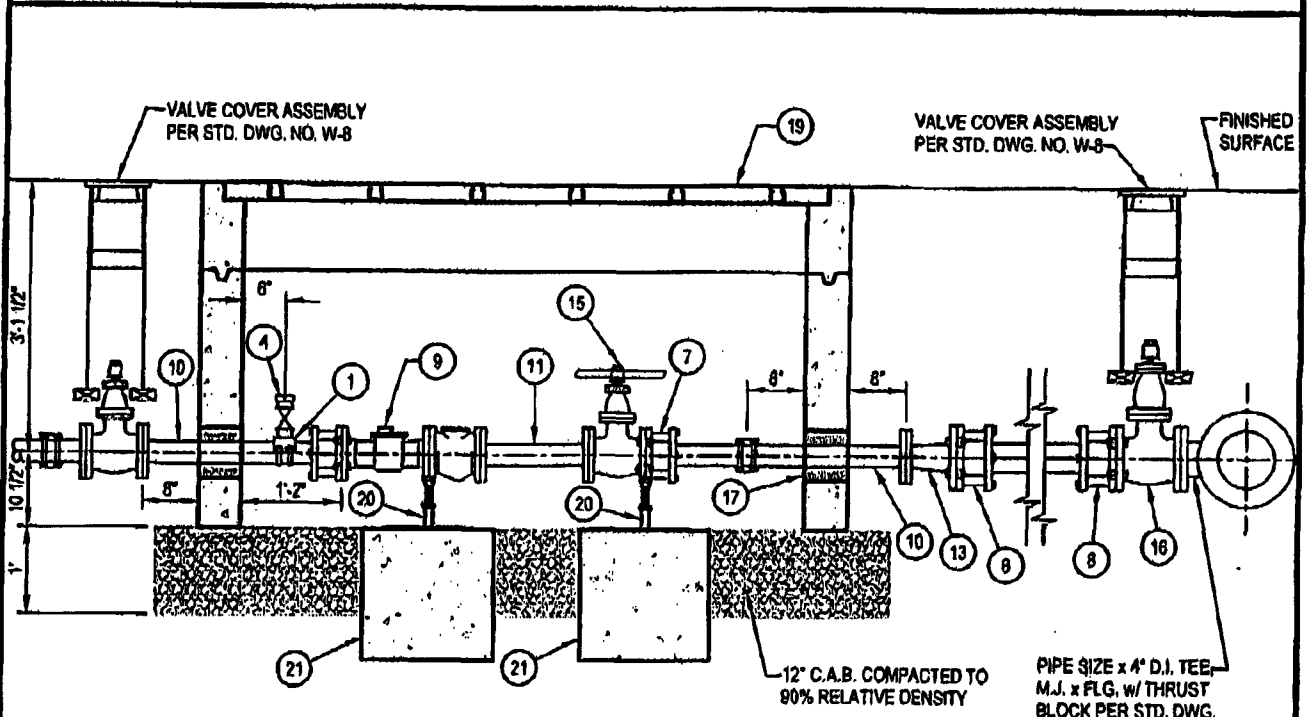
APPROVED: *Tom Calhoun* 11/2/05  
 DEPUTY DIRECTOR - UTILITIES DATE

*[Signature]* 43296 9/2/05  
 CITY ENGINEER RCE No. DATE

REV. No.	DATE	BY/APP.	ITEM
APPROVED: <i>[Signature]</i>		11-30-05	
DIRECTOR OF UTILITIES		DATE	
DESIGNED	DRB	DATE	SCALE: AS SHOWN
DRAWN	DRB	DATE	DATE: AUGUST 2005
CHECKED	TLK	DATE	DATE: AUGUST 2005
			DWG. No. W-3
			SHT. 1 OF 1



**PLAN VIEW**



**ELEVATION VIEW**

METER OPERATING RANGE: 5 TO 350 GPM

**CITY OF ALHAMBRA**  
 DEPARTMENT OF UTILITIES  
**3\"/>
 APPROVED: *Tom Cul* 11/2/05  
 DEPUTY DIRECTOR - UTILITIES  
 CITY ENGINEER**

REV. No.	DATE	BY/APP.	ITEM
1			
APPROVED: <i>mmmtan</i>		DATE: 11-30-05	
DIRECTOR OF UTILITIES		DATE	
DESIGNED	DRB	AUG. 2005	SCALE: AS SHOWN
DRAWN	DRB	AUG. 2005	DATE: AUGUST 2005
CHECKED	TLK	AUG. 2005	DWG. No. W-4
			SHT. 1 OF 2

### CONSTRUCTION NOTES

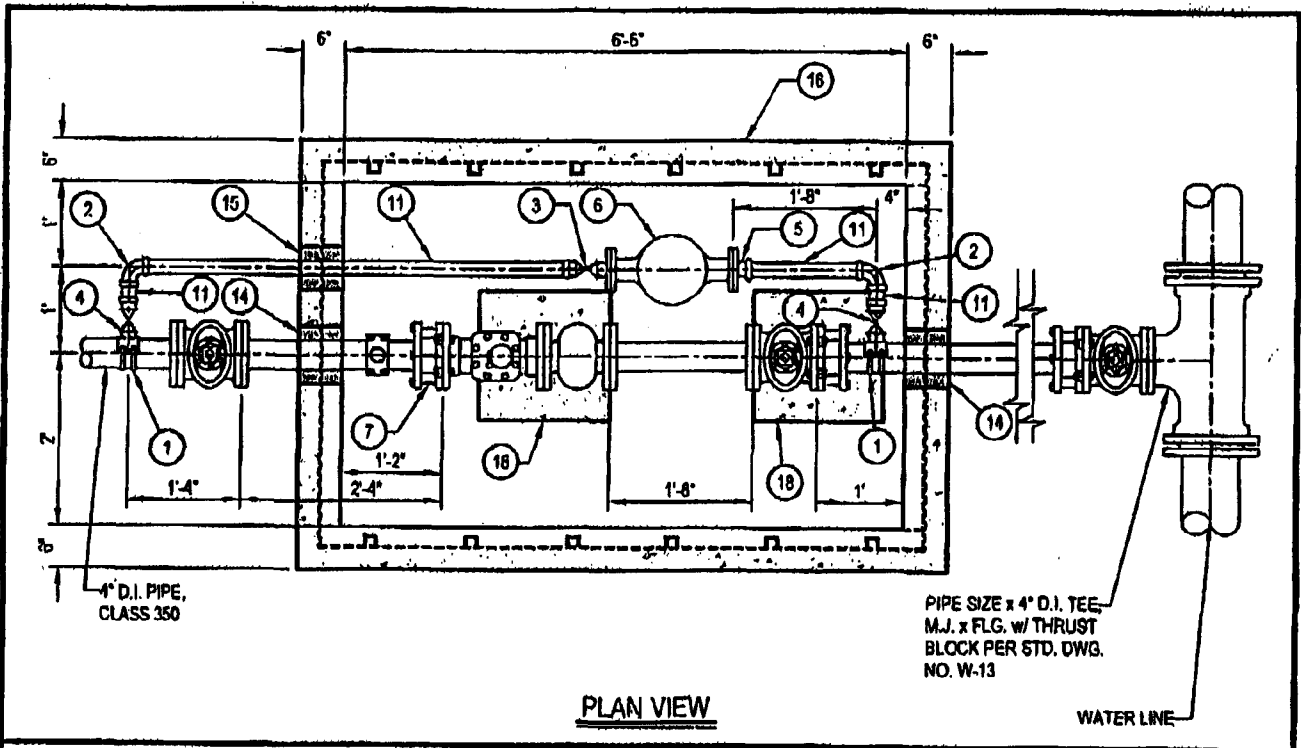
NO.	DESCRIPTION	JAMES JONES	CAMBRIDGE BRASS
1	DOUBLE STRAP SERVICE SADDLE WITH 2" TAP	J-979	SERIES 810
2	2" QUARTER BEND COUPLING, COMP. x COMP.	J-2611	105-H7H7
3	2" BALL METER VALVE, COMP. x METER FLANGE	J1939SG	212-H7MF7
4	2" CORPORATION MAIN STOP, M.I.P. x COMP.	J-1935SG	301-M7H7
5	2" METER COUPLING, METER FLANGE x PACK JOINT, FORD MODEL NO. CF34-77		
* 6	2" METER, FLGxFLG, SENSUS MODEL NO. 2" SR OR NEPTUNE MODEL NO. T-10		
7	3" FLANGE COUPLING ADAPTER, ROMAC MODEL NO. FCA501		
8	4" FLANGE COUPLING ADAPTER, ROMAC MODEL NO. FCA501		
9	3" METER, FLGxFLG, (WITH STRAINER), SENSUS MODEL W-350 DR OR NEPTUNE MODEL HP TURBINE		
10	3" DUCTILE IRON SPOOL, CLASS 350, FLGxPE		
11	3" DUCTILE IRON SPOOL, CLASS 350, FLGxFLG		
12	2" TYPE "K" COPPER TUBING		
13	4"x3" D.I. REDUCER, FLGxFLG		
14	3" RESILIENT WEDGE GATE VALVE, FLGxFLG, WITH VALVE COVER ASSEMBLY PER STD. DWG. NO. W-8.		
15	3" RESILIENT WEDGE GATE VALVE, FLGxFLG, WITH HANDWHEEL		
16	4" RESILIENT WEDGE GATE VALVE, FLGxFLG, WITH VALVE COVER ASSEMBLY PER STD. DWG. NO. W-8.		
17	7" DIA. x 6" WALL SLEEVE w/ WATER STOP NON-SHRINK WATER TIGHT CAULKING		
18	8" DIA. x 6" WALL SLEEVE w/ WATER STOP NON-SHRINK WATER TIGHT CAULKING		
19	4' x 6'-6" x 48" DEEP PARKWAY WATER VAULT WITH COVER DESIGNED FOR PARKWAY LOADING, JENSEN PRECAST MODEL NO. K466-FH48-08P.		
20	ADJUSTABLE PIPE SUPPORT PER STD. DWG. NO. W-19		
21	18" SQUARE x 18" DEEP CONCRETE PEDESTAL FOR PIPE SUPPORT.		

\* TO BE PROVIDED BY THE CITY OF ALHAMBRA

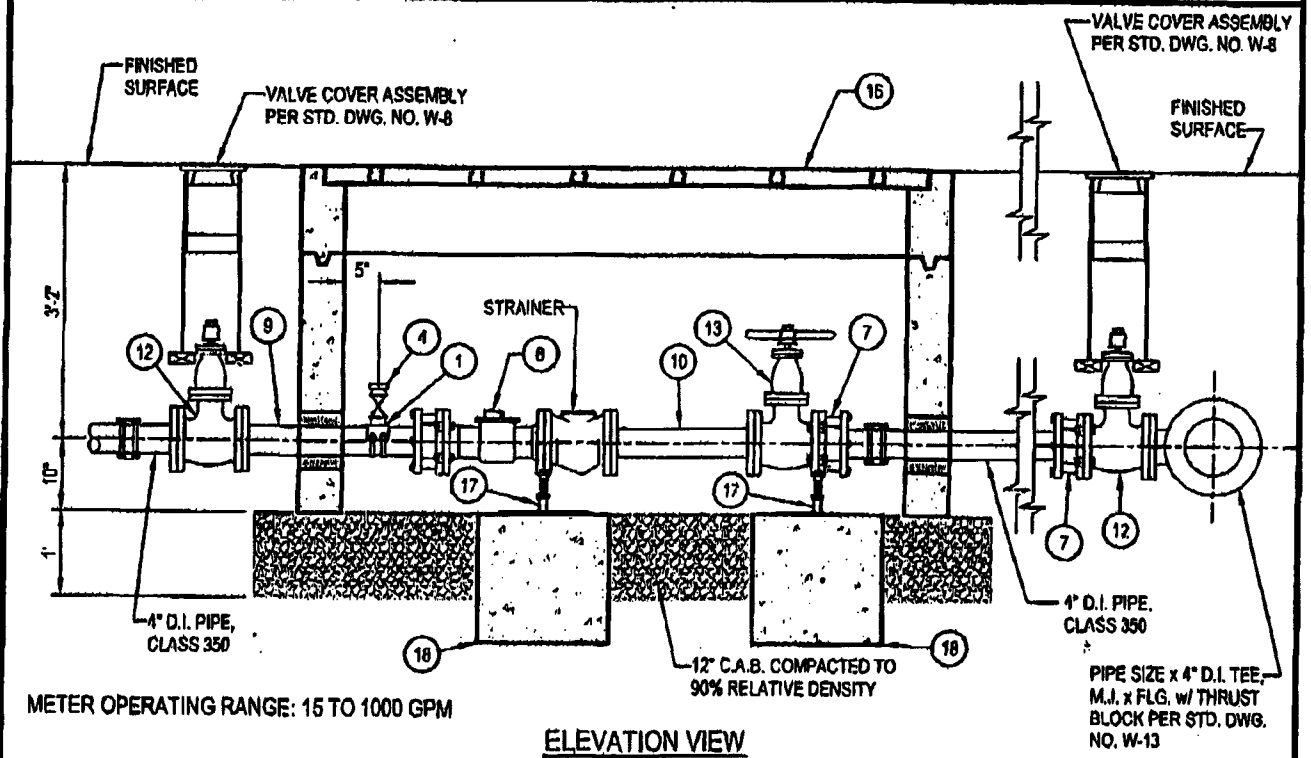
UNLESS OTHERWISE SPECIFIED ON PLANS OR CALLED FOR IN THE SPECIFICATIONS:

1. ANY CHANGES TO STANDARD MUST BE APPROVED BY THE CITY ENGINEER.
2. THE VAULT COVER SHALL HAVE AT LEAST 3 PLATES WITH FLUSH LIFT HANDLES AND BOLT DOWN FEATURES. THE COVER SHALL BE DESIGNED FOR TRAFFIC LOADING IF LOCATED IN AREA WITH TRAFFIC ACCESS. COVER SHALL BE SUPPORTED BY REMOVABLE BEAMS. METER READING LID SHALL BE PROVIDED CENTERED OVER THE METER REGISTER. EACH READING LID SHALL BE FLUSH MOUNT, RECTANGULAR IN SHAPE AND HINGED.
3. ALL BOLTS SHALL BE STAINLESS STEEL.
4. GATE VALVES 4" IN SIZE AND LARGER SHALL BE RESILIENT WEDGE GATE VALVES. GATE VALVES UNDER 4" IN SIZE SHALL BE PER AWWA C500-LATEST EDITION. ALL 3" VALVES OR LARGER WHICH ARE LOCATED INSIDE THE VAULT, SHALL BE EQUIPPED WITH A HANDWHEEL.
5. ALL VAULTS SHALL BE EQUIPPED WITH A PRECAST CONCRETE FLOOR, SUMP WITH GRATE, AND 1 C.F. OF 3/4" GRAVEL BELOW SUMP.

