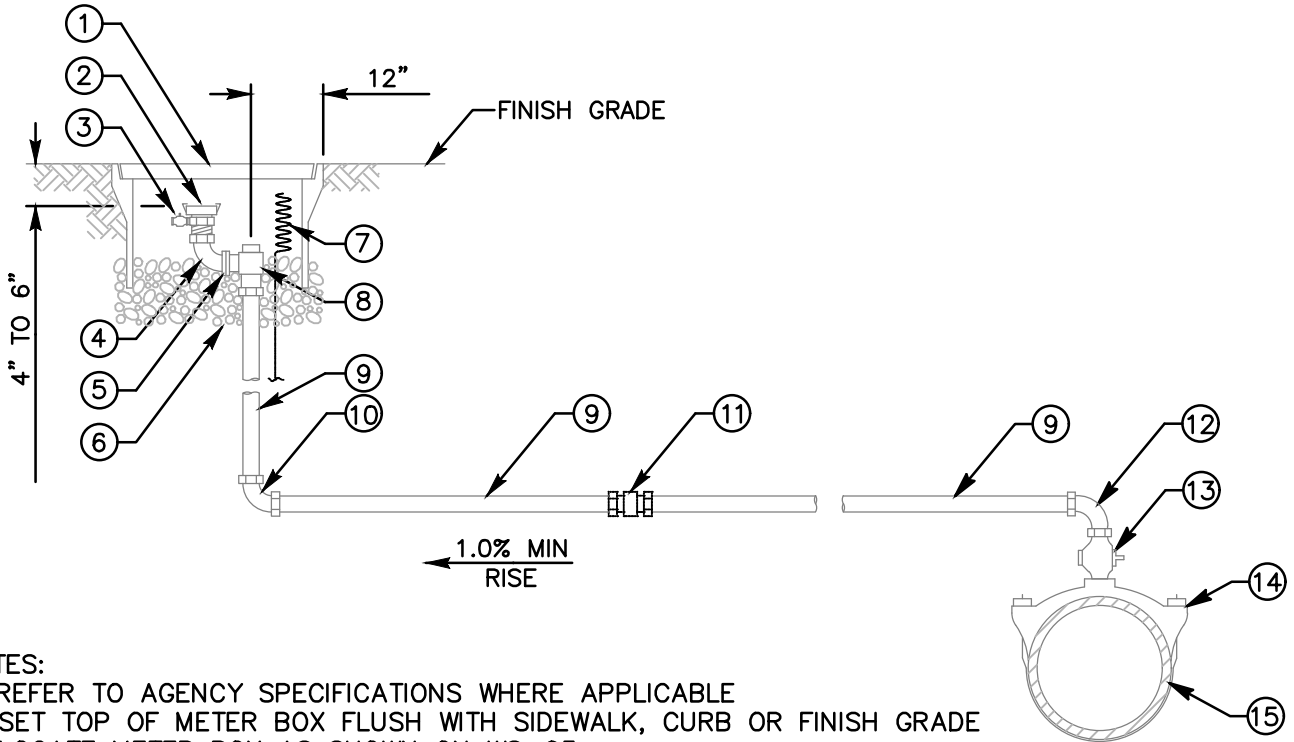


WATER SYSTEMS

WATER SYSTEMS

W



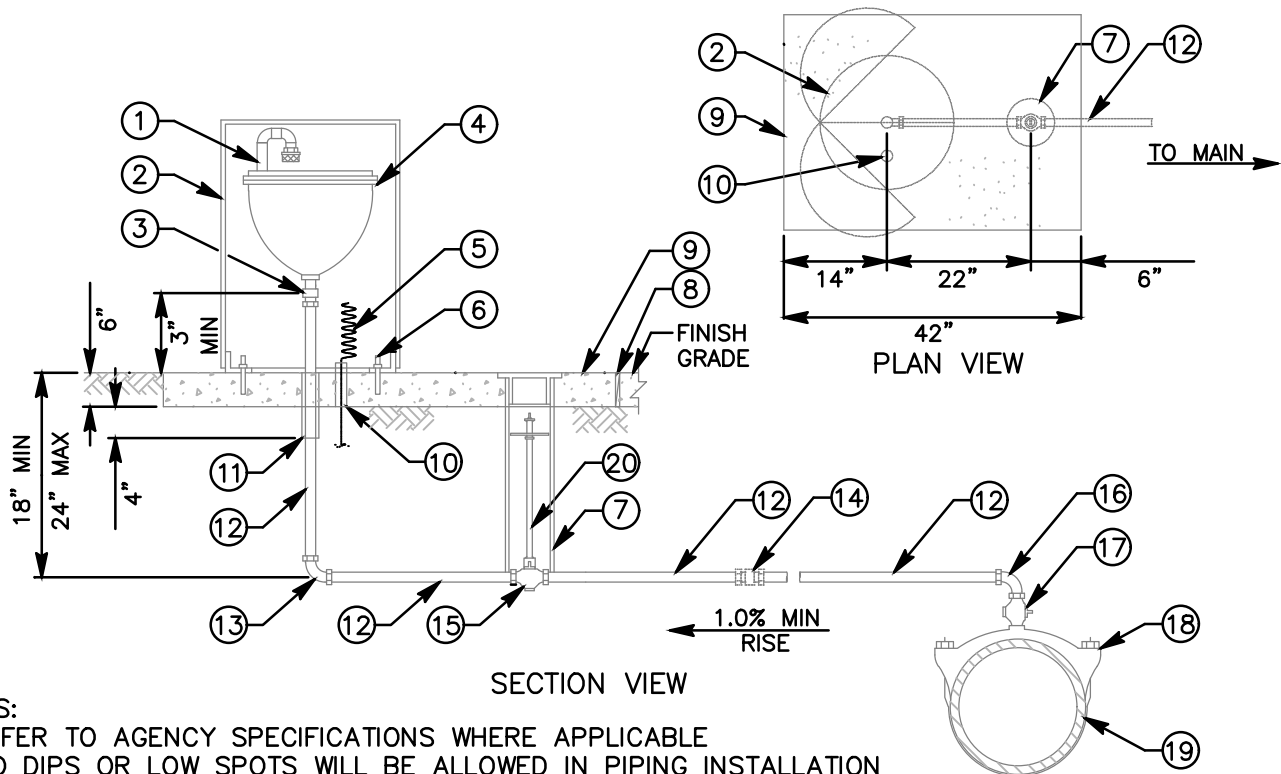
NOTES:

- 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
- 2) SET TOP OF METER BOX FLUSH WITH SIDEWALK, CURB OR FINISH GRADE
- 3) LOCATE METER BOX AS SHOWN ON WS-03
- 4) INSTALL WARNING/IDENTIFICATION TAPE AS SHOWN ON WP-01
- 5) MANUAL AIR VALVE INSTALLATION AT END OF MAIN TO BE SADDLED 24" FROM END CAP
- 6) MANUAL AIR VALVE ASSEMBLIES INSTALLED FOR THE USE OF RECYCLED WATER SHALL BE IDENTIFIED AS DESCRIBED IN AGENCY'S SPECIFICATIONS
- 7) ON STEEL MAINS USE WELD ON COUPLINGS, ON DUCTILE IRON MAINS USE DUCTILE IRON SERVICE SADDLES (INSULATING BUSHINGS ARE REQUIRED)
- 8) CAM & GROOVE ADAPTER SHALL BE DRILLED AND TAPPED AS REQUIRED FOR THE PRESSURE RELEASE PET COCK
- 9) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST

2" |
 LEGEND ON PLANS

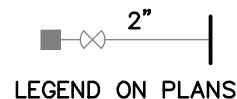
ITEM NO	SIZE AND DESCRIPTION	ITEM NO	SIZE AND DESCRIPTION
①	POLYMER METER BOX WITH LID 17" x 30", SEE NOTE 3	⑧	2" BRONZE COMP x FLG ANGLE METER STOP WITH LOCK WING
②	2" CAM & GROOVE ADAPTER x MIPT WITH LOCKING DUST CAP, SEE NOTE 8	⑨	2" x REQUIRED LENGTH COPPER PIPE TYPE "K" RIGID OR SOFT
③	1/4" PRESSURE PET COCK	⑩	2" 90° BRONZE COMPRESSION ELL
④	2" 90° BRONZE MIPT x FIPT ELL	⑪	2" BRONZE COMPRESSION COUPLING COPPER TO COPPER (IF REQUIRED)
⑤	2" OVAL METER FLANGE FLG x FIPT, WITH GASKET	⑫	2" 90° BRONZE FIPT x COMP ELL
⑥	3/8" ROCK 4" TO 6" DEEP	⑬	2" BRONZE MIPT x MIPT CORPORATION STOP
⑦	TRACER WIRE (AS REQUIRED), SEE WP-01	⑭	SIZE x 2" SERVICE SADDLE
		⑮	WATER MAIN

Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING 2" MANUAL AIR VALVE	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE <i>Samantha Engeda</i> 03/24/2022 Chairperson R.C.E. 52241 Date
ORIGINAL		Kercheval	12/75		
Delete Metric	MR	B. KNOLL	03/11		
Updated	BK	B. KNOLL	10/18		
Reviewed	RP	S. Engeda	03/22		
				DRAWING NUMBER	WA-01