<b>CITY OF ALHAMBRA</b>		REV. No.	DATE	BY/APP.	ITEM
DEPARTMENT OF UTILITIES		APPROVED: <i>mmmtan</i>		DATE: 11-30-05	
<b>3" SERVICE CONNECTION WITH 2" METERED BY-PASS</b>		DIRECTOR OF UTILITIES		DATE	
APPROVED: <i>Tom Calk</i>	DATE: 11/2/05	DESIGNED	DRB	DATE	AUG. 2005
DEPUTY DIRECTOR - UTILITIES	DATE	DRAWN	DRB	DATE	AUG. 2005
<i>[Signature]</i>	43296 9/2/05	CITY ENGINEER	RCE No.	CHECKED	TLK
	DATE			SCALE:	AS SHOWN
				DATE:	AUGUST 2005
				DWG. No.	W-4
					SWT 2 OF 2



PLAN VIEW



ELEVATION VIEW

<p align="center"><b>CITY OF ALHAMBRA</b></p> <p align="center">DEPARTMENT OF UTILITIES</p> <p align="center"><b>4" SERVICE CONNECTION WITH 2" METERED BY-PASS</b></p>		REV. No.	DATE	BY/APP.	ITEM
		<p>APPROVED: <i>[Signature]</i> 11-30-05</p> <p>DIRECTOR OF UTILITIES</p>			
APPROVED:	DATE	BY	DATE	SCALE	DATE
<i>[Signature]</i>	11/2/05	DRB	AUG. 2005	AS SHOWN	DWG. No.
DEPUTY DIRECTOR - UTILITIES	DATE	DRAWN	DATE	DATE	W-5
43296	9/2/05	DRB	AUG. 2005	AUGUST 2005	
CITY ENGINEER	RCE No.	CHECKED	DATE		SHT. 1 OF 2
		TLK	AUG. 2005		

### CONSTRUCTION NOTES

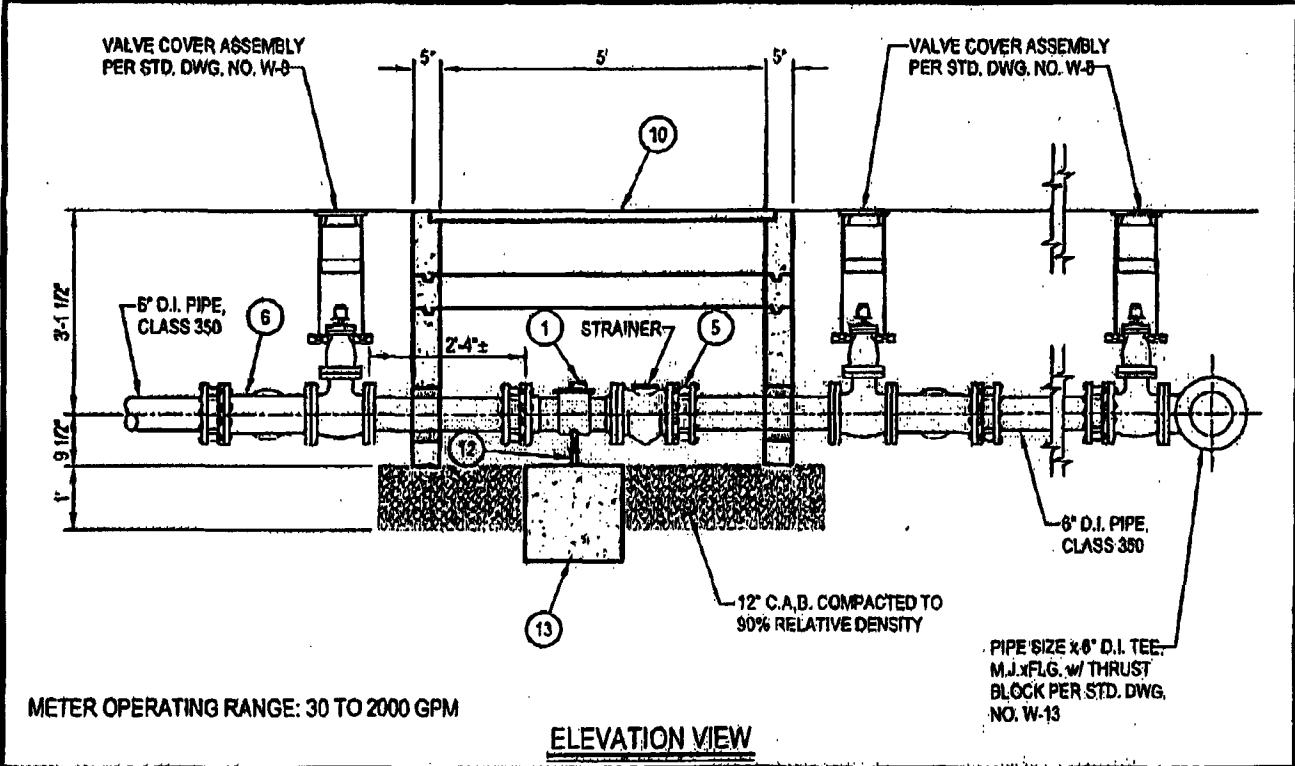
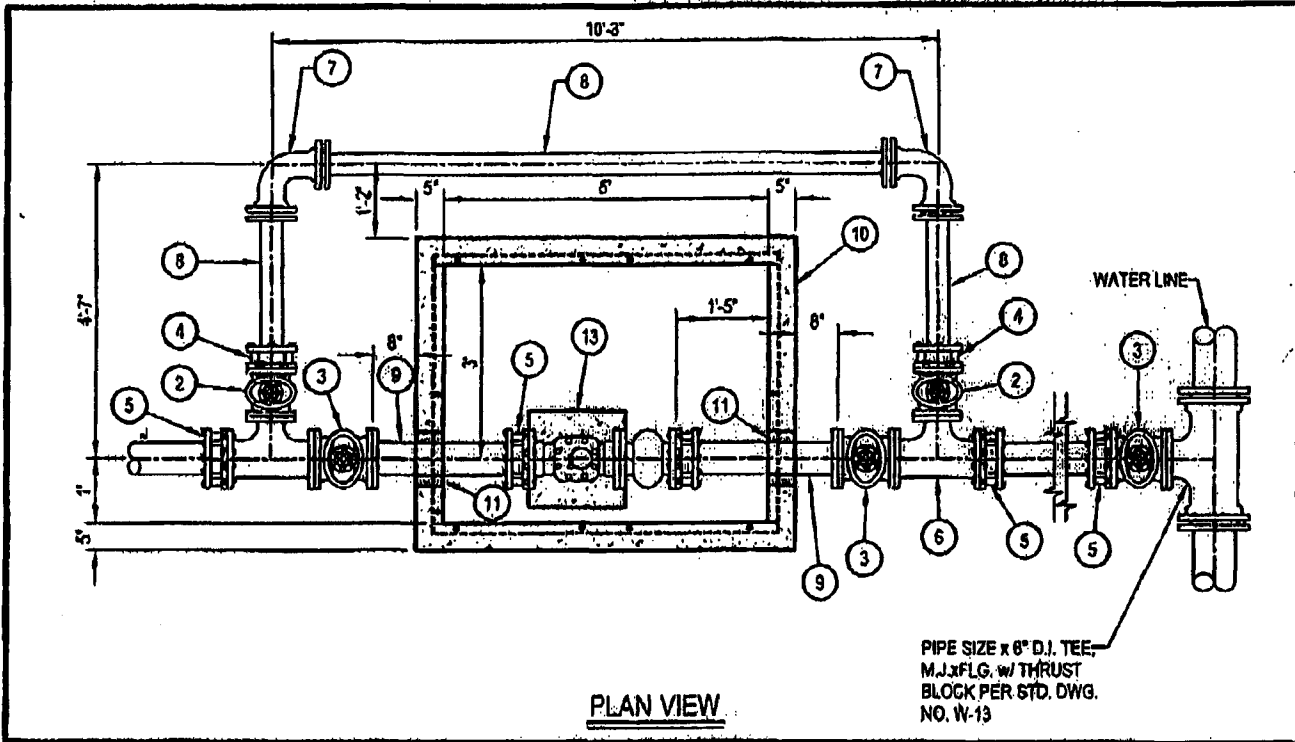
NO.	DESCRIPTION	JAMES JONES	CAMBRIDGE BRASS
1	DOUBLE STRAP SERVICE SADDLE WITH 2" TAP	J-979	SERIES 810
2	2" QUARTER BEND COUPLING, COMP. x COMP.	J-2611	105-H7H7
3	2" BALL METER VALVE, COMP. x METER FLANGE	J1939SG	212-H7MF7
4	2" CORPORATION MAIN STOP, M.I.P. x COMP.	J-1935SG	301-M7H7
5	2" METER COUPLING, METER FLANGE x PACK JOINT, FORD MODEL NO. CF34-77		
* 6	2" METER, FLGxFLG, SENSUS MODEL NO. 2" SR OR NEPTUNE MODEL NO. T-10		
7	4" FLANGE COUPLING ADAPTER, ROMAC MODEL NO. FCA501		
8	4" METER, FLGxFLG, (WITH STRAINER), SENSUS MODEL W-1000 DR OR NEPTUNE MODEL HP TURBINE		
9	4" DUCTILE IRON SPOOL, CLASS 350, FLGxPE		
10	4" DUCTILE IRON SPOOL, CLASS 350, FLGxFLG		
11	2" TYPE "K" COPPER TUBING		
12	4" RESILIENT WEDGE GATE VALVE, FLGxFLG, WITH VALVE COVER ASSEMBLY PER STD. DWG. NO. W-8.		
13	4" RESILIENT WEDGE GATE VALVE, FLGxFLG, WITH HANDWHEEL		
14	8" DIA. x 6" WALL SLEEVE w/ WATER STOP NON-SHRINK WATER TIGHT CAULKING		
15	6" DIA. x 6" WALL SLEEVE w/ WATER STOP NON-SHRINK WATER TIGHT CAULKING		
16	4' x 6'-6" x 48" DEEP PARKWAY WATER VAULT WITH COVER DESIGNED FOR PARKWAY LOADING, JENSEN PRECAST MODEL NO. K468-FH48-00P.		
17	ADJUSTABLE PIPE SUPPORT PER STD. DWG. NO. W-19		
18	18" SQUARE x 18" DEEP CONCRETE PEDESTAL FOR PIPE SUPPORT.		

\* TO BE PROVIDED BY THE CITY OF ALHAMBRA

UNLESS OTHERWISE SPECIFIED ON PLANS OR CALLED FOR IN THE SPECIFICATIONS:

1. ANY CHANGES TO STANDARD MUST BE APPROVED BY THE CITY ENGINEER.
2. THE VAULT COVER SHALL HAVE AT LEAST 3 PLATES WITH FLUSH LIFT HANDLES AND BOLT DOWN FEATURES. THE COVER SHALL BE DESIGNED FOR TRAFFIC LOADING IF LOCATED IN AREA WITH TRAFFIC ACCESS. COVER SHALL BE SUPPORTED BY REMOVABLE BEAMS. METER READING LID SHALL BE PROVIDED CENTERED OVER THE METER REGISTER. EACH READING LID SHALL BE FLUSH MOUNT, RECTANGULAR IN SHAPE AND HINGED.
3. ALL BOLTS SHALL BE STAINLESS STEEL.
4. GATE VALVES 4" IN SIZE AND LARGER SHALL BE RESILIENT WEDGE GATE VALVES. GATE VALVES UNDER 4" IN SIZE SHALL BE PER AWWA C500-LATEST EDITION. ALL 3" VALVES OR LARGER WHICH ARE LOCATED INSIDE THE VAULT, SHALL BE EQUIPPED WITH A HANDWHEEL.
5. ALL VAULTS SHALL BE EQUIPPED WITH A PRECAST CONCRETE FLOOR, SUMP WITH GRATE, AND 1 C.F. OF 3/4" GRAVEL BELOW SUMP.

<b>CITY OF ALHAMBRA</b>		REV. No.	DATE	BY/APP.	ITEM
DEPARTMENT OF UTILITIES		1			
<b>4" SERVICE CONNECTION WITH 2" METERED BY-PASS</b>		APPROVED		<i>mmontana</i> 11-30-05	
APPROVED:		DIRECTOR OF UTILITIES		DATE	
<i>Tom Colby</i>		<i>11/2/05</i>		DATE	
DEPUTY DIRECTOR - UTILITIES		43296		9/2/05	
CITY ENGINEER		RCE No.		DATE	
		DESIGNED	BY	DATE	SCALE
		DRB	DRB	AUG. 2005	AS SHOWN
		DRAWN	BY	DATE	SCALE
		DRB	DRB	AUG. 2005	AUGUST 2005
		CHECKED	BY	DATE	SCALE
		TLK	TLK	AUG. 2005	AUGUST 2005
					DWG No. <b>W-5</b>
					SHT. 2 OF 2



<b>CITY OF ALHAMBRA</b>		REV. NO.	DATE	BY/APP.	ITEM
DEPARTMENT OF UTILITIES		APPROVED: <i>[Signature]</i>		11-30-05	
<b>6" SERVICE CONNECTION WITH 4" D.I.P. BY-PASS</b>		DIRECTOR OF UTILITIES		DATE	
APPROVED:	11/2/05	BY	DATE	SCALE	DWG. No.
<i>[Signature]</i>	DATE	CRB	AUG 2005	AS SHOWN	W-6
DEPUTY DIRECTOR - UTILITIES	43296	DRAWN	AUG 2005	DATE	
<i>[Signature]</i>	DATE	TLK	AUG 2005	AUGUST 2005	
CITY ENGINEER	RCE No.	CHECKED			Sht. 1 of 2

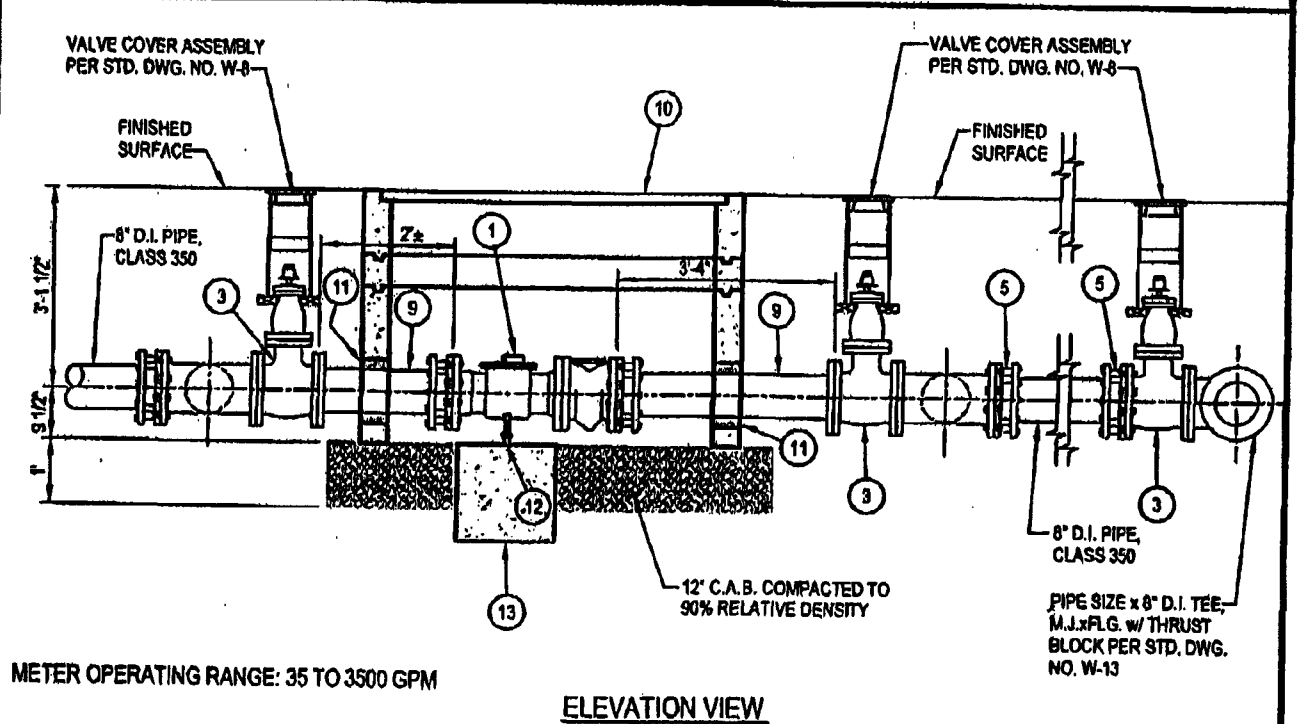
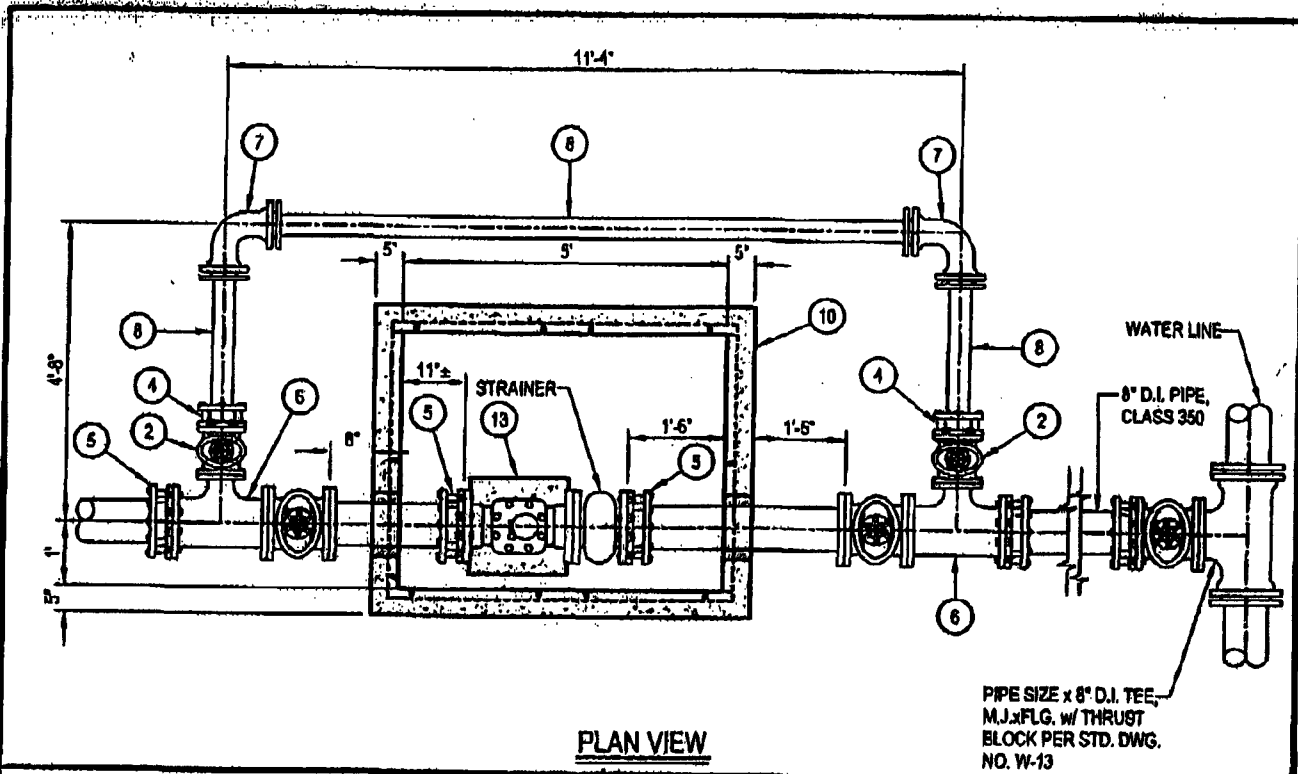
### CONSTRUCTION NOTES

NO.	DESCRIPTION
1	6" METER, FLGxFLG (METER SHALL BE SUPPLIED WITH STRAINER), SENSUS W-2000 DR OR NEPTUNE HP TURBINE
2	4" RESILIENT WEDGE GATE VALVE, FLGxFLG, w/ VALVE COVER ASSEMBLY PER STD. DWG. NO. W-8.
3	6" RESILIENT WEDGE GATE VALVE, FLGxFLG, w/ VALVE COVER ASSEMBLY PER STD. DWG. NO. W-8
4	4" FLANGE COUPLING ADAPTER, ROMAC FCA501
5	6" FLANGE COUPLING ADAPTER, ROMAC FCA501
6	6"x8"x4" D.I. TEE, FLGxFLGxFLG
7	4" 90° D.I. BEND, MJxMJ
8	4" DUCTILE IRON SPOOL, CLASS 350, PExPE
9	6" DUCTILE IRON SPOOL, CLASS 350, FLGxPE
10	4'x5'x4' DEEP PARKWAY WATER VAULT WITH COVER DESIGNED FOR PARKWAY LOADING, JENSEN PRECAST MODEL NO. K45-FH49-08P.
11	10" DIA. x 5' WALL SLEEVE w/ WATER STOP, NON-SHRINK WATER TIGHT CAULKING
12	ADJUSTABLE PIPE SUPPORT PER STD. DWG. NO. W-19
13	18" SQUARE x 18" DEEP CONCRETE PEDESTAL FOR PIPE SUPPORT.

**UNLESS OTHERWISE SPECIFIED ON PLANS OR CALLED FOR IN THE SPECIFICATIONS:**

1. ANY CHANGES TO STANDARD MUST BE APPROVED BY THE CITY ENGINEER.
2. THE VAULT COVER SHALL HAVE AT LEAST 2 PLATES WITH FLUSH LIFT HANDLES AND BOLT DOWN FEATURES. THE COVER SHALL BE DESIGNED FOR TRAFFIC LOADING IF LOCATED IN AREA WITH TRAFFIC ACCESS. COVER SHALL BE SUPPORTED BY REMOVABLE BEAMS. METER READING LID SHALL BE PROVIDED CENTERED OVER THE METER REGISTER. EACH READING LID SHALL BE FLUSH MOUNT, RECTANGULAR IN SHAPE AND HINGED.
3. ALL BOLTS SHALL BE STAINLESS STEEL.
4. GATE VALVES 4" IN SIZE AND LARGER SHALL BE RESILIENT WEDGE GATE VALVES.
5. ALL VAULTS SHALL BE EQUIPPED WITH A PRECAST CONCRETE FLOOR, SUMP WITH GRATE, AND 1 C.F. OF 3/4" GRAVEL BELOW SUMP.

<b>CITY OF ALHAMBRA</b>		REV. No.	DATE	BY/APP.	ITEM
DEPARTMENT OF UTILITIES		1			
<b>6" SERVICE CONNECTION WITH 4" D.I.P. BY-PASS</b>		APPROVED: <i>[Signature]</i>		DATE: 11-30-05	
APPROVED: <i>[Signature]</i>		DIRECTOR OF UTILITIES			
DEPUTY DIRECTOR - UTILITIES		DESIGNED	BY	DATE	SCALE:
CITY ENGINEER		DRAWN	DRD	AUG. 2005	AS SHOWN
RCE No. 43296		CHECKED	TLK	AUG. 2005	DATE:
DATE: 9/12/05					AUGUST 2005
					DWG. No.
					W-6
					SHT. 2 OF 2



<b>CITY OF ALHAMBRA</b>		REV. No.	DATE	BY/APP.	ITEM
DEPARTMENT OF UTILITIES		APPROVED: <i>[Signature]</i>		DATE: 11-30-05	
<b>8" SERVICE CONNECTION WITH 4" D.I.P. BY-PASS</b>		DIRECTOR OF UTILITIES			
APPROVED: <i>[Signature]</i>	DATE: 11/2/05	DESIGNED: DRB	DATE: AUG. 2005	SCALE: AS SHOWN	DWG. No. W-7
DEPUTY DIRECTOR - UTILITIES	RCE No. 43296	DRAWN: DRB	DATE: AUG. 2005	DATE: AUGUST 2005	SHT. 1 OF 2
CITY ENGINEER	DATE: 9/2/05	CHECKED: TLK	DATE: AUG. 2005		

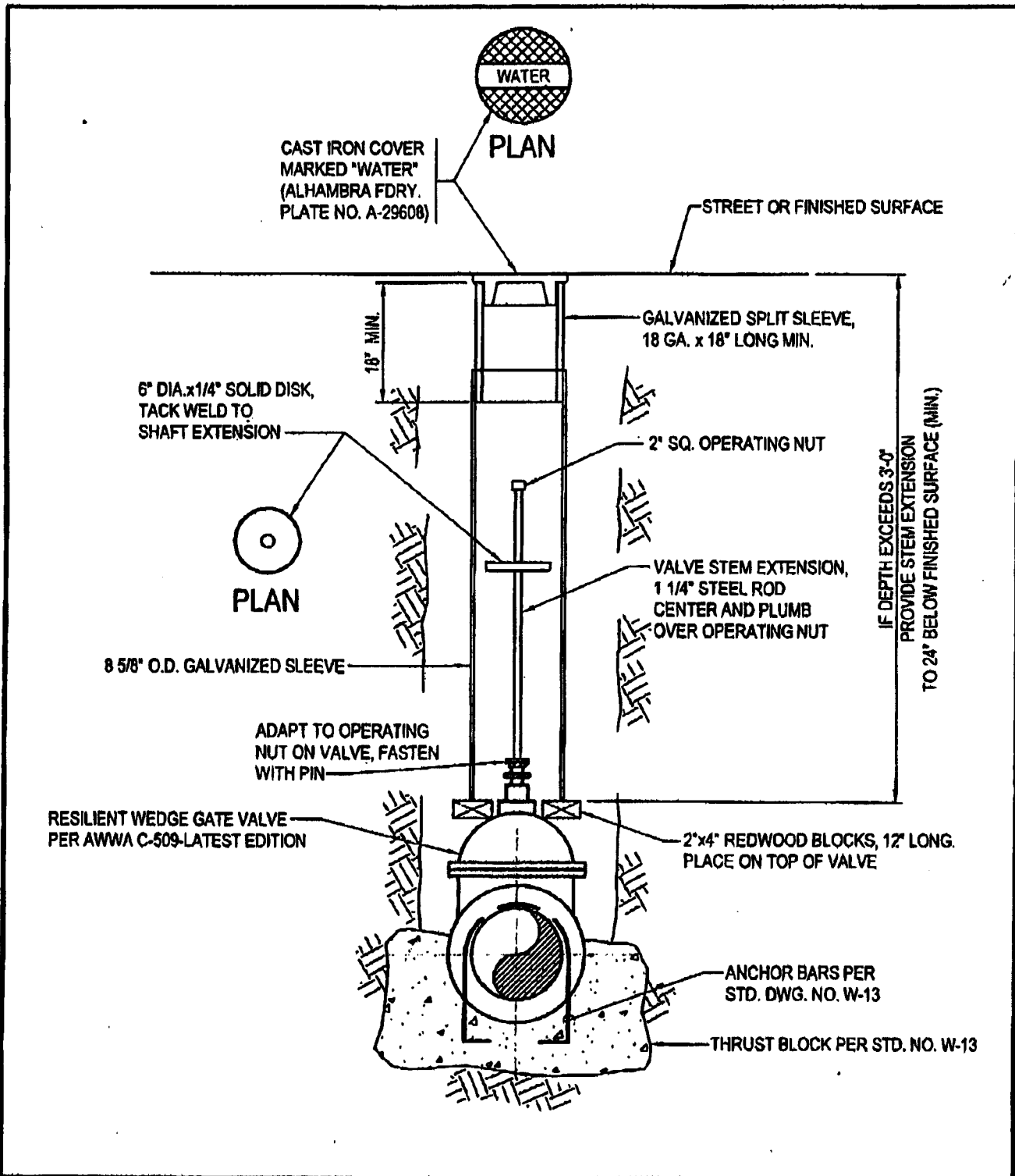
### CONSTRUCTION NOTES

NO.	DESCRIPTION
1	8" METER, FLGxFLG (METER SHALL BE SUPPLIED WITH STRAINER), SENSUS W-3500 DR OR NEPTUNE HP TURBINE
2	4" RESILIENT WEDGE GATE VALVE, FLGxFLG, w/ VALVE COVER ASSEMBLY PER STD. DWG. NO. W-8.
3	8" RESILIENT WEDGE GATE VALVE, FLGxFLG, w/ VALVE COVER ASSEMBLY PER STD. DWG. NO. W-8.
4	4" FLANGE COUPLING ADAPTER, ROMAC FCA501.
5	8" FLANGE COUPLING ADAPTER, ROMAC FCA501.
6	8"x8"x4" D.I. TEE, FLGxFLGxFLG
7	4" - 90° D.I. BEND, MUXMJ
8	4" DUCTILE IRON SPOOL, CLASS 350, PE x PE
9	8" DUCTILE IRON SPOOL, CLASS 350, FLG x PE
10	4'x5'x7" DEEP PARKWAY WATER VAULT WITH COVER DESIGNED FOR PARKWAY LOADING, JENSEN PRECAST MODEL NO. K45-FH48-08P.
11	12" DIA. x 5' WALL SLEEVE w/ WATER STOP NON-SHRINK WATER TIGHT CAULKING
12	ADJUSTABLE PIPE SUPPORT PER STD. DWG. NO. W-19
13	18" SQUARE x 18" DEEP CONCRETE PEDESTAL FOR PIPE SUPPORT.

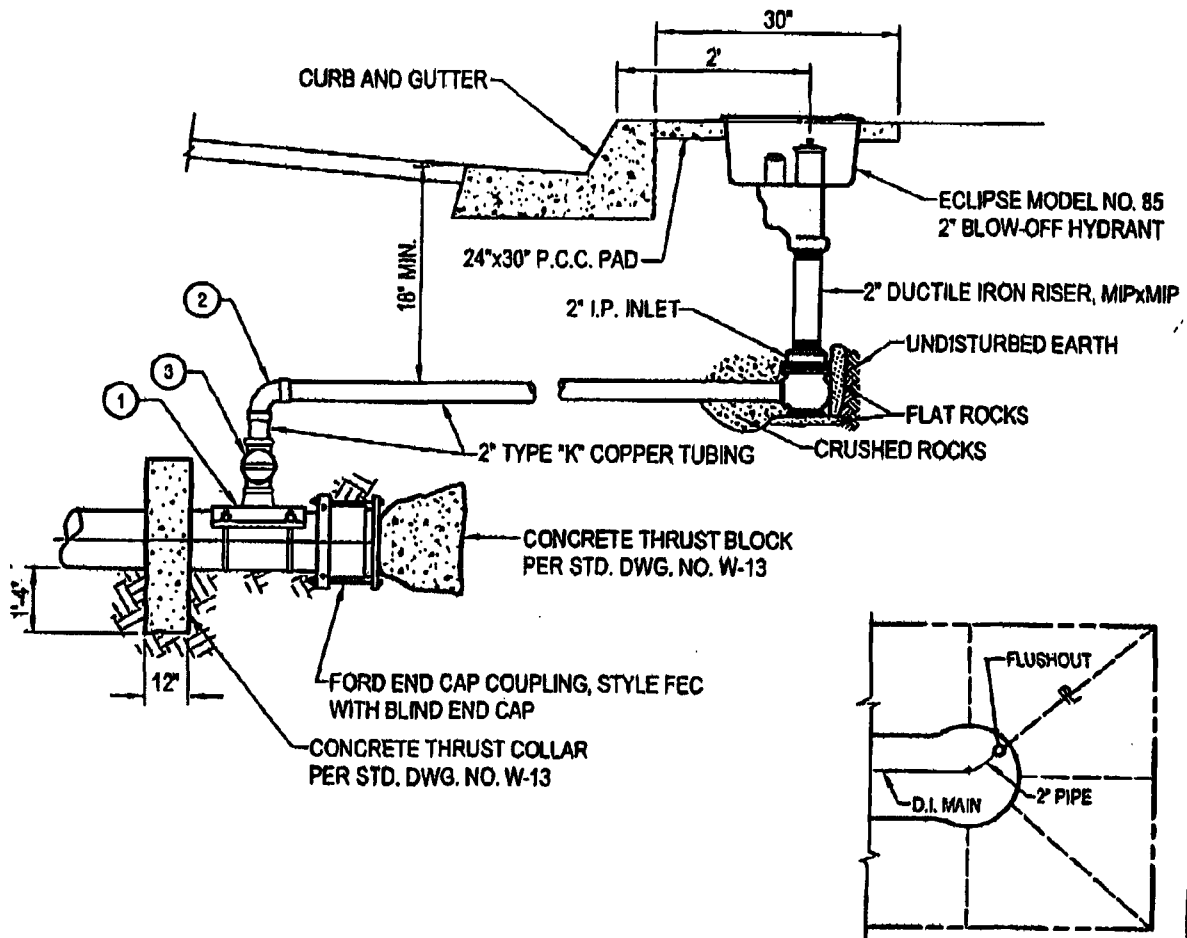
**UNLESS OTHERWISE SPECIFIED ON PLANS OR CALLED FOR IN THE SPECIFICATIONS:**

1. ANY CHANGES TO STANDARD MUST BE APPROVED BY THE CITY ENGINEER.
2. THE VAULT COVER SHALL HAVE AT LEAST 2 PLATES WITH FLUSH LIFT HANDLES AND BOLT DOWN FEATURES. THE COVER SHALL BE DESIGNED FOR TRAFFIC LOADING IF LOCATED IN AREA WITH TRAFFIC ACCESS. COVER SHALL BE SUPPORTED BY REMOVABLE BEAMS. METER READING LID SHALL BE PROVIDED CENTERED OVER THE METER REGISTER. EACH READING LID SHALL BE FLUSH MOUNT, RECTANGULAR IN SHAPE AND HINGED.
3. ALL BOLTS SHALL BE STAINLESS STEEL.
4. GATE VALVES 4" IN SIZE AND LARGER SHALL BE RESILIENT WEDGE GATE VALVES.
5. ALL VAULTS SHALL BE EQUIPPED WITH A PRECAST CONCRETE FLOOR, SUMP WITH GRATE, AND 1 C.F. OF 3/4" GRAVEL BELOW SUMP.