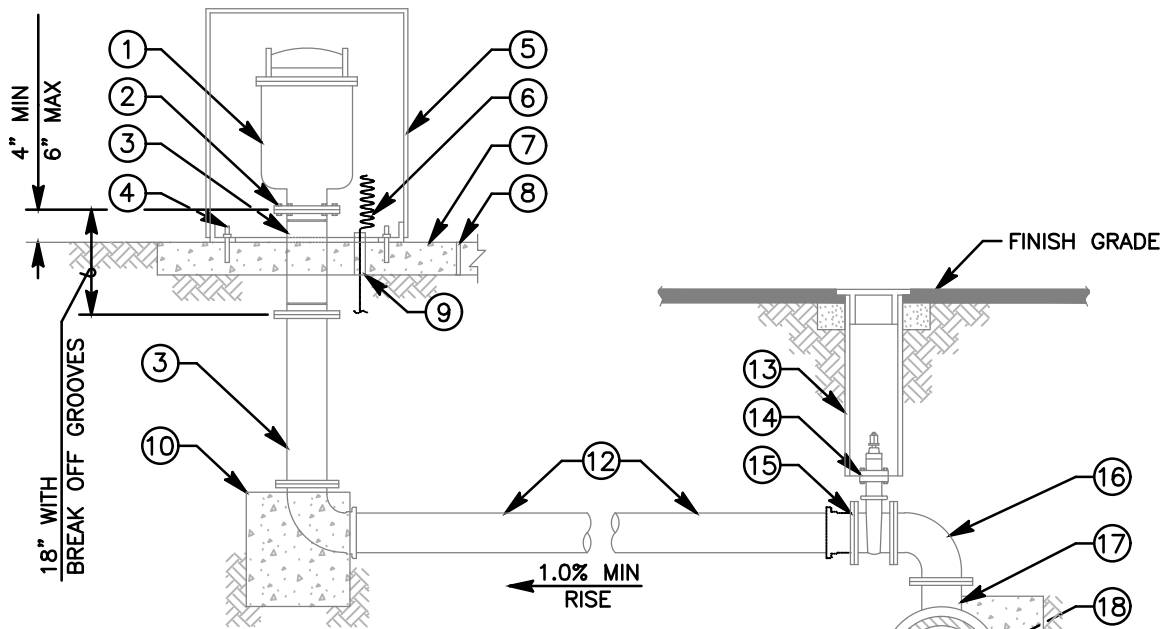
NOTES:

- 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
- 2) NO DIPS OR LOW SPOTS WILL BE ALLOWED IN PIPING INSTALLATION
- 3) LOCATE ENCLOSURE AS SHOWN ON WA-06
- 4) INSTALL WARNING/IDENTIFICATION TAPE AS SHOWN ON WP-01
- 5) AIR & VACUUM VALVES INSTALLED FOR THE USE OF RECYCLED WATER SHALL BE IDENTIFIED AS DESCRIBED IN AGENCY'S SPECIFICATIONS
- 6) ON STEEL MAINS USE WELD ON COUPLINGS, ON DUCTILE IRON MAINS USE DUCTILE IRON SERVICE SADDLES (INSULATING BUSHINGS ARE REQUIRED)
- 7) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST



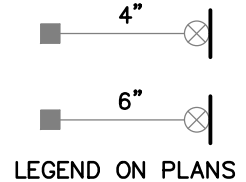
ITEM NO	SIZE AND DESCRIPTION	ITEM NO	SIZE AND DESCRIPTION
①	2" PVC SCH 80 CLOSE NIPPLE & 2-SCH 80 STREET ELLS & INSECT SCREEN	⑪	2" x 1/2" BLACK FOAM SLEEVE
②	VALVE ENCLOSURE	⑫	2" x REQUIRED LENGTH COPPER PIPE TYPE "K" RIGID OR SOFT
③	2" MIPT x COMPRESSION ADAPTER	⑬	2" 90° BRONZE COMPRESSION ELL
④	2" AUTOMATIC COMBINATION AIR RELEASE & AIR/VACUUM VALVE	⑭	2" BRONZE COMPRESSION COUPLING COPPER TO COPPER (IF REQUIRED)
⑤	TRACER WIRE (AS REQUIRED), SEE WP-01	⑮	2" COMP BALL VALVE W/ TEE HEAD
⑥	1/2" x 3" STAINLESS STEEL DROP-IN ANCHORS (3 EA @ 120° APART)	⑯	2" 90° BRONZE FIPT x COMP ELL
⑦	4" SDR 35 SEWER PIPE GATE WELL WITH CAP	⑰	2" BRONZE MIPT x MIPT CORPORATION STOP
⑧	COLD JOINT STRIP	⑱	SIZE x 2" SERVICE SADDLE
⑨	3'-6" x 2'-6" x 6" THICK CONCRETE SLAB	⑲	WATER MAIN
⑩	1" PVC CONDUIT FOR TRACER WIRE INSTALLED 2" ABOVE SLAB	⑳	VALVE STEM EXTENSION, SEE WV-05

Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		Kercheval	12/75		
Delete Metric	MR	B. KNOLL	03/11	2" AUTOMATIC COMBINATION AIR RELEASE & AIR/VACUUM VALVE INSTALLATIONS	<i>Samantha Engeda</i> 03/24/2022
Updated	BK	B. KNOLL	10/18		Chairperson R.C.E. 52241 Date
Reviewed	RP	S. Engeda	03/22		DRAWING NUMBER WA-02



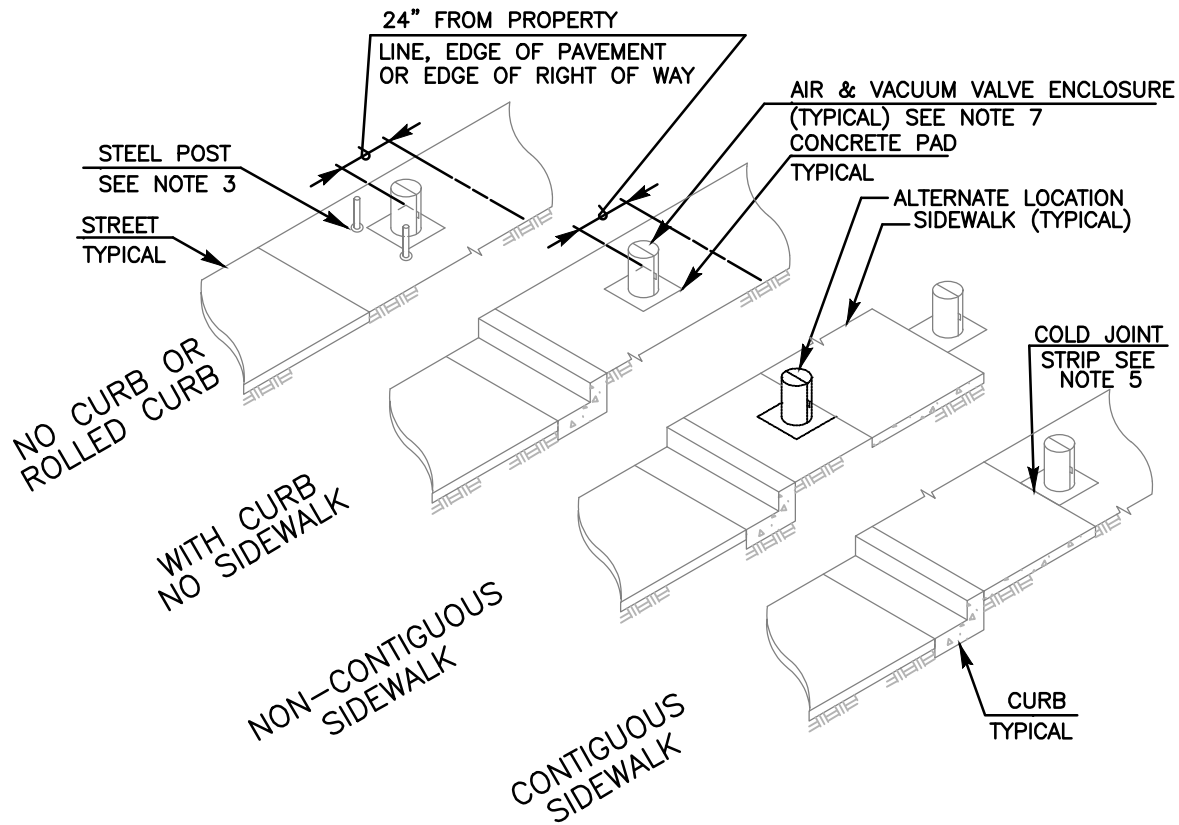
NOTES:

- 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
- 2) NO DIPS OR LOW SPOTS WILL BE ALLOWED IN PIPING INSTALLATION
- 3) LOCATE ENCLOSURE AS SHOWN ON WA-06
- 4) INSTALL WARNING/IDENTIFICATION TAPE AS SHOWN ON WP-01
- 5) BREAK-AWAY BOLTS SHALL BE 5/8" x 3" WITH 3/8" HOLE DRILLED IN THE SHAFT OF THE BOLT. INSTALL WITH NUTS ON TOP OF THE FLANGE. BOLT SHAFT SHALL BE FILLED WITH SILICONE SEALANT
- 6) AIR & VACUUM VALVES INSTALLED FOR THE USE OF RECYCLED WATER SHALL BE IDENTIFIED AS DESCRIBED IN AGENCY'S SPECIFICATIONS
- 7) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST



ITEM NO	SIZE AND DESCRIPTION	ITEM NO	SIZE AND DESCRIPTION
①	4" OR 6" AUTOMATIC COMBINATION AIR RELEASE & AIR/VACUUM VALVE ASSEMBLY	⑩	CONCRETE THRUST/ANCHOR BLOCK SEE WT-01
②	BREAK-AWAY BOLTS, SEE NOTE 5	⑪	4" OR 6" FLG x MJ/PO 90° BEND
③	4" OR 6" FLANGED 8-BOLT DUCTILE IRON PIPE x REQ'D LENGTH (MAX OF 2 SPOOLS)	⑫	4" OR 6" C-900 PVC PIPE
④	5/8" x 3" STAINLESS STEEL DROP-IN ANCHORS (3 EA @ 120° APART)	⑬	GATE WELL WITH CAP SEE WV-01 OR WV-02
⑤	VALVE ENCLOSURE	⑭	4" OR 6" FLG x MJ/PO/FLG RWGV
⑥	TRACER WIRE (AS REQUIRED), SEE WP-01	⑮	4" OR 6" FLG x MJ/PO ADAPTER (IF REQUIRED)
⑦	42" x 42" x 6" THICK CONCRETE SLAB	⑯	4" OR 6" FLANGE 90° BEND
⑧	COLD JOINT STRIP	⑰	SIZE x 4" OR 6" MJ/PO/FLG x FLG TEE
⑨	1" PVC CONDUIT FOR TRACER WIRE INSTALLED 2" ABOVE SLAB	⑱	WATER MAIN

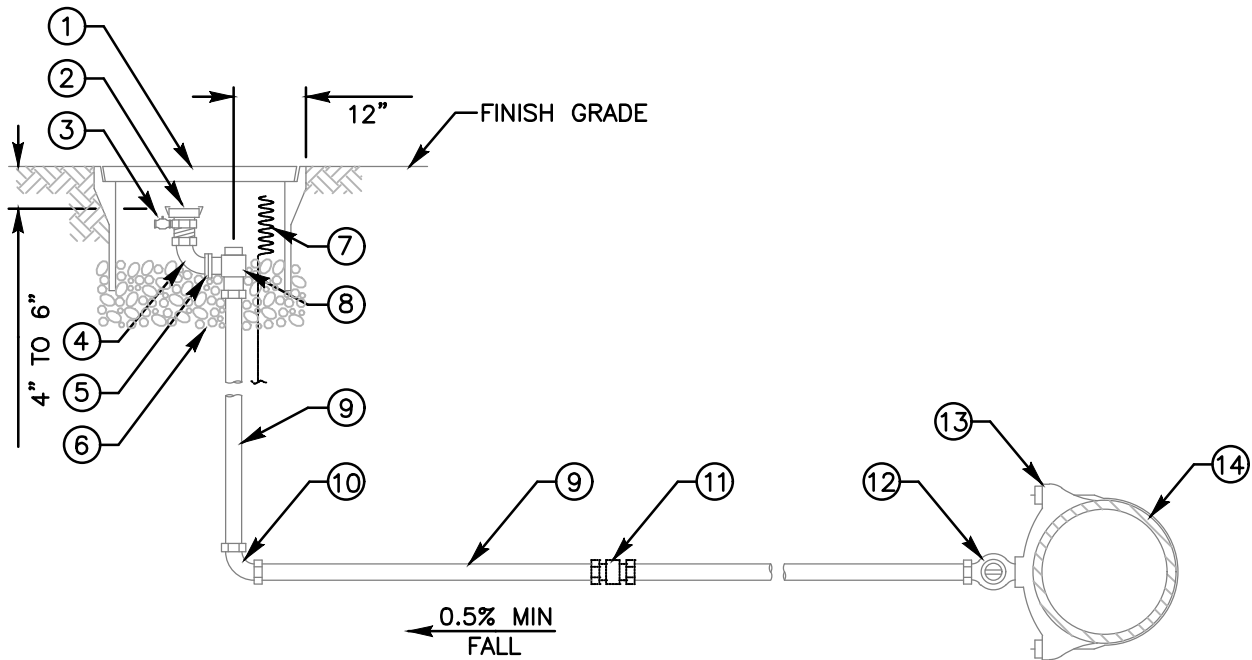
Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE	
ORIGINAL		Kercheval	12/75		4" & 6" AUTOMATIC COMBINATION AIR RELEASE & AIR/VACUUM VALVE INSTALLATIONS	<i>Samantha Engeda</i> 03/24/2022
Delete Metric	MR	B. KNOLL	03/11	Chairperson R.C.E. 52241 Date		
Updated	BK	B. KNOLL	10/18	DRAWING NUMBER		WA-04
Reviewed	RP	S. Engeda	03/22			



NOTES:

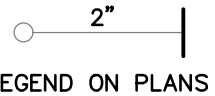
- 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
- 2) REFER TO WA-02 AND WA-04
- 3) PROTECTION POSTS SHALL BE INSTALLED AS CALLED FOR ON THE PLANS OR AS DIRECTED BY THE ENGINEER PER WM-04
- 4) AN EASEMENT MAY BE NEEDED DEPENDING ON LOCATION OF ENCLOSURE
- 5) IF THE CONCRETE SLAB IS TO BE INSTALLED ADJACENT TO A CONCRETE CURB OR SIDEWALK A COLD JOINT STRIP SHALL BE INSTALLED
- 6) AIR & VACUUM VALVES & APPURTENANCES INSTALLED FOR THE USE OF RECYCLED WATER SHALL BE IDENTIFIED AS DESCRIBED IN THE AGENCY'S SPECIFICATIONS
- 7) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST

Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		Kercheval	12/75		AIR & VACUUM VALVE ENCLOSURE LOCATIONS
Delete Metric	MR	B. KNOLL	03/11	Chairperson R.C.E. 52241 Date	
Updated	BK	B. KNOLL	10/18	DRAWING NUMBER	
Reviewed	RP	S. Engeda	03/22	WA-06	



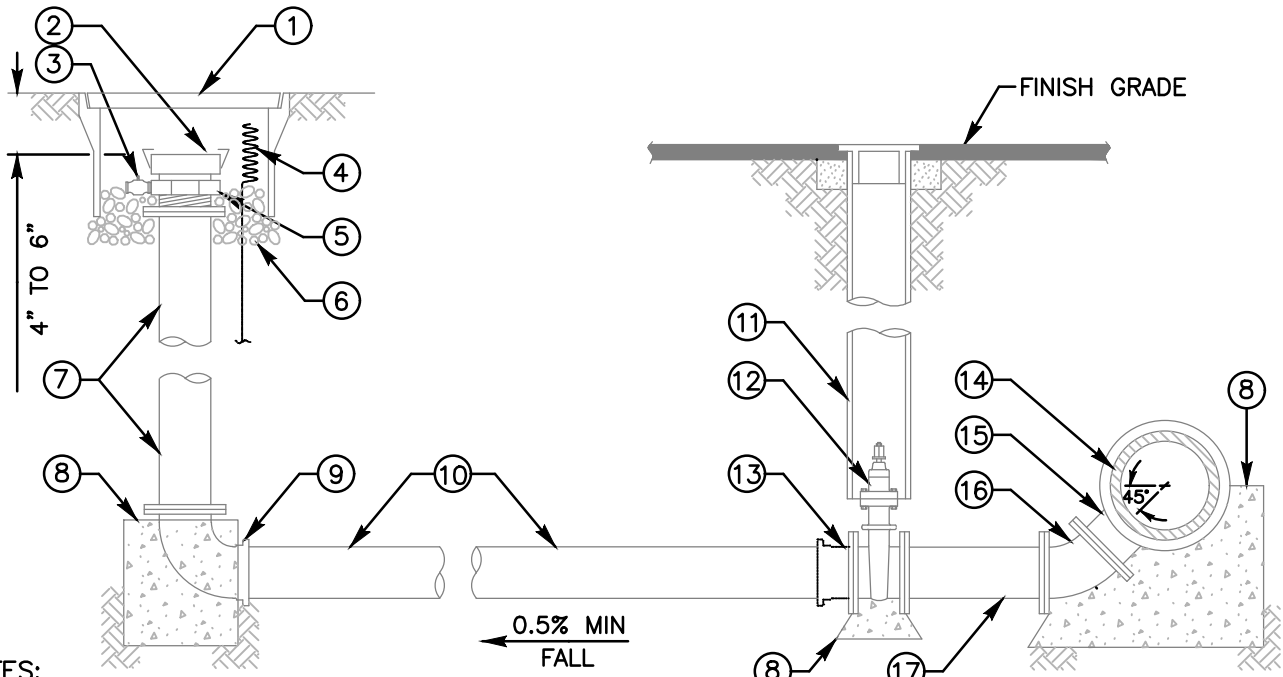
NOTES:

- 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
- 2) SET TOP OF METER BOX FLUSH WITH SIDEWALK, CURB OR FINISH GRADE
- 3) LOCATE METER BOX AS SHOWN ON WS-03
- 4) INSTALL WARNING/IDENTIFICATION TAPE AS SHOWN ON WP-01
- 5) FOR BLOW-OFF INSTALLATION AT END OF MAIN SEE WB-04
- 6) BLOW-OFF ASSEMBLIES INSTALLED FOR THE USE OF RECYCLED WATER SHALL BE IDENTIFIED AS DESCRIBED IN AGENCY'S SPECIFICATIONS
- 7) ON STEEL MAINS USE WELD ON COUPLINGS, ON DUCTILE IRON MAINS USE DUCTILE IRON SERVICE SADDLES (INSULATING BUSHINGS ARE REQUIRED)
- 8) CAM & GROOVE ADAPTER SHALL BE DRILLED AND TAPPED AS REQUIRED FOR THE PRESSURE PET COCK
- 9) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST



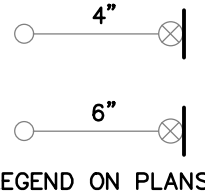
ITEM NO	SIZE AND DESCRIPTION	ITEM NO	SIZE AND DESCRIPTION
①	POLYMER METER BOX WITH LID 17" x 30", SEE NOTE 3	⑧	2" BRONZE COMP x FLG ANGLE METER STOP WITH LOCK WING
②	2" CAM & GROOVE ADAPTER x MIPT WITH LOCKING DUST CAP, SEE NOTE 8	⑨	2" x REQUIRED LENGTH COPPER PIPE TYPE "K" RIGID OR SOFT
③	1/4" PRESSURE PET COCK	⑩	2" 90° BRONZE COMPRESSION ELL
④	2" 90° BRONZE MIPT x FIPT ELL	⑪	2" BRONZE COMPRESSION COUPLING COPPER TO COPPER (IF REQUIRED)
⑤	2" OVAL METER FLANGE FLG x FIPT, WITH GASKET	⑫	2" BRONZE MIPT x COMP CORPORATION STOP
⑥	3/8" ROCK 4" TO 6" DEEP	⑬	SIZE x 2" SERVICE SADDLE
⑦	TRACER WIRE (AS REQUIRED), SEE WP-01	⑭	WATER MAIN

Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		Kercheval	12/75		
Delete Metric	MR	B. KNOLL	03/11	2" BLOW-OFF INSTALLATION	<i>Samantha Engeda</i> 03/24/2022
Updated	BK	B. KNOLL	10/18		Chairperson R.C.E. 52241 Date
Reviewed	RP	S. Engeda	03/22		DRAWING NUMBER WB-01



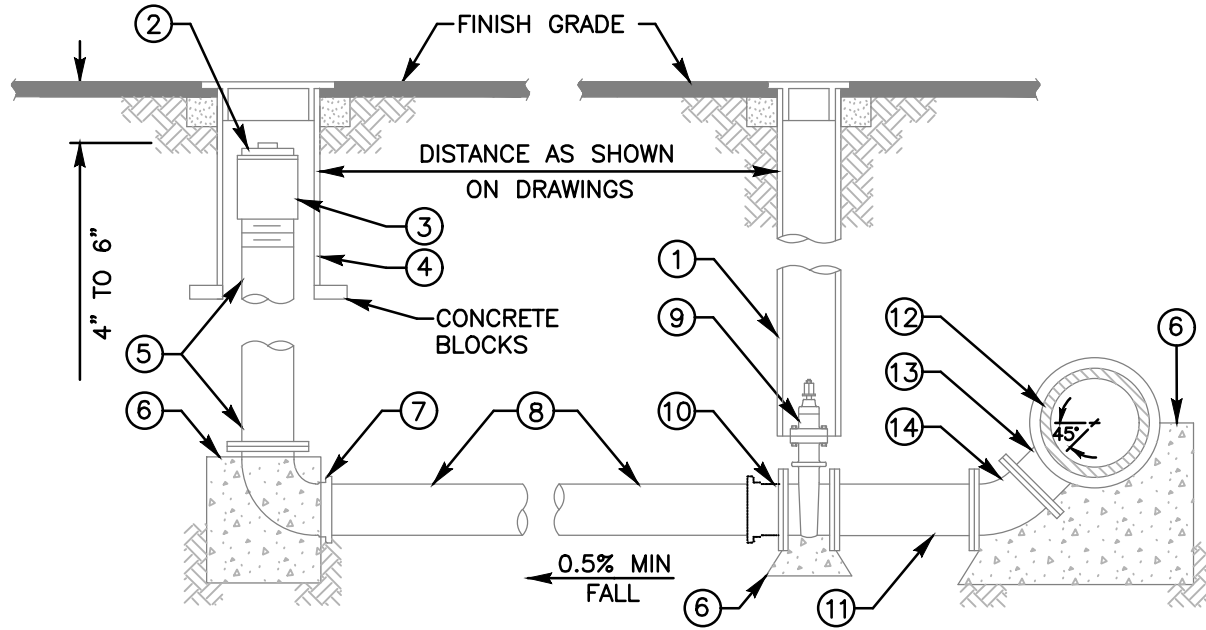
NOTES:

- 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
- 2) SET TOP OF METER BOX FLUSH WITH SIDEWALK, CURB OR FINISH GRADE
- 3) LOCATE METER BOX AS SHOWN ON WS-03
- 4) INSTALL WARNING/IDENTIFICATION TAPE AS SHOWN ON WP-01
- 5) FOR BLOW-OFF INSTALLATION AT END OF MAIN SEE WB-04
- 6) BLOW-OFF ASSEMBLIES INSTALLED FOR THE USE OF RECYCLED WATER SHALL BE IDENTIFIED AS DESCRIBED IN AGENCY'S SPECIFICATIONS
- 7) 45° BEND SHALL BE USED FOR MAINS UP TO 30". 90° BEND SHALL BE USED FOR MAINS IN EXCESS OF 30" AS DIRECTED BY THE ENGINEER
- 8) CAM & GROOVE ADAPTER SHALL BE DRILLED AND TAPPED AS REQUIRED FOR THE PRESSURE PET COCK
- 9) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST



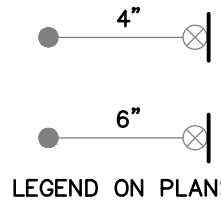
ITEM NO	SIZE AND DESCRIPTION	ITEM NO	SIZE AND DESCRIPTION
①	POLYMER METER BOX WITH LID 17" x 30", SEE NOTE 3	⑨	4" OR 6" FLG x MJ/PO 90° BEND
②	4" OR 6" CAM & GROOVE ADAPTER x MIPT WITH LOCKING DUST CAP, SEE NOTE 8	⑩	4" OR 6" C-900 PVC PIPE
③	1/4" PRESSURE PET COCK	⑪	GATE WELL WITH CAP SEE WV-01 OR WV-02
④	TRACER WIRE (AS REQUIRED), SEE WP-01	⑫	4" OR 6" FLG x MJ/PO/FLG RWGV
⑤	4" OR 6" FLANGED COMPANION x FIPT	⑬	4" OR 6" FLG x MJ/PO ADAPTER (IF REQUIRED)
⑥	3/8" ROCK 4" TO 6" DEEP	⑭	WATER MAIN
⑦	4" OR 6" FLG DI PIPE x REQUIRED LENGTH (MAXIMUM OF 2 SPOOLS)	⑮	SIZE x 4" OR 6" MJ/PO/FLG x FLG TEE
⑧	CONCRETE THRUST BLOCK SEE WT-01	⑯	4" OR 6" FLANGED 45° BEND
		⑰	4" OR 6" x 24" FLG DI SPOOL

Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		Kercheval	12/75		
Delete Metric	MR	B. KNOLL	03/11	4" & 6" BLOW-OFF INSTALLATION TYPE A	 Chairperson R.C.E. 52241 Date 03/24/2022
Updated	BK	B. KNOLL	10/18		
Reviewed	RP	S. Engeda	03/22		
				DRAWING NUMBER	WB-02



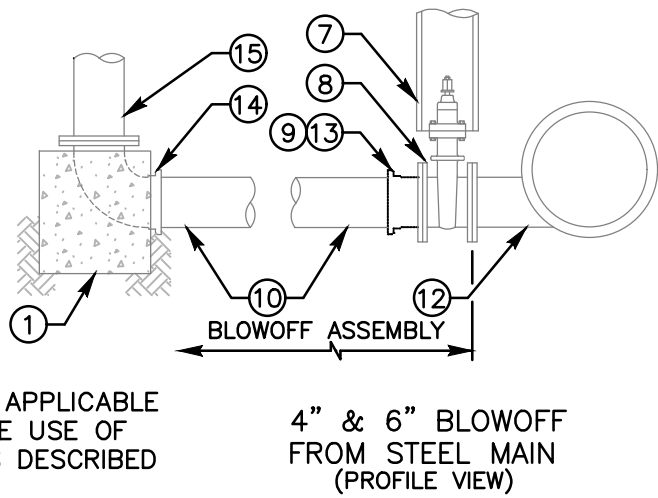
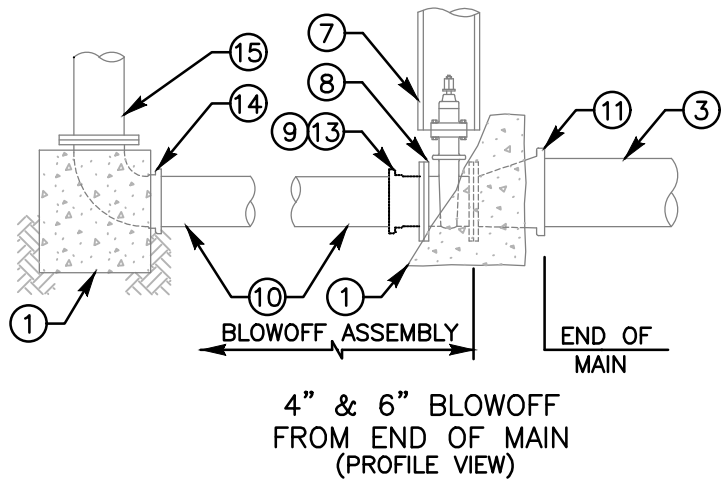
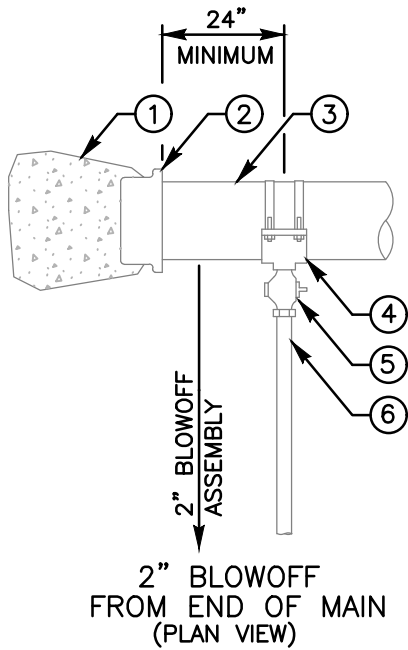
NOTES:

- 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
- 2) FOR BLOW-OFF INSTALLATION AT END OF MAIN SEE WB-04
- 3) BLOW-OFF ASSEMBLIES INSTALLED FOR THE USE OF RECYCLED WATER SHALL BE IDENTIFIED AS DESCRIBED IN AGENCY'S SPECIFICATIONS
- 4) ON STEEL MAINS USE WELD ON COUPLINGS, ON DUCTILE IRON MAINS USE DUCTILE IRON SERVICE SADDLES (INSULATING BUSHINGS ARE REQUIRED)
- 5) 45° BEND SHALL BE USED FOR MAINS UP TO 30". 90° BEND SHALL BE USED FOR MAINS IN EXCESS OF 30" AS DIRECTED BY THE ENGINEER
- 6) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST



ITEM NO	SIZE AND DESCRIPTION	ITEM NO	SIZE AND DESCRIPTION
①	GATE WELL WITH CAP SEE WV-01 OR WV-02	⑧	4" OR 6" C-900 PVC PIPE
②	GALVANIZED IRON PLUG	⑨	4" OR 6" FLG x MJ/PO/FLG RWGV
③	GALVANIZED IRON COUPLING, THREADED	⑩	4" OR 6" FLG x MJ/PO ADAPTER (IF REQUIRED)
④	10" STEEL GATE WELL WITH CAP	⑪	4" OR 6" x 24" FLG DI SPOOL
⑤	4" OR 6" FLG DI PIPE x REQUIRED LENGTH (MAXIMUM OF 2 SPOOLS)	⑫	WATER MAIN
⑥	CONCRETE THRUST BLOCK SEE WT-01	⑬	SIZE x 4" OR 6" MJ/PO/FLG x FLG TEE
⑦	4" OR 6" FLG x MJ/PO 90° BEND	⑭	4" OR 6" FLANGED 45° BEND, SEE NOTE 5

Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING 4" & 6" BLOW-OFF ASSEMBLIES IN STREET TYPE B	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE <i>Samantha Engeda</i> 03/24/2022 Chairperson R.C.E. 52241 Date
ORIGINAL		Kercheval	12/75		
Delete Metric	MR	B. KNOLL	03/11		
Updated	BK	B. KNOLL	10/18		
Reviewed	RP	S. Engeda	03/22		
				DRAWING NUMBER	WB-03

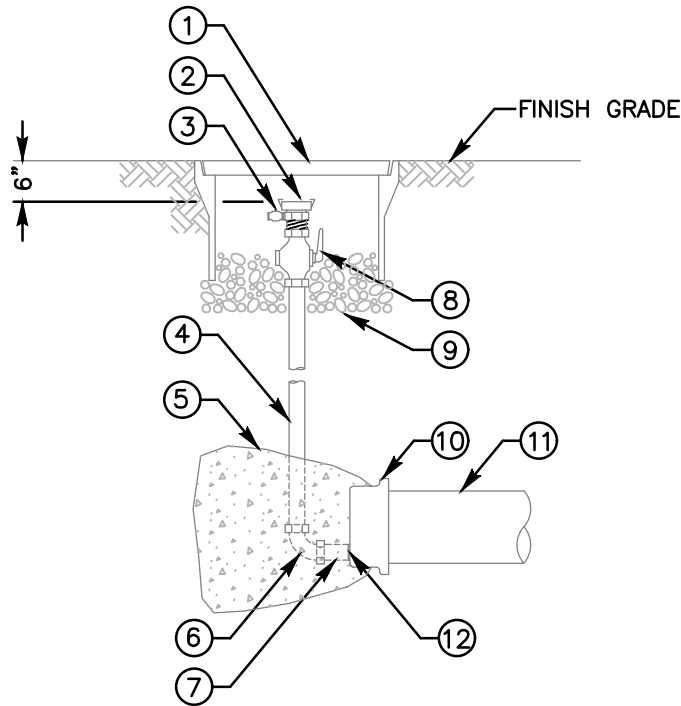


NOTES:

- 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
- 2) BLOW-OFF ASSEMBLIES INSTALLED FOR THE USE OF RECYCLED WATER SHALL BE IDENTIFIED AS DESCRIBED IN AGENCY'S SPECIFICATIONS
- 3) FOR 2" BLOW-OFFS ON STEEL MAINS USE WELD ON COUPLINGS, ON DUCTILE IRON MAINS USE DUCTILE IRON SERVICE SADDLES (INSULATING BUSHINGS ARE REQUIRED)
- 4) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST

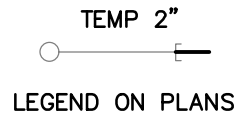
ITEM NO	SIZE AND DESCRIPTION	ITEM NO	SIZE AND DESCRIPTION
①	CONCRETE THRUST BLOCKS SEE WT-01	⑧	FLG x MJ/PO/FLG RWGV
②	DI END CAP	⑨	FLG x MJ/PO ADAPTER (IF REQUIRED)
③	WATER MAIN	⑩	C-900 PVC PIPE
④	SIZE x 2" SERVICE SADDLE	⑪	FLG x MJ/PO ECCENTRIC DI REDUCER
⑤	2" BRONZE MIPT x COMP CORPORATION STOP	⑫	MAIN SIZE x BLOWOFF SIZE FLANGE MANUFACTURED STEEL TANGENTIAL OUTLET
⑥	2" x REQ'D LENGTH COPPER PIPE TYPE "K" RIGID OR SOFT	⑬	FLG x MJ/PO BEND (IF REQUIRED)
⑦	GATE WELL WITH CAP SEE WV-01 & WV-02	⑭	FLG x MJ/PO 90° BEND
		⑮	FLG DI PIPE x REQUIRED LENGTH (MAXIMUM OF 2 SPOOLS)

Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		Kercheval	12/75		BLOW-OFF INSTALLATION FROM END OF MAINS AND FROM STEEL MAINS
Delete Metric	MR	B. KNOLL	03/11	Chairperson R.C.E. 52241 Date	
Updated	BK	B. KNOLL	10/18	DRAWING NUMBER	
Reviewed	RP	S. Engeda	03/22	WB-04	



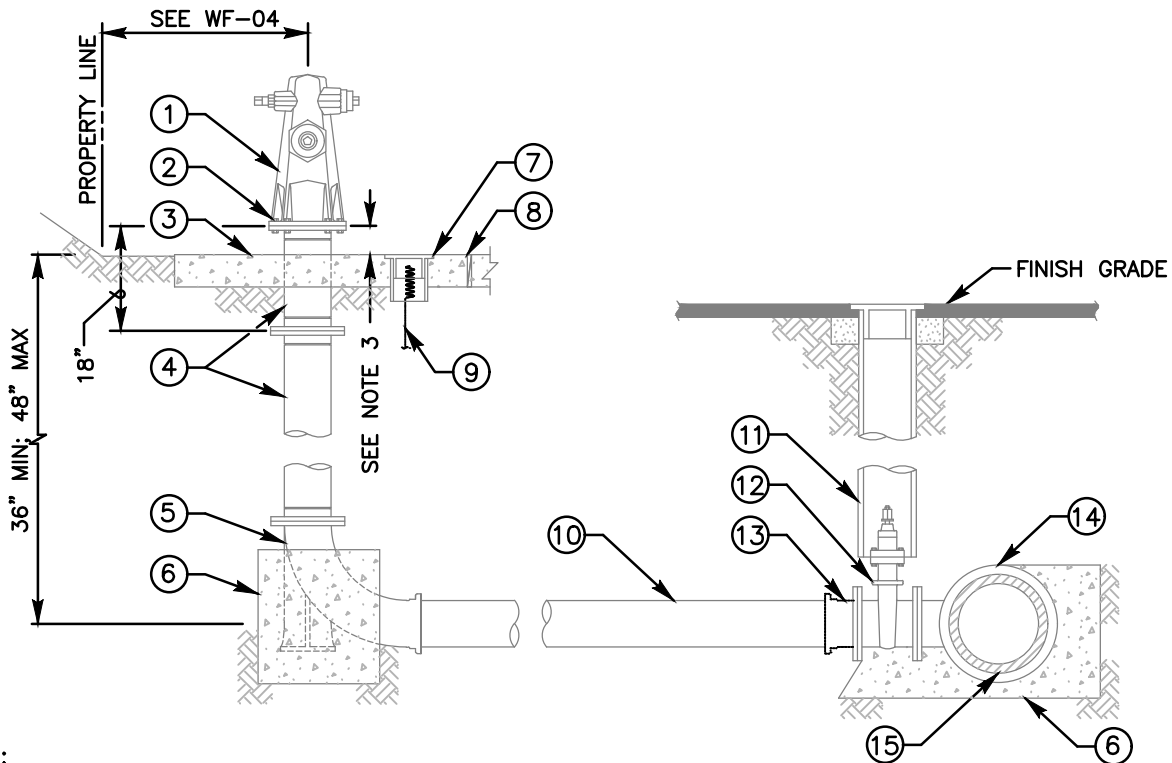
NOTES:

- 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
- 2) SET TOP OF METER BOX 2" ABOVE FINISH GRADE
- 3) BLOW-OFF ASSEMBLIES INSTALLED FOR THE USE OF RECYCLED WATER SHALL BE IDENTIFIED AS DESCRIBED IN AGENCY'S SPECIFICATIONS
- 4) THE CONSTRUCTION OF A TEMPORARY BLOW-OFF FOR THE USE OF TESTING AND FLUSHING OF NEW MAINS ONLY
- 5) CAM & GROOVE ADAPTER SHALL BE DRILLED AND TAPPED AS REQUIRED FOR THE PRESSURE PET COCK
- 6) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST



ITEM NO	SIZE AND DESCRIPTION	ITEM NO	SIZE AND DESCRIPTION
①	POLYMER METER BOX WITH LID 17" x 30"	⑥	2" 90° BRONZE IRON PIPE THREAD BY COMPRESSION ELL
②	2" CAM & GROOVE ADAPTER x MIPT WITH LOCKING DUST CAP, SEE NOTE 5	⑦	2" CLOSE NIPPLE IPT
③	1/4" PRESSURE PET COCK	⑧	2" COMPRESSION x FIPT BALL VALVE WITH HANDLE
④	2" x REQUIRED LENGTH COPPER PIPE TYPE "K" RIGID OR SOFT	⑨	3/8" ROCK 6" DEEP
⑤	CONCRETE THRUST BLOCK SEE WT-01	⑩	DI END CAP WITH 2.5" FIPT OUTLET
		⑪	WATER MAIN
		⑫	NYLON DIELECTRIC BUSHING (2.5" x 2")

Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE	
ORIGINAL		Kercheval	12/75		TEMPORARY 2" BLOW-OFF INSTALLATION	<i>Samantha Engeda</i> 03/24/2022
Delete Metric	MR	B. KNOLL	03/11	Chairperson R.C.E. 52241		Date
Updated	BK	B. KNOLL	10/18	DRAWING NUMBER		WB-05
Reviewed	RP	S. Engeda	03/22			



NOTES:

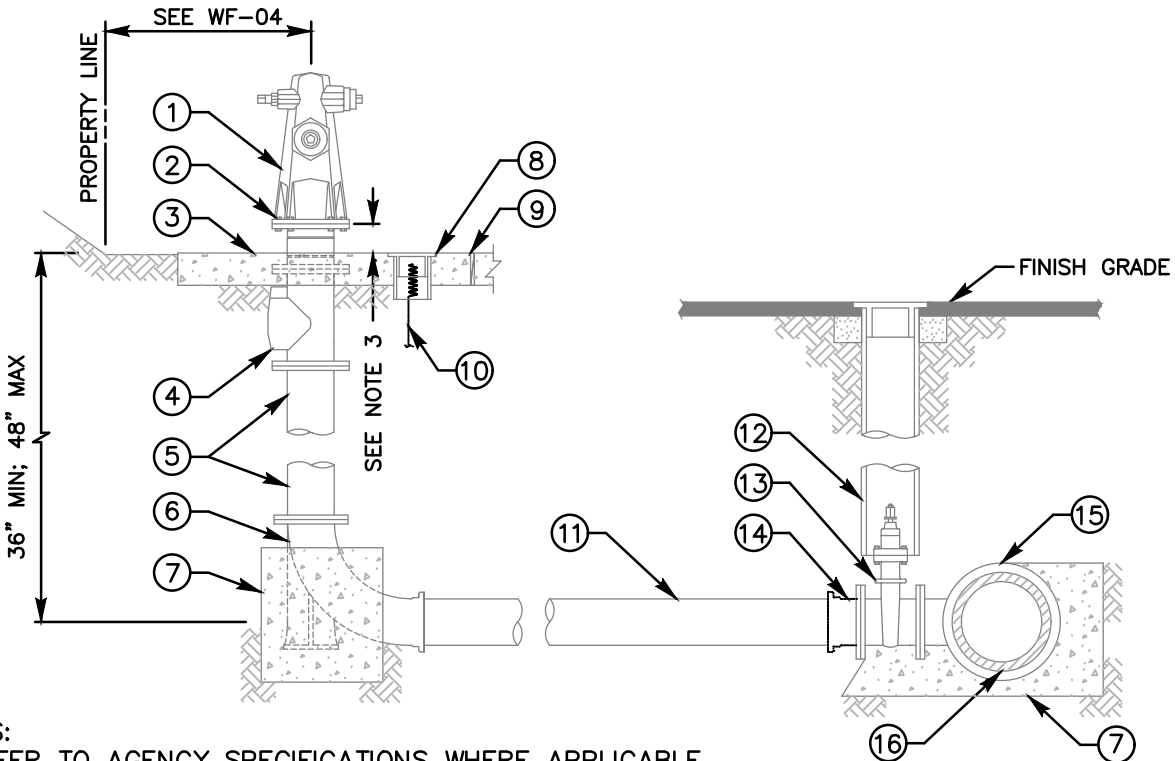
- 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
- 2) THE NUMBER OF OUTLETS SHALL BE AS SHOWN ON PLANS
- 3) FIRE HYDRANT FLANGE SHALL BE 6" ± 1" ABOVE TOP OF CURB OR SPLASH PAD SEE PLANS FOR ELEVATION
- 4) LOCATE FIRE HYDRANT AS SHOWN ON WF-04
- 5) INSTALL WARNING/IDENTIFICATION TAPE AS SHOWN ON WP-01
- 6) FIRE HYDRANT FLANGE BOLTS SHALL BE BREAK AWAY BOLTS INSTALLED WITH NUTS ON TOP OF THE FLANGE. BOLT SHAFT SHALL BE FILLED WITH SILICONE SEALANT
- 7) CONNECTIONS TO STEEL MAINS WILL BE MADE IN ACCORDANCE WITH AGENCY'S SPECIFICATIONS
- 8) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST



LEGEND ON PLANS

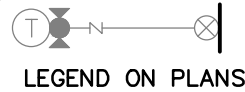
ITEM NO	SIZE AND DESCRIPTION	ITEM NO	SIZE AND DESCRIPTION
①	6" FIRE HYDRANT SEE NOTE 2	⑧	COLD JOINT STRIP
②	BREAK-AWAY BOLTS, SEE NOTE 6	⑨	TRACER WIRE (AS REQUIRED) PER WP-01
③	4' x 4' x 6" THICK CONCRETE SPLASH PAD	⑩	6" C-900 PVC PIPE
④	6" FLANGE DI HYDRANT EXTENSION SPOOL(S) WITH BREAK OFF GROOVES (MAXIMUM OF 2 SPOOLS)	⑪	GATE WELL WITH CAP SEE WV-01 OR WV-02
⑤	6" x 16" LONG RADIUS FLG x MJ/PO BURY ELL	⑫	6" FLG x MJ/PO/FLG RWGV
⑥	CONCRETE THRUST BLOCK SEE WT-01	⑬	6" FLG x MJ/PO ADAPTER (IF REQUIRED)
⑦	TRACER WIRE ACCESS PORT, 4" x 8" LONG SDR 35 SEWER PIPE W/ CAP (AS-REQUIRED)	⑭	SIZE x 6" MJ/PO/FLG x FLG TEE
		⑮	WATER MAIN

Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		Kercheval	12/75		
Delete Metric	MR	B. KNOLL	03/11	6" FIRE HYDRANT INSTALLATION	<i>Samuel Engeda</i> 03/24/2022
Updated	BK	B. KNOLL	10/18		Chairperson R.C.E. 52241 Date
Reviewed	RP	S. Engeda	03/22		DRAWING NUMBER



NOTES:

- 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
- 2) THE NUMBER OF OUTLETS SHALL BE AS SHOWN ON PLANS
- 3) TOP FLANGE OF BREAK-OFF CHECK VALVE SHALL BE SET WITHIN THE CONCRETE PAD. BREAK OFF GROOVE, MINIMUM OF ONE, SHALL BE PLACED ABOVE THE PAD
- 4) LOCATE FIRE HYDRANT AS SHOWN ON WF-04
- 5) INSTALL WARNING/IDENTIFICATION TAPE AS SHOWN ON WP-01
- 6) FIRE HYDRANT FLANGE BOLTS SHALL BE A307 ZINC-PLATED BOLTS INSTALLED WITH NUTS ON TOP OF THE FLANGE. BREAK AWAY BOLTS SHALL NOT BE USED
- 7) CONNECTIONS TO STEEL MAINS WILL BE MADE IN ACCORDANCE WITH AGENCY'S SPECIFICATIONS
- 8) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST



ITEM NO	SIZE AND DESCRIPTION	ITEM NO	SIZE AND DESCRIPTION
①	6" FIRE HYDRANT SEE NOTE 2	⑨	COLD JOINT STRIP
②	BOLTS, SEE NOTE 6	⑩	TRACER WIRE (AS REQUIRED) PER WP-01
③	4' x 4' x 8" THICK CONCRETE SPLASH PAD	⑪	6" C-900 PVC PIPE
④	6" BREAK-OFF CHECK VALVE	⑫	GATE WELL WITH CAP SEE WV-01 OR WV-02
⑤	6" FLANGE DI SPOOL(S) (MAXIMUM OF 2 SPOOLS) NO GROOVES	⑬	6" FLG x MJ/PO/FLG RWGV
⑥	6" x 16" LONG RADIUS FLG x MJ/PO BURY ELL	⑭	6" FLG x MJ/PO ADAPTER (IF REQUIRED)
⑦	CONCRETE THRUST BLOCK SEE WT-01	⑮	SIZE x 6" MJ/PO/FLG x FLG TEE
⑧	TRACER WIRE ACCESS PORT, 4" x 8" LONG SDR 35 SEWER PIPE W/ CAP (AS-REQUIRED)	⑯	WATER MAIN