<b>CITY OF ALHAMBRA</b>		REV. No.	DATE	BY/APP.	ITEM
DEPARTMENT OF UTILITIES		APPROVED: <i>[Signature]</i>		DATE: 11-30-05	
8" SERVICE CONNECTION WITH 4" D.I.P. BY-PASS		DIRECTOR OF UTILITIES		DATE	
APPROVED: <i>[Signature]</i>	DATE: 11/2/05	BY	DATE	SCALE:	DWG. No.
DEPUTY DIRECTOR - UTILITIES	DATE: 9/2/05	DESIGNED	DRB	AUG. 2005	AS SHOWN
CITY ENGINEER	RCE No. 43294	DRAWN	DRB	AUG. 2005	DATE: AUGUST 2005
	DATE	CHECKED	TLK	AUG. 2005	W-7
					SHT. 2 OF 2



<p align="center"><b>CITY OF ALHAMBRA</b></p> <p align="center">DEPARTMENT OF UTILITIES</p> <p align="center"><b>GATE VALVE AND VALVE COVER ASSEMBLY</b></p>		REV. No.	DATE	BY/APP.	ITEM
		1			
<p>APPROVED: <i>[Signature]</i> 11/2/05 DEPUTY DIRECTOR - UTILITIES DATE</p> <p><i>[Signature]</i> 43296 9/2/05 CITY ENGINEER RCE No. DATE</p>		<p>APPROVED: <i>[Signature]</i> 11-30-05 DIRECTOR OF UTILITIES DATE</p>		BY	DATE
		DESIGNED	DRB	AUG. 2005	SCALE: AS SHOWN
		DRAWN	DRB	AUG. 2005	DATE: AUGUST 2005
		CHECKED	TLK	AUG. 2005	DWG. No. <b>W-8</b>
					SHT. 1 OF 1



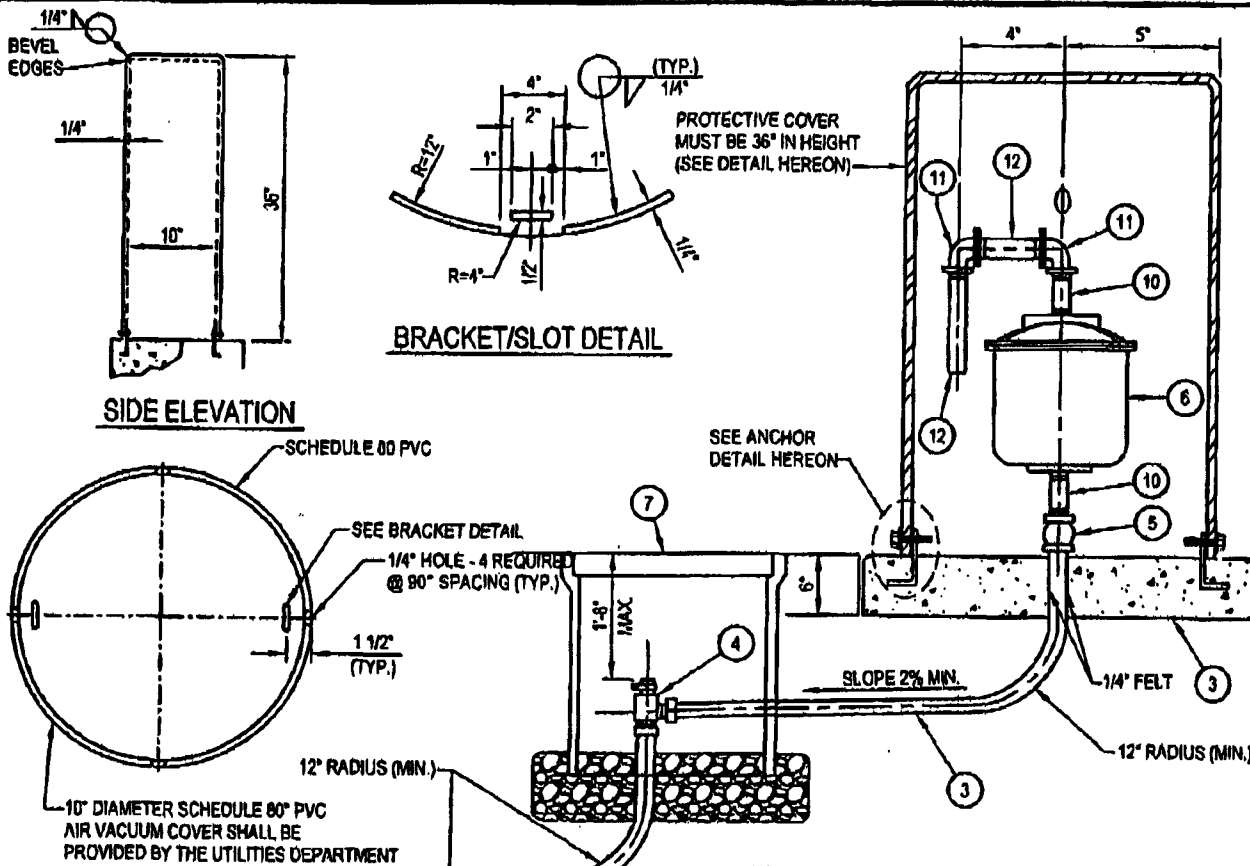
**CONSTRUCTION NOTES**

NO.	DESCRIPTION	JAMES JONES	CAMBRIDGE BRASS
1	DOUBLE STRAP SERVICE SADDLE WITH 2" TAP	J-979	SERIES 810
2	2" QUARTER BEND COUPLING, COMP. x COMP.	J-2611	105-H7H7
3	2" CORPORATION MAIN STOP, M.I.P. x COMP.	J-1935SG	301-M7H7

**NOTES**

1. A BLOW-OFF HYDRANT SHALL BE INSTALLED IN CUL-DE-SAC STREETS GREATER THAN 200 FEET IN LENGTH OR THOSE CUL-DE-SACS WITHOUT A FIRE HYDRANT AT THE END OF THE STREET.
2. FULL SIZE MAIN SHALL CONTINUE AT LEAST TO THE CENTER OF THE CUL-DE-SAC.
3. NO HOUSE SERVICE CONNECTIONS WILL BE ALLOWED ON THE 2" PIPE. THE BLOW-OFF HYDRANT SHALL BE LOCATED ON THE PROJECTION OF A LOT LINE.
4. FOR PIPE SIZES LARGER THAN 12" USE FORD STEEL END CAP COUPLING, STYLE FC4.

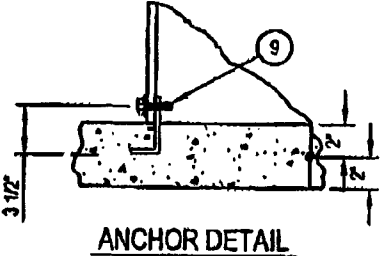
<b>CITY OF ALHAMBRA</b>		REV. No.	DATE	BY/APP.	ITEM
DEPARTMENT OF UTILITIES		APPROVED: <i>[Signature]</i> 11-30-05 DIRECTOR OF UTILITIES			
<b>2" BLOW-OFF ASSEMBLY</b>		BY	DATE	SCALE	DWG. No.
APPROVED:	<i>[Signature]</i> 11/2/05	DESIGNED	DRB	AUG. 2005	AS SHOWN
DEPUTY DIRECTOR - UTILITIES	DATE	DRAWN	DRB	AUG. 2005	DATE
CITY ENGINEER	RCE No. 43296	DATE	9/2/05	CHECKED	TLK
				DATE	AUGUST 2005
					cur 1 of 1



**PLAN**  
**PROTECTIVE COVER DETAIL**  
10" DIA. x 36" HIGH

**CONSTRUCTION NOTES**

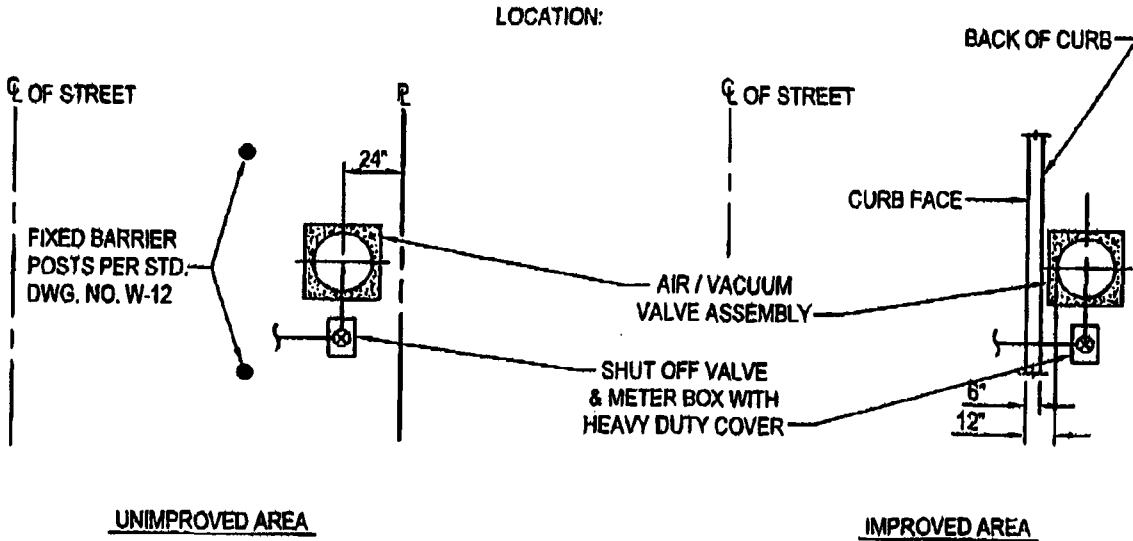
- 1 1" DOUBLE STRAP SADDLE, JAMES JONES J-979 OR CAMBRIDGE BRASS SERIES 810.
- 2 1" CORPORATION STOP, M.I.P.xCOMP., JAMES JONES J-1935SG OR CAMBRIDGE BRASS 301-M4H4.
- 3 1" TYPE 'K' COPPER TUBING
- 4 ANGLE INVERTED KEY METER VALVE, COMP. x SWIVEL NUT, JAMES JONES J-1963WSG OR CAMBRIDGE BRASS 210-M4T4.
- 5 1" COUPLING, COMP.xF.I.P., JAMES JONES J-2807SG OR CAMBRIDGE BRASS 117-M4F4.
- 6 1" AIR / VACUUM RELEASE VALVE, APCO MODEL 142 OR APPROVED EQUAL
- 7 METER BOX, 9 1/2"x16" WITH HEAVY DUTY COVER, BROOKS PRODUCT 3 SERIES
- 8 2'-6"x2'-6"x6" THICK CONCRETE PAD (520-C-2500 PCC PER S.S.P.W.C.)
- 9 ANCHOR BOLTS TO BE PROVIDED BY UTILITIES DEPARTMENT.
- 10 1"x3" LONG BRASS NIPPLE, M.I.P.xM.I.P.
- 11 1" - 90° BRASS ELL, F.I.P.xF.I.P.
- 12 1"x6" LONG BRASS NIPPLE, M.I.P.xM.I.P.



**ANCHOR DETAIL**

<b>CITY OF ALHAMBRA</b>		REV. No.	DATE	BY/APP.	ITEM
<b>DEPARTMENT OF UTILITIES</b>		1			
<b>1" AIR / VACUUM VALVE RELEASE ASSEMBLY</b>		APPROVED: <i>[Signature]</i> 11-30-05			
APPROVED: <i>[Signature]</i> 11/2/05		DIRECTOR OF UTILITIES			
DEPUTY DIRECTOR - UTILITIES	DATE	BY	DATE	SCALE	DWG. No.
<i>[Signature]</i>	43296 9/2/05	DRB	AUG. 2005	AS SHOWN	W-10
CITY ENGINEER	RCE No.	CHECKED	DATE	DATE	SHT. 1 OF 2
		TLK	AUG. 2005	AUGUST 2005	

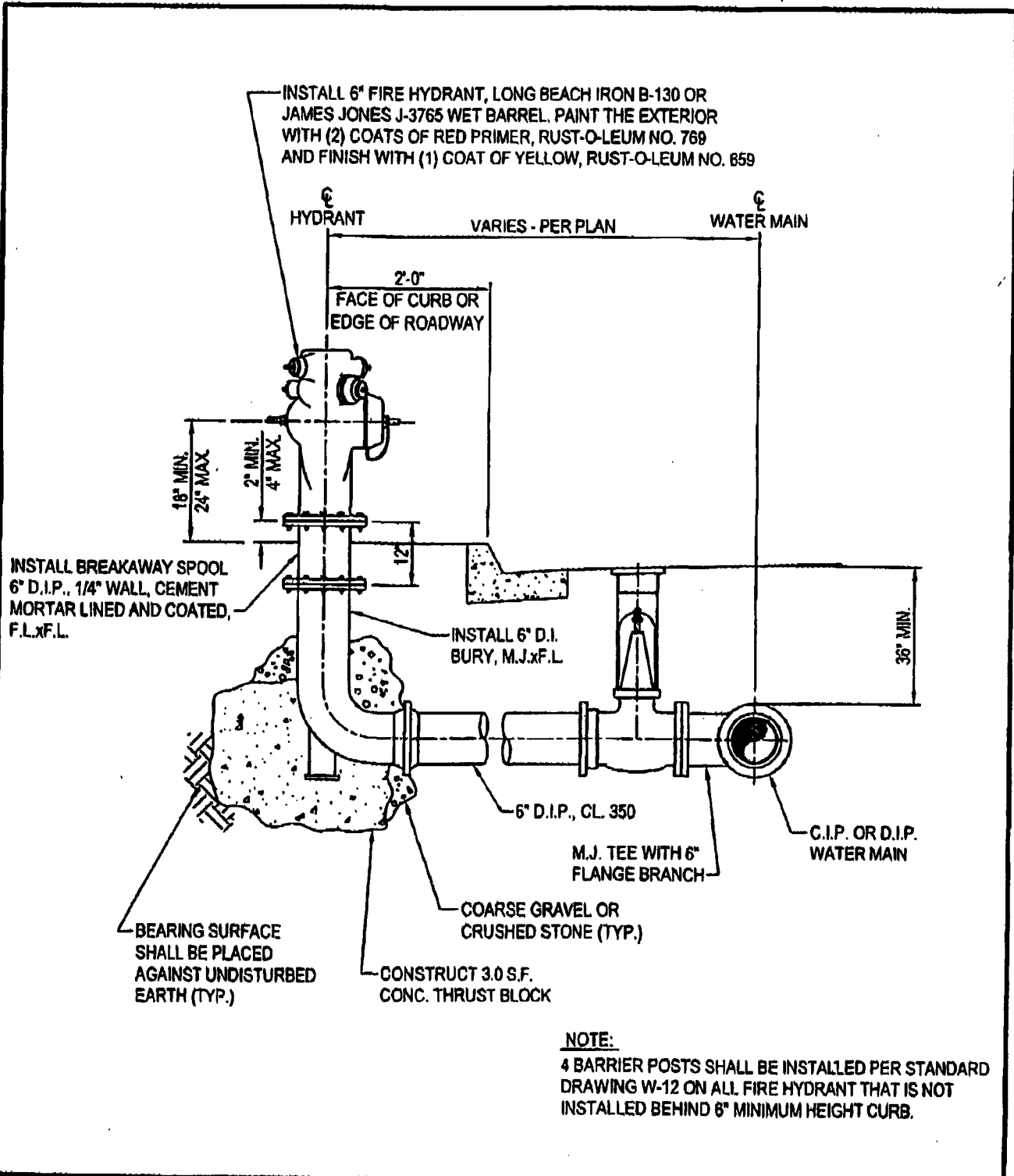
UNLESS OTHERWISE SPECIFIED ON PLANS:



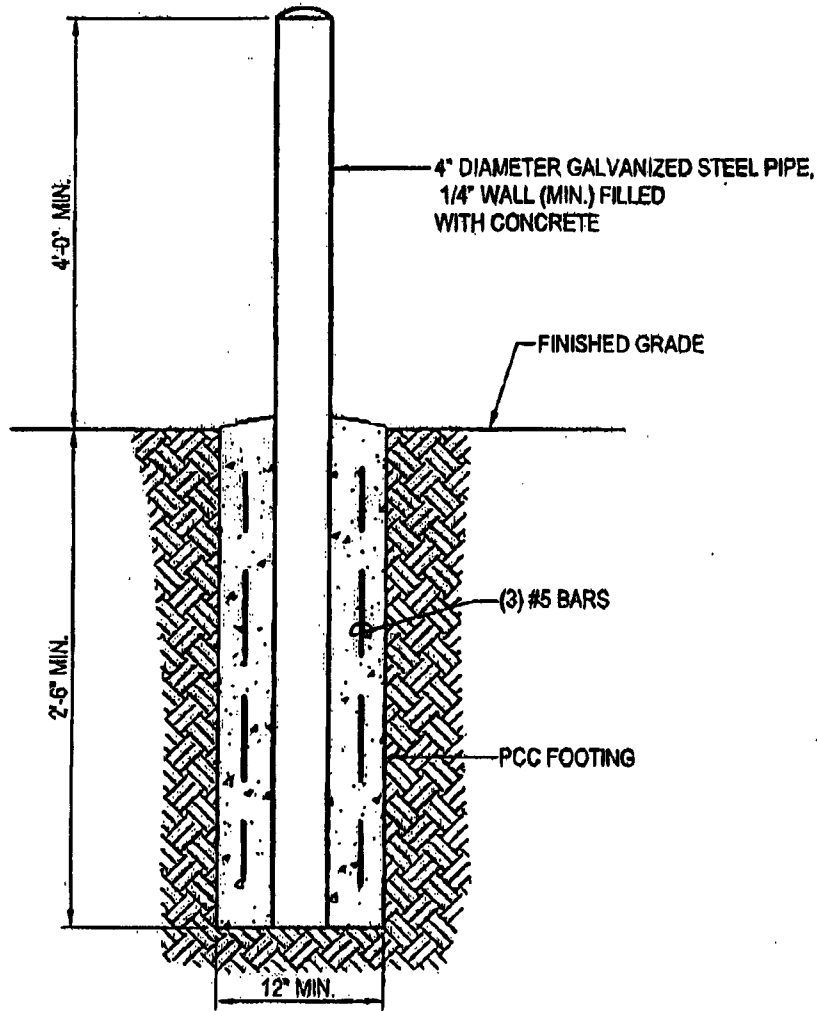
GENERAL NOTES

1. AIR RELEASE VALVE ASSEMBLIES INSTALLED IN EASEMENTS, ROADS AND STREETS WITHOUT CURBS SHALL BE PROTECTED BY TWO GUARD POSTS. POSITION GUARD POSTS 24" IN FRONT OF AND 30" EACH SIDE OF AIR RELEASE VALVE ASSEMBLY.
2. PIPING SHALL BE INSTALLED PRIOR TO STREET PAVING.
3. NO CONNECTION OR TAP SHALL BE PLACED LESS THAN 24" FROM A VALVE, JOINT OR ADJACENT CONNECTION.
4. SET PORTLAND CEMENT CONCRETE PAD 4" ABOVE GRADE IN UNIMPROVED AREAS.

<b>CITY OF ALHAMBRA</b>		REV. No.	DATE	BY/APP.	ITEM
DEPARTMENT OF UTILITIES					
<b>1" AIR / VACUUM VALVE ASSEMBLY</b>		APPROVED: <i>Tom M. Stanton</i> <span style="float: right;">11-30-05</span> DIRECTOR OF UTILITIES			
APPROVED:		BY	DATE	SCALE:	DATE
<i>Tom Cahn</i>	<i>11/2/05</i>	DRB	AUG. 2005	AS SHOWN	<b>W-10</b>
DEPUTY DIRECTOR - UTILITIES		DRB	AUG. 2005	DATE:	
<i>[Signature]</i>	43296	TLK	AUG. 2005	AUGUST 2005	
CITY ENGINEER	RCE No.				SHT. 2 OF 2



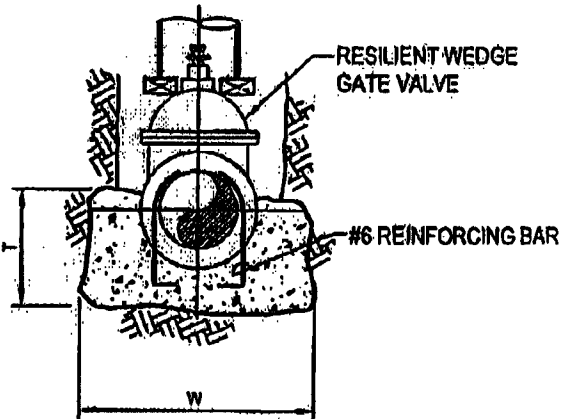
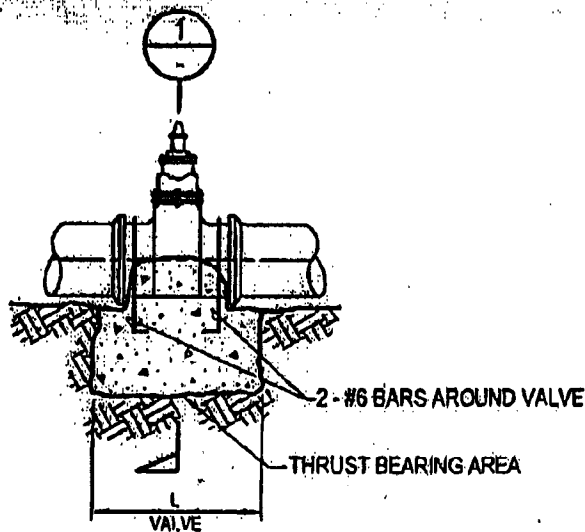
<b>CITY OF ALHAMBRA</b>		REV. No.	DATE	BY/APP.	ITEM
DEPARTMENT OF UTILITIES					
<b>FIRE HYDRANT ASSEMBLY</b>		APPROVER: <i>[Signature]</i> 11-30-05 DIRECTOR OF UTILITIES			
APPROVED:		BY	DATE	SCALE	DATE
<i>[Signature]</i>	11/2/05	DRB	AUG. 2005	AS SHOWN	
DEPUTY DIRECTOR - UTILITIES	DATE	DESIGNED	DATE	SCALE	DWG. No.
<i>[Signature]</i>	9/2/05	DRB	AUG. 2005	AUGUST 2005	W-11
CITY ENGINEER	RCE No.	CHECKED	DATE		SHT. 1 OF 1
	43296	TLK	AUG. 2005		



**NOTE:**

INSTALL POLYETHELENE GUARDIAN SLEEVE, MODEL NO. P6000460-YLW,  
OVER 4" GALVANIZED STEEL PIPE.

<b>CITY OF ALHAMBRA</b> DEPARTMENT OF UTILITIES <b>FIXED POST BARRIER</b>		REV. No.	DATE	BY/APP.	ITEM
APPROVED:		DIRECTOR OF UTILITIES		11-30-05	
DEPUTY DIRECTOR - UTILITIES:		DESIGNED	DRB	AUG. 2005	SCALE: AS SHOWN DATE: AUGUST 2005
CITY ENGINEER:		DRAWN	DRB	AUG. 2005	
RCE No. 43296		CHECKED	TLK	AUG. 2005	
DATE: 9/2/05					DATE: 11/30/05 DWG. No. W-12 SHT. 1 OF 1



SECTION 1

VALVE AND PIPE SIZE	(L) LENGTH	(W) WIDTH	(T) THICKNESS
6"	2'	2'-0"	12"
8"	3'	2'-2"	14"
10"	3'	2'-4"	14"
12"	4'	2'-6"	15"

THRUST BEARING AREA (SQUARE FEET)

PIPE SIZE		6"	8"	10"	12"
TEST PRESSURE (PSI)		150	150	150	150
BENDS	90°	4.0	7.1	11.1	18.0
	45°	2.2	3.8	6.0	8.7
	22.5°	2.0	2.0	3.1	4.4
	11.25°	2.0	2.0	2.0	2.2
PLUG		5.7	10.1	15.7	22.6
TEE/VALVE		2.8	5.0	7.9	11.3
CROSS*		2.8	5.0	7.9	11.3
REDUCER		2.0	4.0	7.0	10.0

\* WITH A VALVE

TABLE(S) BASED ON SOIL BEARING VALUE OF 1500 lb. PER SQUARE FOOT.

CALCULATIONS MUST BE SUBMITTED FOR OTHER SOIL BEARING VALUES OR OTHER TEST PRESSURE IN WATER MAIN.

VERTICAL ANCHOR (CUBIC FEET OF P.C.C.)

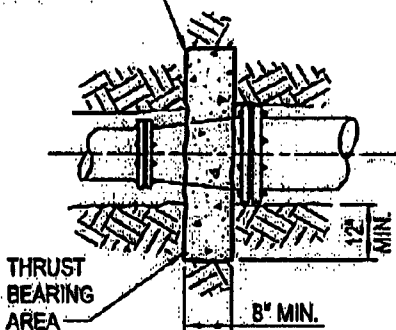
PIPE SIZE		6"	8"	10"	12"
TEST PRESSURE (PSI)		150	150	150	150
BENDS	90°	62	111	173	249
	45°	44	78	122	176
	22.5°	24	42	66	95
	11.25°	12	22	34	49

NOTES:

- THRUST BLOCKS MUST BEAR ON UNDISTURBED SOIL.
- CONCRETE FOR THRUST & ANCHOR BLOCKS SHALL BE OF CLASS 480-C-2000 IN ACCORDANCE WITH S.S.P.W.C. IT SHALL BE POURED (12" THICK MIN.) AGAINST UNDISTURBED SOIL. P.C.C. SHALL BE KEPT CLEAR OF PIPE & BELL OF THE FITTINGS.
- WHEN MECHANICAL JOINTS ARE UTILIZED, SET FORMS TO SEPARATE BOLTS FROM P.C.C. TO ASSURE ACCESS TO BOLTS & JOINTS.

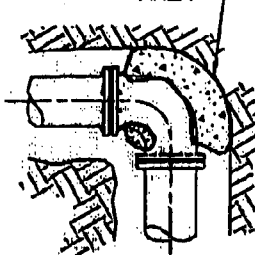
<p><b>CITY OF ALHAMBRA</b> DEPARTMENT OF UTILITIES THRUST BLOCKS</p>		REV. No.	DATE	BY/APP.	ITEM
		<p>APPROVED: <i>[Signature]</i> 11-30-05 DIRECTOR OF UTILITIES</p>			
APPROVED:	BY	DATE	SCALE:	DWG. No.	
DEPUTY DIRECTOR - UTILITIES	DRB	AUG. 2005	AS SHOWN	W-13	
CITY ENGINEER	DRB	AUG. 2005	DATE:	AUGUST 2005	
43296	TLK	AUG. 2005		SHT. 1 OF 2	

CONSTRUCT SYMMETRICAL AROUND PIPE



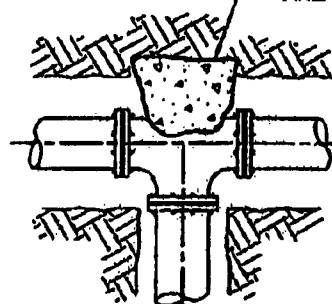
REDUCER PLAN

THRUST BEARING AREA



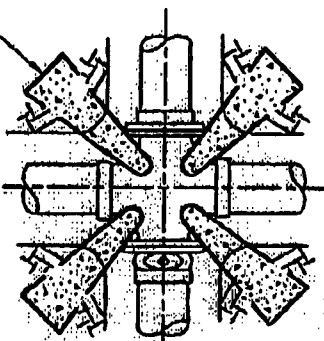
BEND PLAN

THRUST BEARING AREA



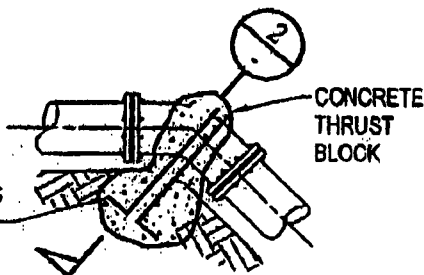
TEE OR PLUG PLAN

THRUST BEARING AREA (TYP.)



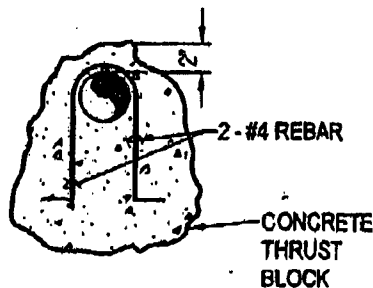
CROSS WITH VALVE PLAN

HOOK ENDS 6" MINIMUM



VERTICAL BEND

CONCRETE THRUST BLOCK



SECTION 2

CITY OF ALHAMBRA

DEPARTMENT OF UTILITIES

THRUST BLOCKS

APPROVED:

DEPUTY DIRECTOR - UTILITIES

CITY ENGINEER

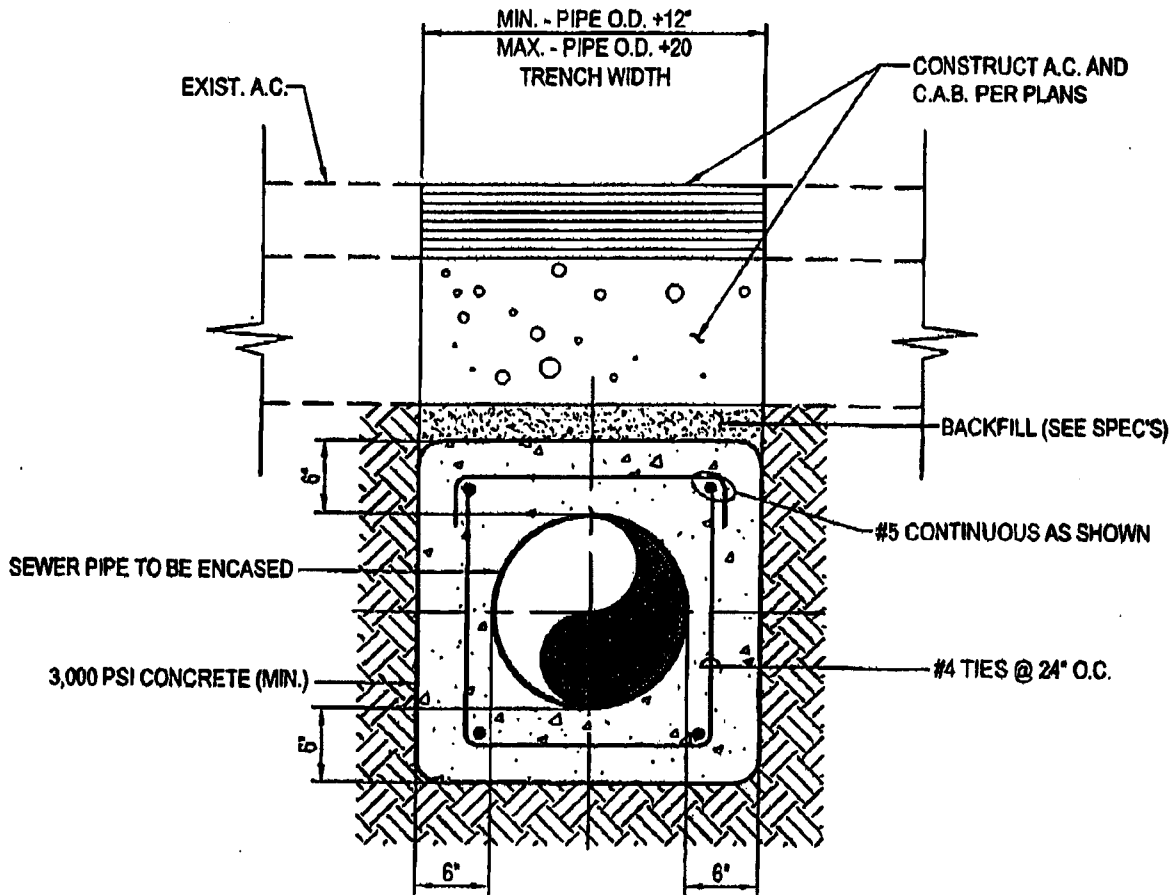
43296

RCE No.