Revision	By	Approved	Date
ORIGINAL		Kercheval	12/75
Delete Metric	MR	B. KNOLL	03/11
Updated	BK	B. KNOLL	10/18
Reviewed	RP	S. Engeda	03/22

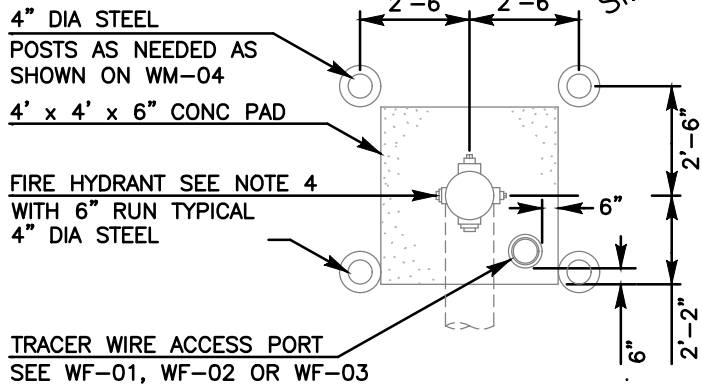
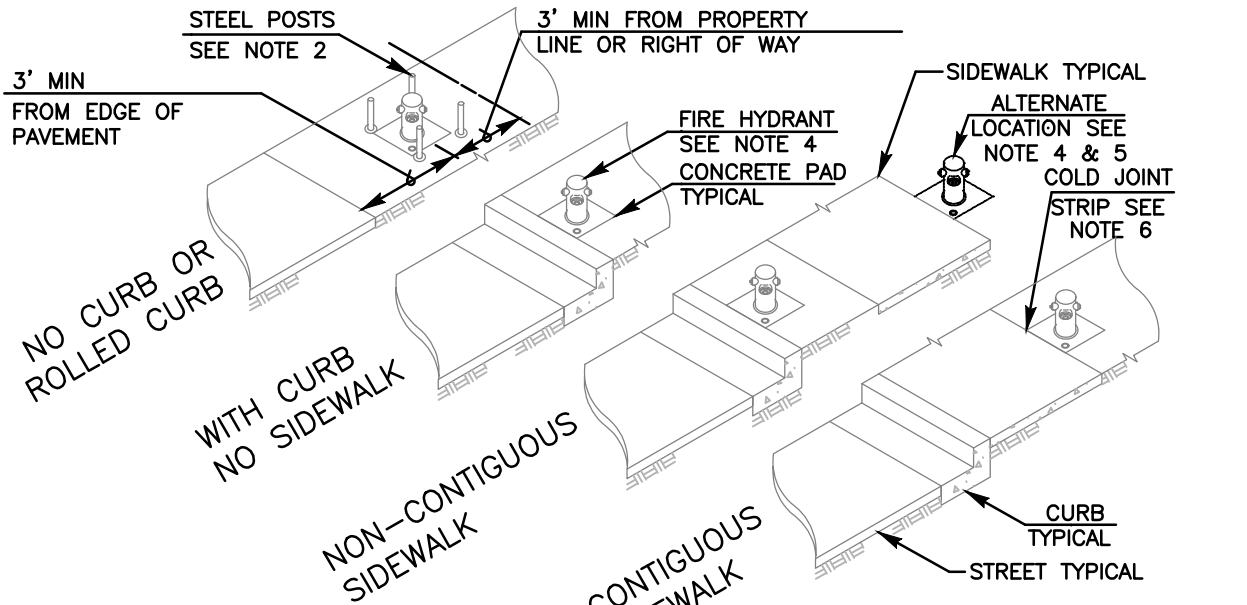
SAN DIEGO REGIONAL STANDARD DRAWING

**6" FIRE HYDRANT INSTALLATION WITH
BREAK-OFF CHECK VALVE**

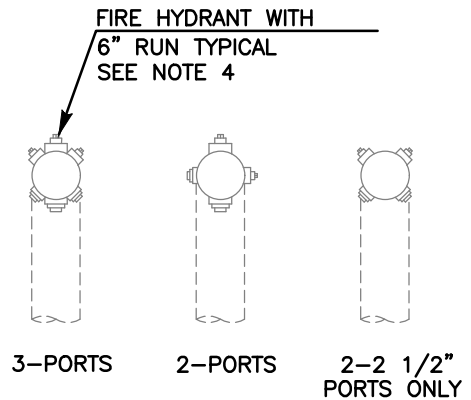
RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE

Saman Engeda 03/24/2022
Chairperson R.C.E. 52241 Date

DRAWING NUMBER WF-02



PROTECTION POST LOCATIONS



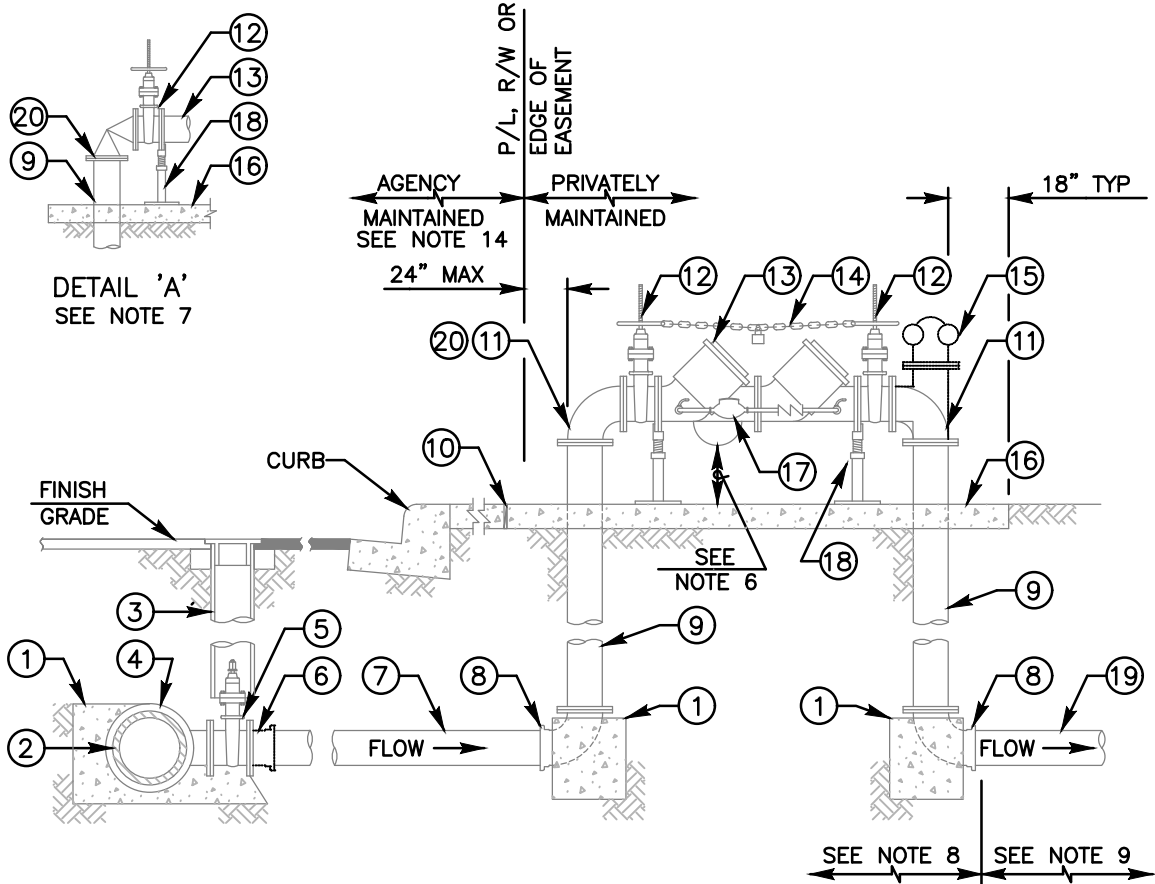
PORT ORIENTATION

NOTES:

- 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
- 2) PROTECTION POSTS SHALL BE INSTALLED AS CALLED FOR ON THE PLANS OR AS DIRECTED BY THE ENGINEER PER WM-04
- 3) LOCATE FIRE HYDRANT AS SHOWN ABOVE OR AS DIRECTED BY THE ENGINEER
- 4) FIRE HYDRANTS SHALL BE INSTALLED WITH THE LARGEST PORT PERPENDICULAR TO THE STREET
- 5) AN EASEMENT MAY BE NEEDED DEPENDING ON LOCATION OF FIRE HYDRANT
- 6) IF THE CONCRETE SLAB IS TO BE INSTALLED ADJACENT TO A CONCRETE CURB OR SIDEWALK A COLD JOINT STRIP SHALL BE INSTALLED
- 7) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST



Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING		RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		Kercheval	12/75	FIRE HYDRANT LOCATIONS AND PORT ORIENTATION		<i>Samantha Engeda</i> 03/24/2022 Chairperson R.C.E. 52241 Date
Delete Metric	MR	B. KNOLL	03/11			
Updated	BK	B. KNOLL	10/18			
Reviewed	RP	S. Engeda	03/22			
						DRAWING NUMBER WF-04