DATE

9/2/05

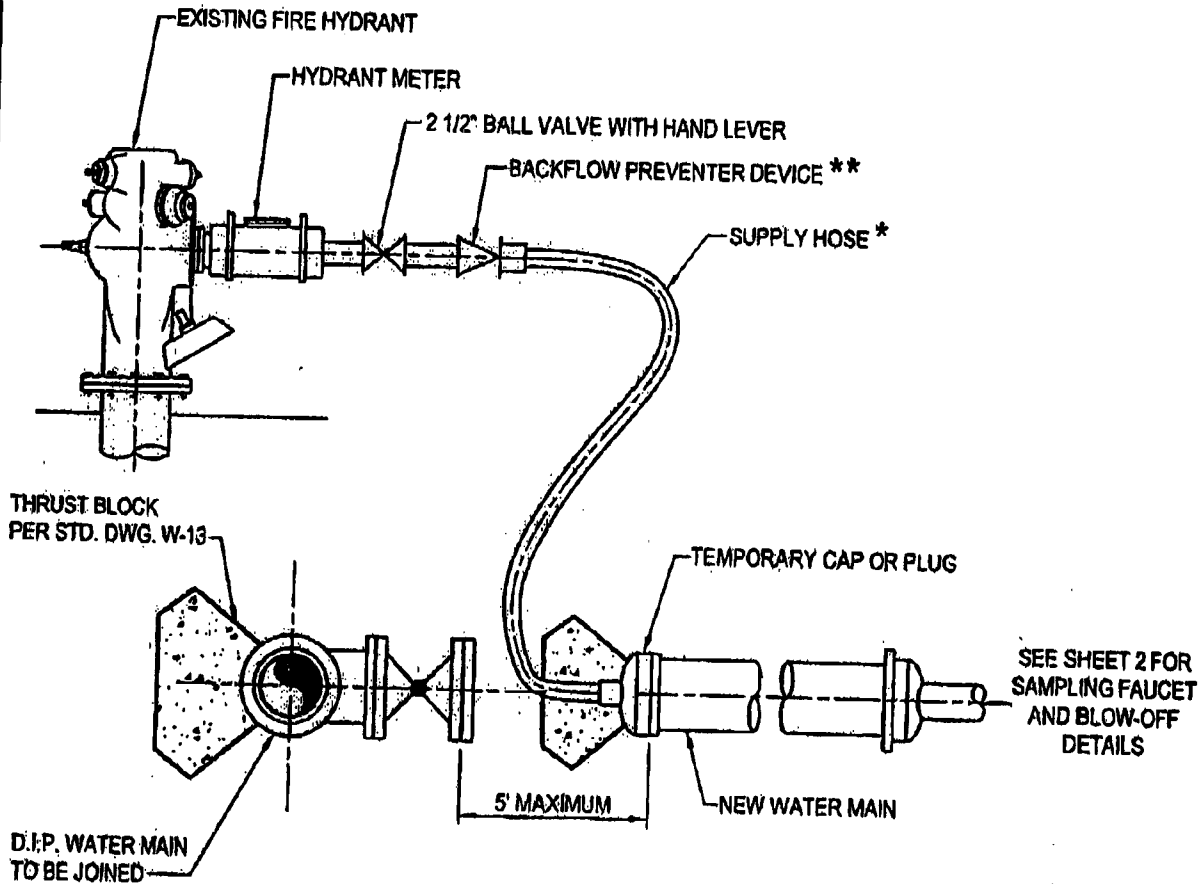
REV. No.	DATE	BY/APP.	ITEM
1			
APPROVED: <i>[Signature]</i>			DATE: 11-30-05
DIRECTOR OF UTILITIES			
DESIGNED	DRB	AUG. 2005	SCALE: AS SHOWN
DRAWN	DRB	AUG. 2005	DATE: AUGUST 2005
CHECKED	TLK	AUG. 2005	DATE: AUGUST 2005
			CONG. No. W-13
			SHT. 2 OF 2



**NOTES:**

1. THE LENGTH OF THE ENCASEMENT SHALL BE AS SHOWN ON THE CONTRACT DRAWINGS.
2. PERPENDICULAR CROSSINGS OF WATER AND SEWER PIPELINES SHALL BE PER CALIFORNIA DEPARTMENT OF HEALTH SERVICES, "CRITERIA FOR THE SEPARATION OF WATER MAIN AND SANITARY SEWER".
3. V.C.P. SEWER PIPE SHALL BE WRAPPED WITH POLYETHYLENE MATERIAL PRIOR TO BEING ENCASED IN CONCRETE.

<b>CITY OF ALHAMBRA</b>		REV. No.	DATE	BY/APP.	ITEM
DEPARTMENT OF UTILITIES		APPROVER		DATE	
PIPE SEWER ENCASEMENT		DIRECTOR OF UTILITIES		DATE	
APPROVED:		DESIGNED	BY	DATE	SCALE
<i>[Signature]</i>		DRAWN	DRB	AUG. 2005	AS SHOWN
DEPUTY DIRECTOR - UTILITIES		CHECKED	TLX	AUG. 2005	DATE
					AUGUST 2005
					CONG. No.
					W-14
					SHT. 1 OF 1

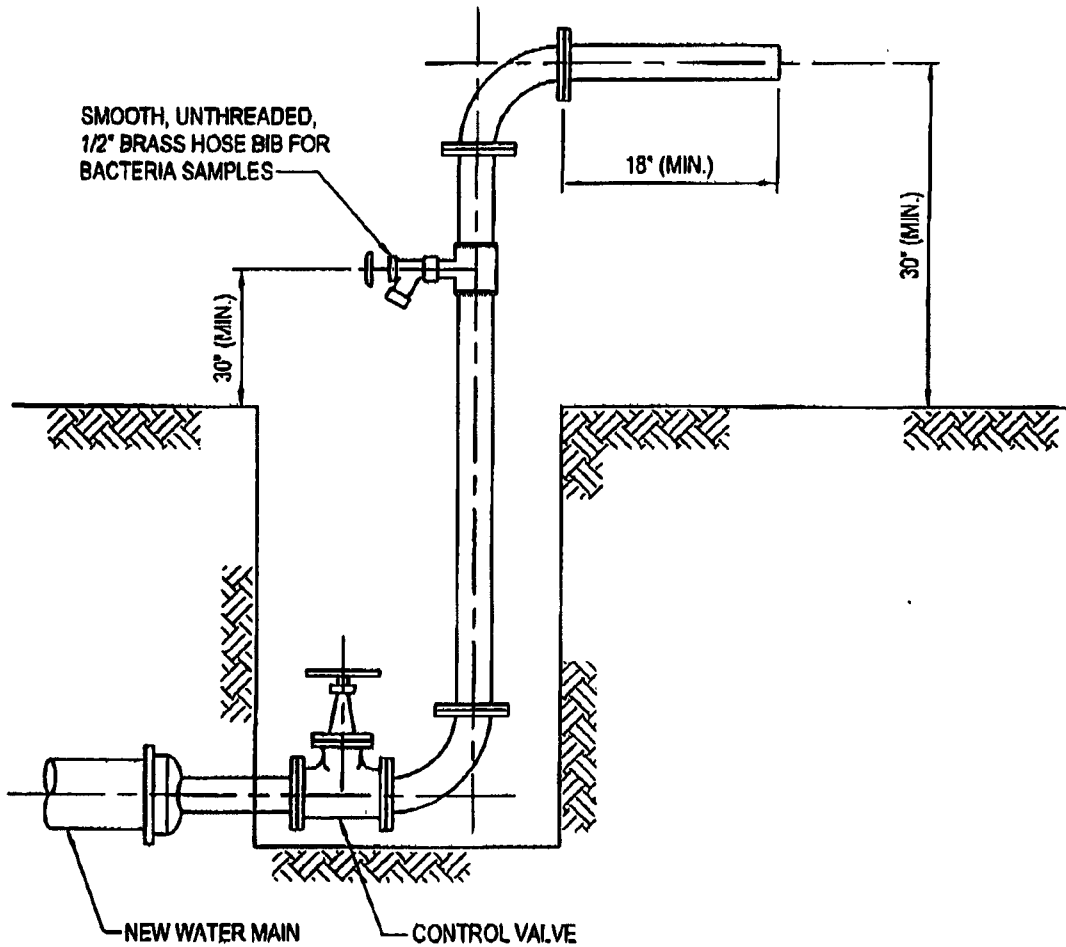


**NOTE:**

\*USE CLEAN POTABLE-WATER HOSE ONLY. THIS HOSE MUST BE REMOVED DURING THE HYDROSTATIC PRESSURE TEST. (SEE TABLE ON SHEET 2 FOR NUMBER OF TAPS AND SIZES REQUIRED).

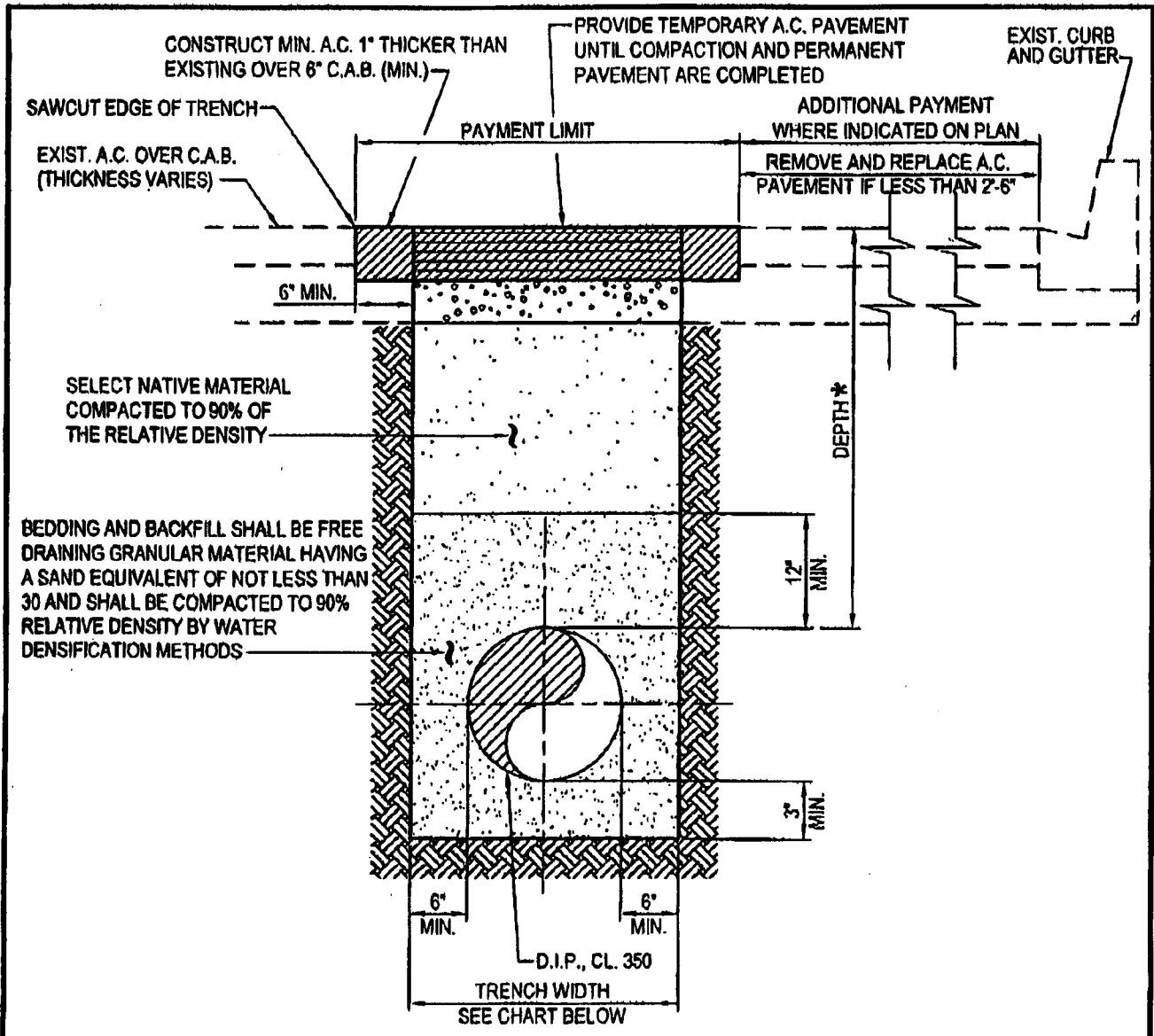
\*\*CITY BACKFLOW INSPECTOR SHALL SPECIFY TYPE AND MAKE.

<b>CITY OF ALHAMBRA</b>		REV. No.	DATE	BY/APP.	ITEM
DEPARTMENT OF UTILITIES		APPROVED: <i>[Signature]</i>		11-30-05	
<b>TEMPORARY FLUSH ASSEMBLY</b>		DIRECTOR OF UTILITIES			
APPROVED: <i>[Signature]</i>	DATE: 11/2/05	BY	DATE	SCALE	DATE
DEPUTY DIRECTOR - UTILITIES	43214	DRB	AUG. 2005	AS SHOWN	DWG. No.
CITY ENGINEER	RCE No.	DRB	AUG. 2005	DATE:	<b>W-15</b>
		TLK	AUG. 2005	AUGUST 2005	SHT. 1 OF 2



PIPE DIAMETER in.	FLOW REQUIRED TO PRODUCE 2.5 ft/s (APPROX.) VELOCITY IN MAIN gpm	SIZE OF TAP, in.			NUMBER OF 2 1/2 INCH HYDRANT OUTLETS
		1	1 1/2	2	
		NUMBER OF TAPS ON PIPE			
4	100	1	-	-	1
6	200	-	1	-	1
8	400	-	2	1	1
10	600	-	3	2	1
12	900	-	-	2	2
16	1600	-	-	4	2

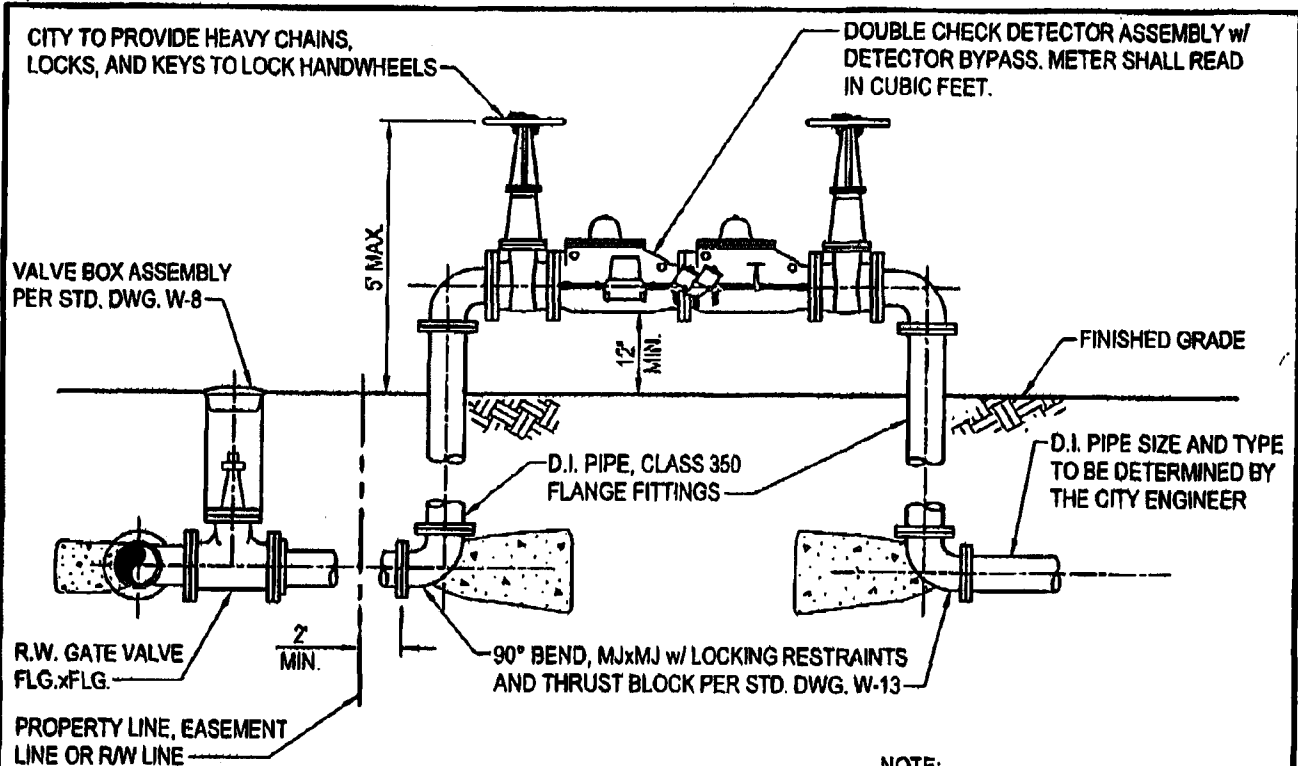
<b>CITY OF ALHAMBRA</b> DEPARTMENT OF UTILITIES <b>TEMPORARY FLUSH ASSEMBLY</b>		REV. No.	DATE	BY/APP.	ITEM
		APPROVED: <i>[Signature]</i> 11-30-05 DIRECTOR OF UTILITIES			
APPROVED:	BY	DATE	SCALE	DWG. No.	
<i>[Signature]</i> DEPUTY DIRECTOR - UTILITIES	DRB	AUG. 2005	AS SHOWN	W-15	
<i>[Signature]</i> CITY ENGINEER	DRB	AUG. 2005	DATE		
43296 RCE No.	TLK	AUG. 2005	AUGUST 2005	SHT. 2 OF 2	



PIPE SIZE	4"	6"	8"	10"	12"	16"	20"	24"	30"
MAXIMUM ALLOWED TRENCH WIDTH	20"	20"	20"	22"	24"	28"	32"	36"	42"

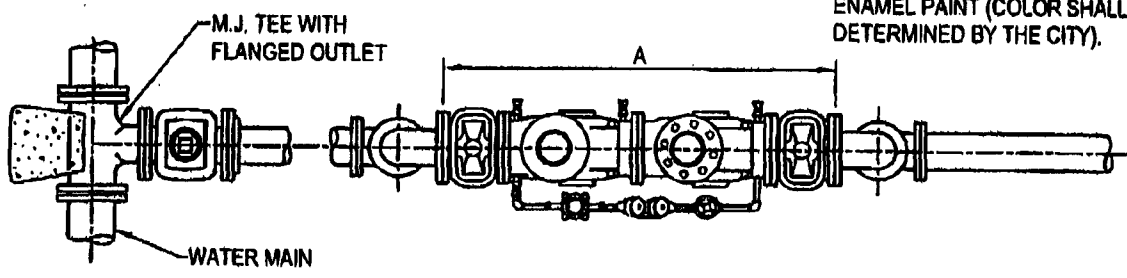
**NOTE:**  
 \*DEPTH OF COVER SHALL BE 36" ON 4" DIA. THROUGH 8" DIA. PIPE ON RESIDENTIAL STREETS.  
 \*DEPTH OF COVER SHALL BE 42" ON 12" DIA. AND LARGER PIPE ON ARTERIAL STREETS.

<b>CITY OF ALHAMBRA</b>		REV. No.	DATE	BY/APP.	ITEM
DEPARTMENT OF UTILITIES		APPROVED		<i>[Signature]</i> 11-30-05	
TYPICAL TRENCH DETAIL		DIRECTOR OF UTILITIES		DATE	
APPROVED:	<i>[Signature]</i>	BY	DATE	SCALE:	DWG. No.
DEPUTY DIRECTOR - UTILITIES	11/2/05	DRB	AUG. 2005	AS SHOWN	<b>W-16</b>
<i>[Signature]</i>	43296	DRB	AUG. 2005	DATE:	
CITY ENGINEER	RCE No.	TLK	AUG. 2005	AUGUST 2005	
					SHT. 1 OF 1



SECTIONAL VIEW

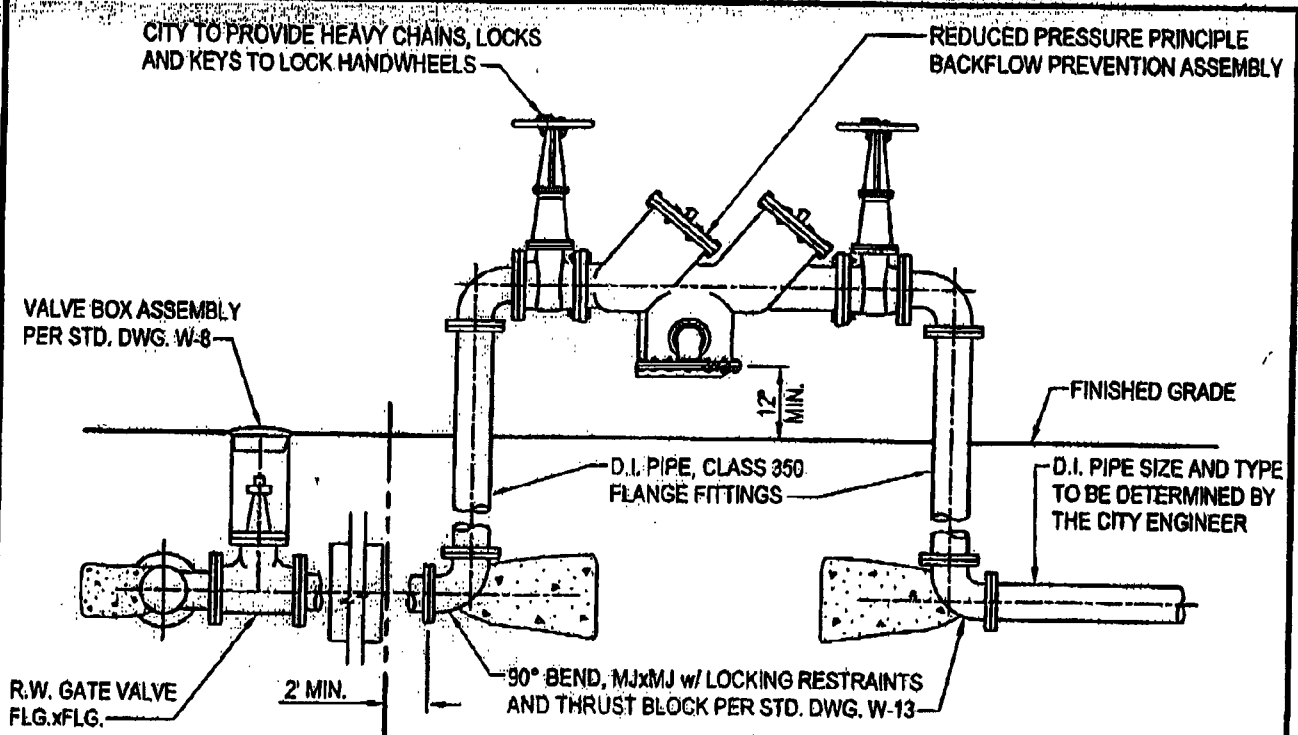
NOTE:  
ALL ABOVE GROUND PIPING & VALVES SHALL RECEIVE ONE COAT OF RED LEAD PRIMER AND TWO FINISHING COATS OF ENAMEL PAINT (COLOR SHALL BE DETERMINED BY THE CITY).



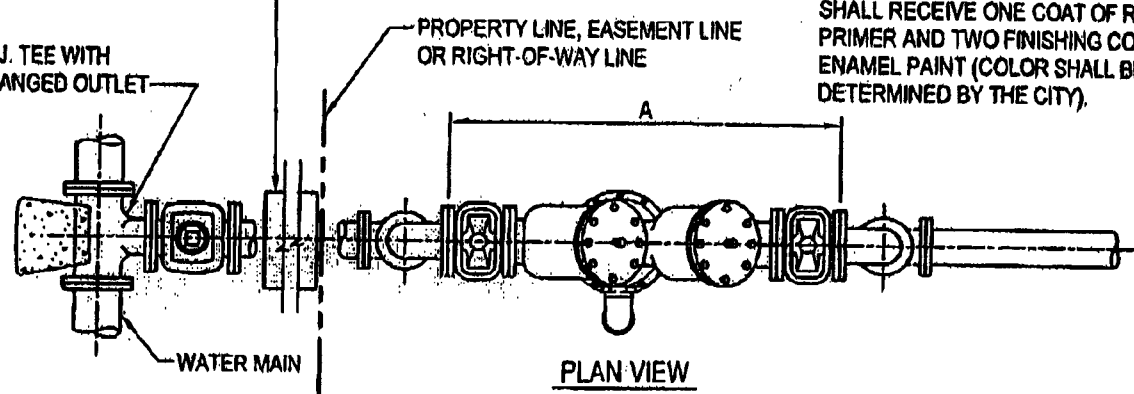
PLAN VIEW

SERVICE	D.C.D.A. LENGTH (A)	MIN. / MAX. FLOW	HERSEY/GRINNEL MODEL O.A.E.
3" x 3/4"	40 5/8"	100 - 320 GPM	MODEL DDC II
4" x 3/4"	47 1/2"	200 - 500 GPM	MODEL DDC II
6" x 3/4"	62"	200 - 1000 GPM	MODEL DDC II
8" x 3/4"	75 1/2"	400 - 1600 GPM	MODEL DDC II
10" x 3/4"	88"	800 - 2300 GPM	MODEL DDC II

<b>CITY OF ALHAMBRA</b>		REV. No.	DATE	BY/APP.	ITEM
DEPARTMENT OF UTILITIES		APPROVED: <i>mmmontan</i> 11-30-05			
<b>DOUBLE CHECK DETECTOR ASSEMBLY</b>		DIRECTOR OF UTILITIES			
APPROVED:		BY	DATE	SCALE:	DATE
<i>Tom Calan</i>	11/2/05	DRB	AUG. 2005	AS SHOWN	DWG. No.
DEPUTY DIRECTOR - UTILITIES	DATE	DRAWN	DATE		<b>W-17</b>
<i>[Signature]</i>	43296 9/2/05	TLK	AUG. 2005	AUGUST 2005	
CITY ENGINEER	RCE No. DATE	CHECKED			SHT. 1 OF 1



**SECTIONAL VIEW**

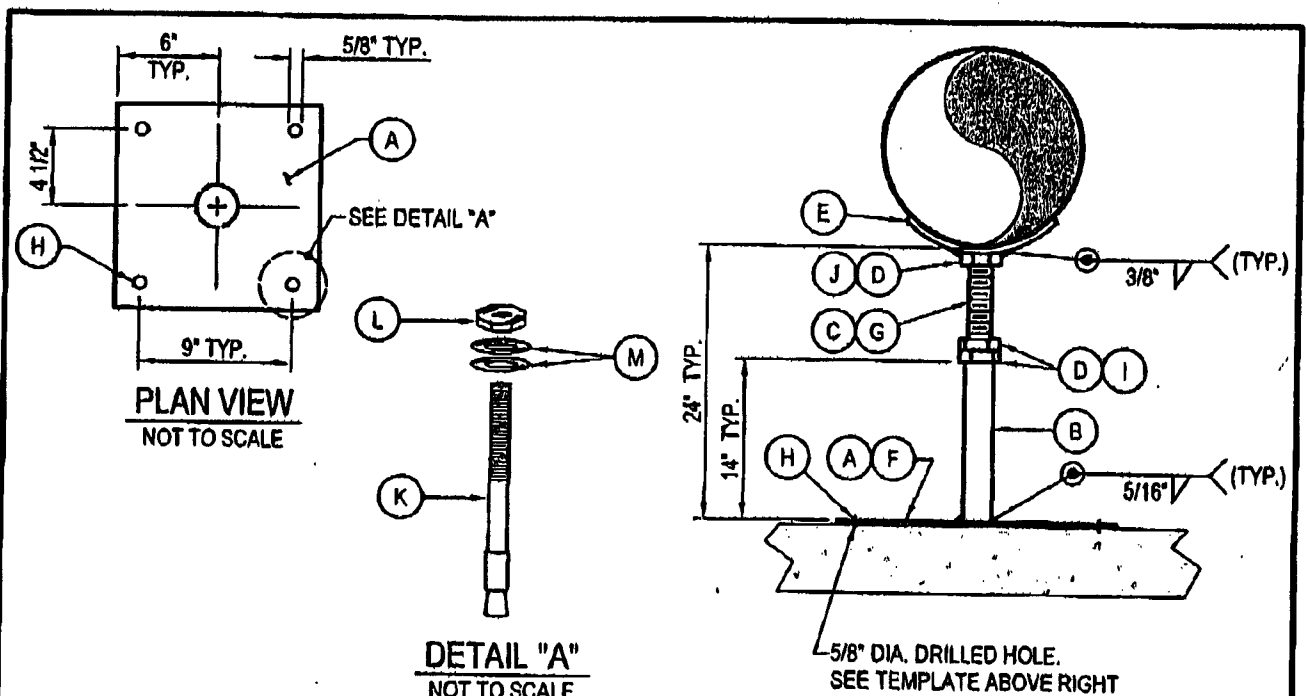


**PLAN VIEW**

**NOTE:**  
ALL ABOVE GROUND PIPING & VALVES SHALL RECEIVE ONE COAT OF RED LEAD PRIMER AND TWO FINISHING COATS OF ENAMEL PAINT (COLOR SHALL BE DETERMINED BY THE CITY).

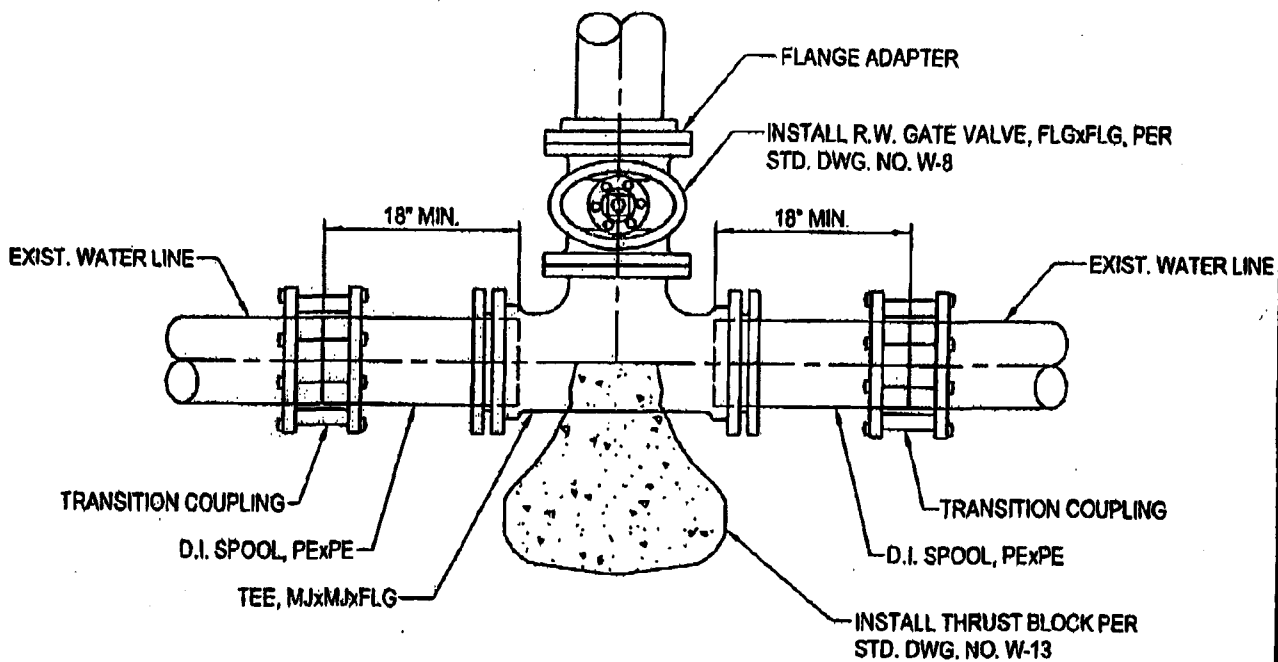
SERVICE	R.P.B.P. LENGTH (A)	MIN. / MAX. FLOW	HERSEY/GRINNEL MODEL O.A.E.
3"	40" (BRONZE)	200 - 320 GPM	MODEL 6CM
4"	46 1/2" (BRONZE)	200 - 500 GPM	MODEL 6CM
6"	62" (BRONZE)	400 - 1000 GPM	MODEL 6CM
8"	75 1/2" (IRON)	800 - 1600 GPM	MODEL 6CM
10"	88" (IRON)	800 - 2300 GPM	MODEL 6CM

<b>CITY OF ALHAMBRA</b>		REV. No.	DATE	BY/APP.	ITEM
DEPARTMENT OF UTILITIES		APPROVED: <i>[Signature]</i>		DATE: 11-30-05	
<b>REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION ASSEMBLY</b>					
APPROVED: <i>[Signature]</i>		BY	DATE	SCALE	DWG. No.
DEPUTY DIRECTOR - UTILITIES		DESIGNED	DRB	AUG. 2005	AS SHOWN
CITY ENGINEER		DRAWN	DRB	AUG. 2005	DATE: AUGUST 2005
RCEN: 43296		CHECKED	TLK	AUG. 2005	<b>W-18</b>
DATE: 9/2/05					SHT. 1 OF 1

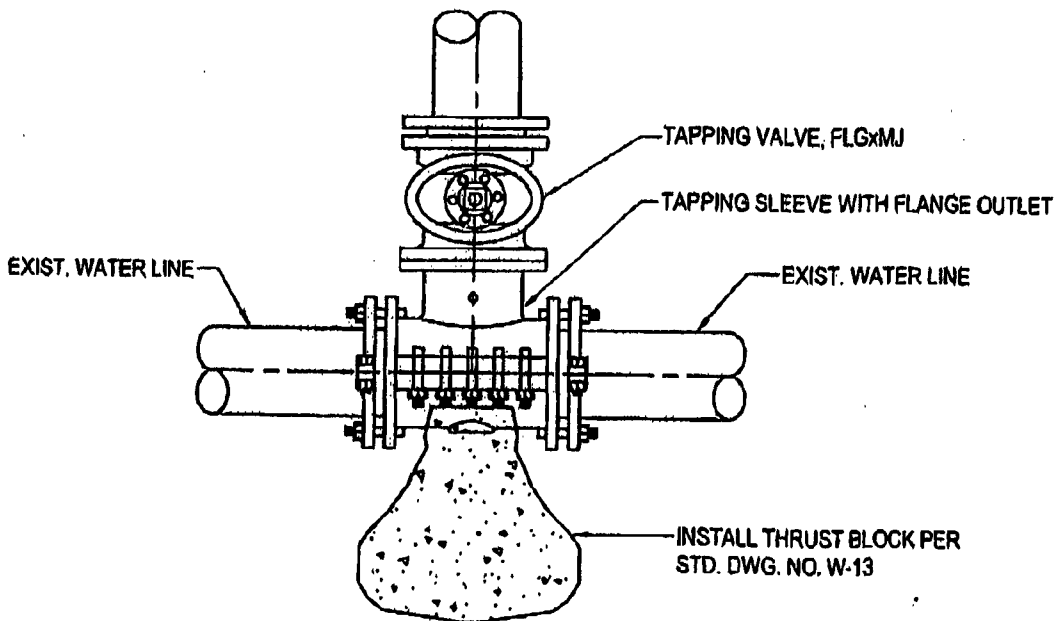


- (A) SQUARE STEEL PLATE 12"x12"x0.375" THICK.
- (B) BLACK STEEL PIPE SUPPORT TUBE. 2.5" DIA.x14" LONGx0.375" WALL THICKNESS.
- (C) STAINLESS STEEL (318 ALLOY) ALL THREAD ROD. 2.0" DIA.x18" LONG. TACK WELD TO TOP HEX NUT.
- (D) HEAVY HEX HEAD STEEL (304 ALLOY) NUT.
- (E) SADDLE SUPPORT. STEEL PIPE BENT OPEN TO ACCOMMODATE SAME SIZE PIPE OR ROLLED STEEL FLAT BAR TO MATCH SUPPORTED PIPE OF FITTING FLANGE O.D. 3" MIN. WIDTHx12" ROLLED LENGTH. FILLET WELD HEX NUT TO BOTTOM OF SADDLE SUPPORT.
- (F) INSTALL BASE PLATE ON LEVELING COURSE OF HIGH STRENGTH EPOXY CEMENT COMPOUND.
- (G) COAT THREADS WITH LIBERAL AMOUNT OF ANTI-CEASE COMPOUND.
- (H) DRILL CONCRETE PAD OR VAULT FLOOR AND MOUNT BASE PLATE WITH 4 EACH. 1/2" STAINLESS STEEL CONCRETE ANCHOR BOLTS. SEE BASE PLATE TEMPLATE.
- (I) TIGHTEN DOUBLE HEX NUTS SNUG AGAINST SUPPORT TUBE. USE 60 FT. LBS. TORQUE.
- (J) TACK WELD ALL THREAD ROD TO HEAVY HEX NUT UNDER SUPPORT SADDLE.
- (K) RED HEAD STAINLESS STEEL CONCRETE ANCHOR BOLT. 1/2" DIA.x4" LONG.
- (L) 1/2" STAINLESS STEEL HEX ANCHOR NUT. RED HEAD OR APPROVED EQUAL.
- (M) 1"x1/2" HEAVY STAINLESS STEEL WASHERS. DOUBLE STACK ON TOP OF SUPPORT PLATE.

<b>CITY OF ALHAMBRA</b>		REV. No.	DATE	BY/APP.	ITEM
DEPARTMENT OF UTILITIES		APPROVED:		<i>[Signature]</i> 11-30-05	
<b>ADJUSTABLE PIPE SUPPORT ASSEMBLY</b>		DIRECTOR OF UTILITIES		DATE	
APPROVED:	<i>[Signature]</i> 11/2/05	DESIGNED	DRB	DATE	AUG. 2005
DEPUTY DIRECTOR - UTILITIES	DATE	DRAWN	DRB	DATE	AUG. 2005
CITY ENGINEER	43296 RCE No.	CHECKED	TLK	DATE	AUG. 2005
				SCALE:	AS SHOWN
				DATE:	AUGUST 2005
				DWG. No.	<b>W-19</b>

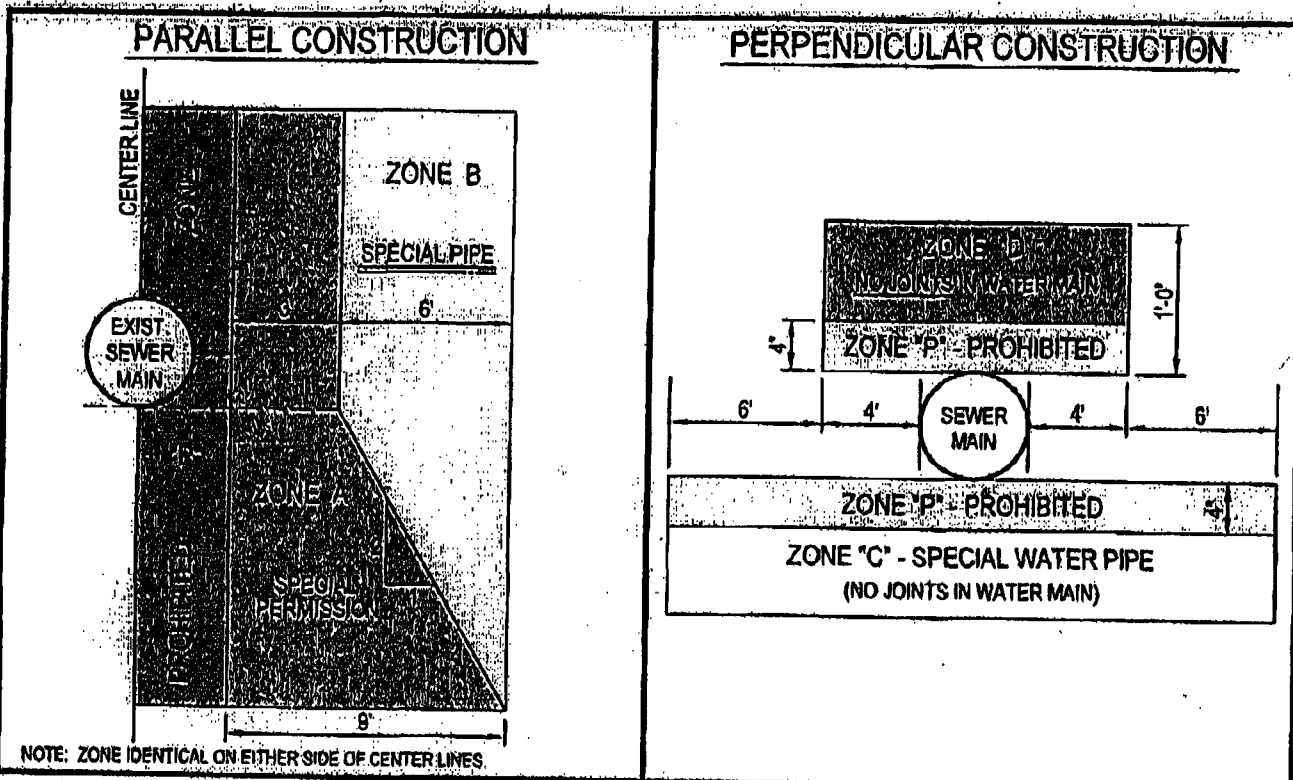


**CUT-IN TEE CONNECTION DETAIL**



**TAPPING SLEEVE AND TAPPING VALVE CONNECTION DETAIL**

<b>CITY OF ALHAMBRA</b>		REV. No.	DATE	BY/APP.	ITEM
DEPARTMENT OF UTILITIES		APPROVED: <i>[Signature]</i>		DATE: 11-30-05	
<b>CONNECTION TO EXISTING MAIN LINES</b>		DIRECTOR OF UTILITIES		DATE	
APPROVED: <i>[Signature]</i>	DATE: 11/2/05	DESIGNED: DRB	DATE: AUG. 2006	SCALE: AS SHOWN	DWG. No. W-20
DEPUTY DIRECTOR - UTILITIES	RCE No. 43296	DRAWN: DRB	DATE: AUG. 2005	DATE: AUGUST 2005	SHEET 1 OF 1
CITY ENGINEER	DATE: 9/2/05	CHECKED: TLK	DATE: AUG. 2005		



**ZONE SPECIAL CONSTRUCTION REQUIRED FOR WATER MAIN**

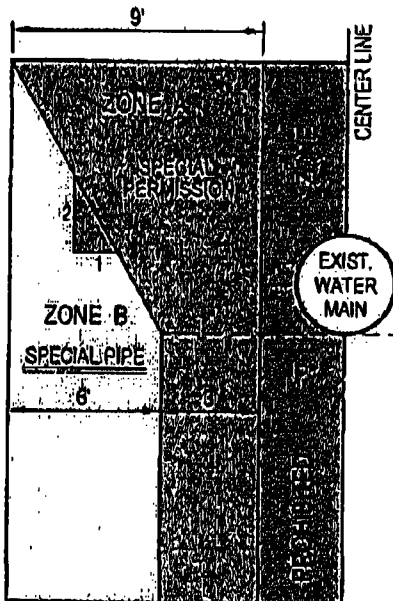
- A** NO WATER MAINS PARALLEL TO SANITARY SEWER MAINS SHALL BE CONSTRUCTED WITHOUT PRIOR WRITTEN APPROVAL FROM THE DEPARTMENT OF HEALTH SERVICES.
- B** THE WATER MAIN SHOULD BE CONSTRUCTED OF ONE OF THE FOLLOWING:
  - a) DUCTILE IRON PIPE WITH HOT DIP BITUMINOUS COATING;
  - b) HDPE PIPE WITH FUSION WELDED JOINTS (PER AWWA C906-LATEST EDITION);
  - c) DIPPED AND WRAPPED ONE-FOURTH-INCH-THICK WELDED STEEL PIPE;
  - d) CLASS 200, TYPE II ASBESTOS-CEMENT PRESSURE PIPE;
  - e) CLASS 200 PRESSURE RATED PVC WATER PIPE (DR 14 PER AWWA C900-LATEST EDITION);
  - f) REINFORCED CONCRETE PRESSURE PIPE, STEEL CYLINDER, PER AWWA (C300 OR C302 OR C303 - LATEST EDITION).
- C** THE WATER MAIN SHOULD HAVE NO JOINTS IN ZONE C AND BE CONSTRUCTED OF ONE OF THE FOLLOWING:
  - a) DUCTILE IRON PIPE WITH HOT DIP BITUMINOUS COATING;
  - b) HDPE PIPE WITH FUSION WELDED JOINTS (PER AWWA C906-LATEST EDITION);
  - c) DIPPED AND WRAPPED ONE-FOURTH-INCH-THICK WELDED STEEL PIPE;
  - d) CLASS 200 PRESSURE RATED PVC WATER PIPE (DR 14 PER AWWA C900-LATEST EDITION);
  - e) REINFORCED CONCRETE PRESSURE PIPE, STEEL CYLINDER, PER AWWA (C300 OR C302 OR C303 - LATEST EDITION).
- D** THE WATER MAIN SHOULD HAVE NO JOINTS WITHIN FOUR FEET FROM EITHER SIDE OF THE SANITARY SEWER MAIN AND SHOULD BE CONSTRUCTED AS FOR ZONE C.
- P** IS A PROHIBITED ZONE, SECTION 64630 (e) (2) CALIFORNIA ADMINISTRATIVE CODE, TITLE 22.

**ADDITIONAL NOTES:**

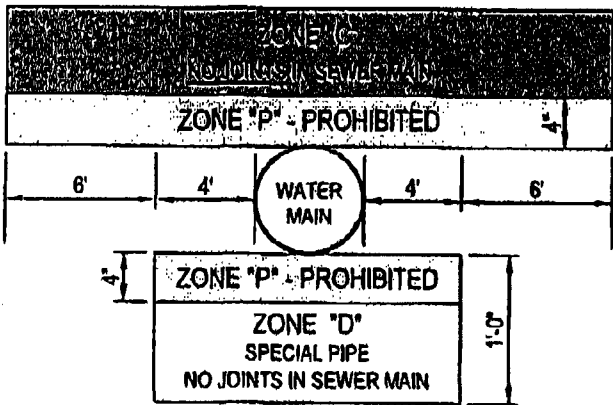
1. WATER MAINS AND SEWER LINES MUST NOT BE INSTALLED IN THE SAME TRENCH.
2. SEPARATION DISTANCES SPECIFIED SHALL BE MEASURED FROM THE NEAREST EDGE OF FACILITIES.

<b>CITY OF ALHAMBRA</b>		REV. No.	DATE	BY/APP.	ITEM
DEPARTMENT OF UTILITIES					
<b>CONSTRUCTION ZONES - NEW WATER MAIN</b>		APPROVED: <i>[Signature]</i>		DATE: 11-30-05	
APPROVED: <i>[Signature]</i>		DIRECTOR OF UTILITIES		DATE	
DEPUTY DIRECTOR - UTILITIES		DESIGNED	BY	DATE	SCALE
DATE: 9/2/05		DRAWN	DRB	AUG. 2005	AS SHOWN
CITY ENGINEER		CHECKED	TLK	AUG. 2005	DATE: AUGUST 2005
RCE No. 43226					DWG. No. W-21

**PARALLEL CONSTRUCTION**



**PERPENDICULAR CONSTRUCTION**



NOTE: ZONES IDENTICAL ON EITHER SIDE OF CENTER LINES

**ZONE SPECIAL CONSTRUCTION REQUIRED FOR WATER MAIN**

- A** SANITARY SEWER MAINS PARALLEL TO WATER MAINS SHALL NOT BE PERMITTED IN THIS ZONE WITHOUT PRIOR WRITTEN APPROVAL FROM THE DEPARTMENT OF HEALTH SERVICES AND PUBLIC WATER SYSTEM.
- B** THE SANITARY SEWER MAIN SHOULD BE CONSTRUCTED OF ONE OF THE FOLLOWING:
  - a) HIGH-DENSITY-POLYETHYLENE (HDPE) PIPE WITH FUSION WELDED JOINTS (PER AWWA C906-LATEST EDITION);
  - b) EXTRA STRENGTH VITRIFIED CLAY PIPE WITH COMPRESSION JOINTS;
  - c) CLASS 4000, TYPE II ASBESTOS CEMENT PIPE WITH RUBBER GASKET JOINTS;
  - d) PVC SEWER PIPE WITH RUBBER RING JOINTS (PER ASTM D3034) OR EQUIVALENT;
  - e) CAST OR DUCTILE IRON PIPE WITH COMPRESSION JOINTS; OR
  - f) REINFORCED CONCRETE PRESSURE PIPE WITH COMPRESSION JOINTS (PER AWWA C302-LATEST EDITION).
- C** THE SANITARY SEWER MAIN SHOULD HAVE NO JOINTS IN ZONE C AND BE CONSTRUCTED OF ONE OF THE FOLLOWING:
  - a) HDPE PIPE WITH FUSION-WELDED JOINTS (PER AWWA C906-LATEST EDITION);
  - b) DUCTILE IRON PIPE WITH HOT DIP BITUMINOUS COATING AND MECHANICAL JOINTS (GASKETED, BOLTED JOINTS);
  - c) A CONTINUOUS SECTION OF CLASS 200 (DR 14 PER AWWA C900-LATEST EDITION) PVC PIPE OR EQUIVALENT, CENTERED OVER THE PIPE BEING CROSSED;
  - d) A CONTINUOUS SECTION OF REINFORCED CONCRETE PRESSURE PIPE (PER AWWA C302-LATEST EDITION) CENTERED OVER THE PIPE BEING CROSSED; OR
  - e) ANY SANITARY SEWER MAIN WITHIN A CONTINUOUS SLEEVE.
- D** THE SANITARY SEWER MAIN SHOULD HAVE NO JOINTS WITHIN FOUR FEET FROM EITHER SIDE OF THE WATER MAIN AND SHOULD BE CONSTRUCTED OF ONE OF THE FOLLOWING:
  - a) A CONTINUOUS SECTION OF DUCTILE IRON PIPE WITH HOT DIP BITUMINOUS COATING; OR
  - b) ONE OF THE ZONE C OPTIONS a), c), d), OR e) ABOVE.
- P** ZONES "P" IS A PROHIBITED ZONE, SECTION 64630 (e) (2) CALIFORNIA ADMINISTRATIVE CODE, TITLE 22.

**ADDITIONAL NOTES:**

1. WATER MAINS AND SEWER LINES MUST NOT BE INSTALLED IN THE SAME TRENCH.
2. SEPARATION DISTANCES SPECIFIED SHALL BE MEASURED FROM THE NEAREST EDGE OF FACILITIES.

**CITY OF ALHAMBRA**

DEPARTMENT OF UTILITIES

**CONSTRUCTION ZONES - NEW SEWER MAIN**

APPROVED:

*[Signature]*  
DEPUTY DIRECTOR - UTILITIES

*[Signature]*  
CITY ENGINEER

43296  
RCE No

11/21/05  
DATE  
9/2/05  
DATE

REV. No.	DATE	BY/APP.	ITEM
APPROVED:		<i>[Signature]</i> 11-30-05	
DIRECTOR OF UTILITIES		DATE	
DESIGNED	DRB	DATE	SCALE
DRAWN	DRB	AUG. 2006	AS SHOWN
CHECKED	TLK	AUG. 2006	DATE:
			AUGUST 2005
			DWG. No.
			W-22
			SHT 1 OF 1