FOR NOTES REGARDING THE INSTALLATION OF
FIRE SERVICES SEE WF-05 SHEET 2 OF 2

RPFS  LEGEND ON PLANS

ITEM NO	SIZE AND DESCRIPTION	ITEM NO	SIZE AND DESCRIPTION
①	CONCRETE THRUST BLOCK SEE WT-01	⑬	RPDA UNLESS OTHERWISE SPECIFIED BY AGENCY OF JURISDICTION SEE NOTE 4
②	WATER MAIN	⑭	CHAIN WITH KNOX LOCK SEE NOTE 4
③	GATE WELL WITH CAP SEE WV-01 OR WV-02	⑮	FLANGED TEE WITH "FDC" SEE NOTE 4
④	SIZE x SIZE MJ/PO/FLG x FLG TEE	⑯	CONCRETE SLAB AS REQUIRED BY AGENCY OF JURISDICTION. MINIMUM 4" THICK x 36" WIDE x AS REQUIRED
⑤	FLG x MJ/PO/FLG RWGV	⑰	3/4" BYPASS, METER & RP DEVICE
⑥	FLG x MJ/PO ADAPTER (IF REQUIRED)	⑱	ADJUSTABLE VALVE SUPPORT
⑦	C-900 PVC PIPE	⑲	PVC OR DI PIPE SEE NOTE 9
⑧	MJ/PO x FLG 90° BEND	⑳	FLANGED ANGLE PRESSURE REDUCING VALVE SEE NOTE 7
⑨	FLANGED DUCTILE IRON PIPE		
⑩	COLD JOINT STRIP		
⑪	FLANGED 90° BEND, SEE NOTE 7		
⑫	FLANGED OS&Y RWGV WITH HAND WHEEL		

Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		Kercheval	12/75		
Delete Metric	MR	B. KNOLL	03/11	4" AND LARGER FIRE SERVICE INSTALLATION	 03/24/2022
Updated	BK	B. KNOLL	10/18		Chairperson R.C.E. 52241 Date
Reviewed	RP	S. Engeda	03/22		DRAWING NUMBER WF-05 (1 OF 2)

NOTES:

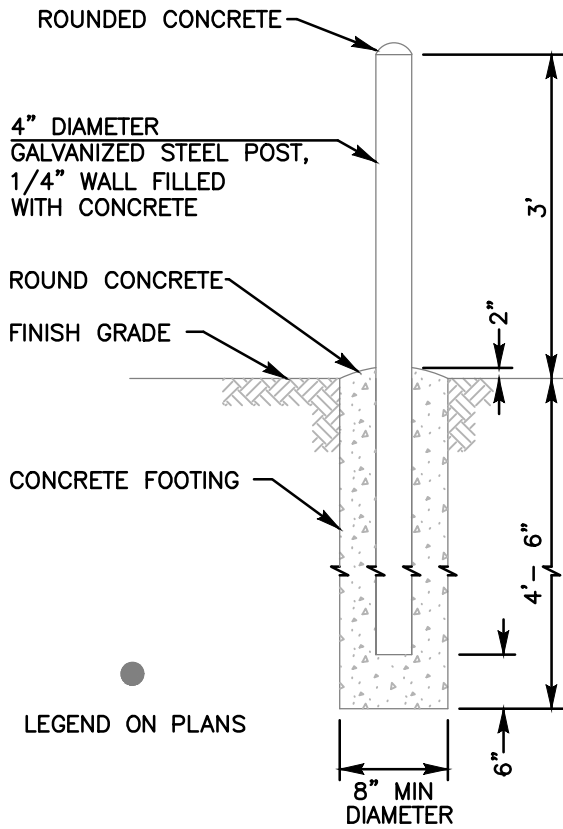
- 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
- 2) INSTALL WARNING/IDENTIFICATION TAPE AS SHOWN ON WP-01
- 3) LOCATION OF FIRE SERVICES SHALL BE AS DIRECTED BY THE FIRE DEPARTMENT OF JURISDICTION. FIRE SERVICES SHOULD BE LOCATED IN SUCH A MANNER THAT WILL ALLOW THE DEVICE TO BE READILY ACCESSIBLE FOR INSPECTION, REPAIR, AND USAGE
- 4) TAMPER SWITCH, AUTOMATIC RESET, CHAIN WITH KNOX LOCK, AND FIRE DEPARTMENT CONNECTION ("FDC") SHALL BE AS REQUIRED BY THE FIRE DEPARTMENT OF JURISDICTION
- 5) BALL VALVE TEST COCKS SHALL BE PROVIDED AND LOCATED PER THE MANUFACTURES RECOMMENDATIONS AND THE REQUIREMENTS OF THE WATER AGENCY STANDARDS
- 6) INSTALL FIRE SERVICES SO THAT THE DISTANCE BETWEEN THE BOTTOM OF THE RELIEF DIAPHRAM AND THE CONCRETE SLAB OR FINISH GRADE IS 12" MINIMUM AND 24" MAXIMUM
- 7) INSTALL AN ANGLE PRESSURE REDUCING VALVE IN LIEU OF THE FIRST 90° BEND WHEN SYSTEM STATIC PRESSURE EXCEEDS 150 PSI OR WHEN RECOMMENDED BY THE BACKFLOW MANUFACTURER
- 8) INSTALL PIPE AND RELATED APPURTENANCES IN THIS AREA PER THE REQUIREMENTS OF THE WATER AGENCY STANDARDS
- 9) INSTALL PIPE AND RELATED APPURTENANCES IN THIS AREA AS REQUIRED BY THE FIRE DEPARTMENT OF JURISDICTION
- 10) ABOVE GROUND APPURTENANCES SHALL BE PAINTED AND IDENTIFIED AS CALLED FOR BY THE FIRE DEPARTMENT OF JURISDICTION
- 11) TESTING SHALL BE CONDUCTED AS CALLED FOR IN AGENCY'S SPECIFICATIONS PRIOR TO ACCEPTANCE BY THE DISTRICT
- 12) CONNECTIONS TO STEEL MAINS SHALL BE IN ACCORDANCE WITH AGENCY'S SPECIFICATIONS
- 13) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST
- 14) AGENCY RESPOSIBILITY ENDS AT EDGE OF PROPERTY LINE, RIGHT OF WAY, OR EASEMENT.

FOR DETAILS REGARDING THE INSTALLATION OF
FIRE SERVICES SEE WF-05 SHEET 1 OF 2

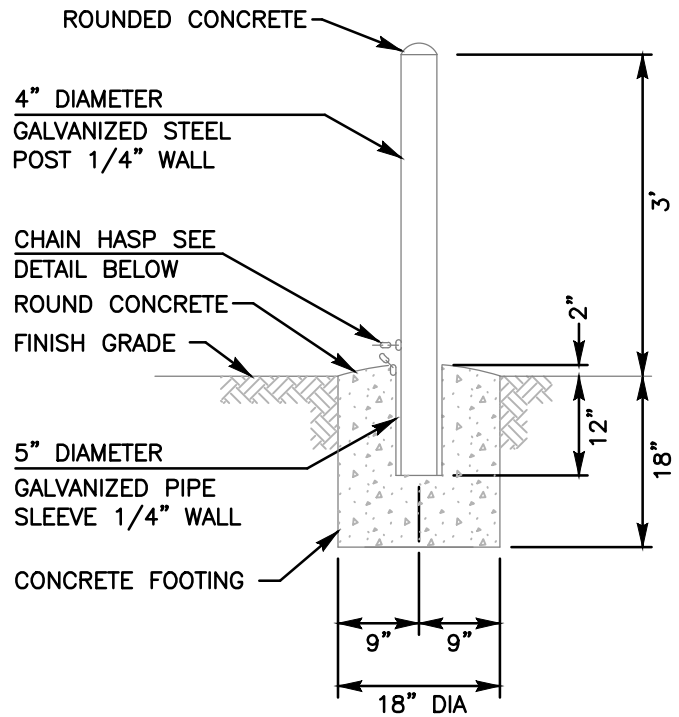


LEGEND ON PLANS

Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		Kercheval	12/75		4" AND LARGER FIRE SERVICE INSTALLATION NOTES
Delete Metric	MR	B. KNOLL	03/11	Chairperson R.C.E. 52241 Date	
Updated	BK	B. KNOLL	10/18		
Reviewed	RP	S. Engeda	03/22		
					DRAWING NUMBER WF-05 (2 OF 2)



PROTECTION POST TYPE "A"

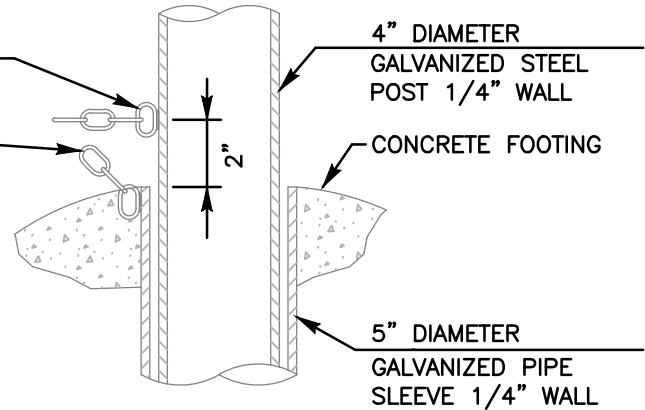


DEMOUNTABLE PROTECTION POST TYPE "B"

LEGEND ON PLANS

LEGEND ON PLANS

4-CHAIN LINK SEGMENT WELDED TO POST
 3-CHAIN LINK SEGMENT WELDED TO SLEEVE

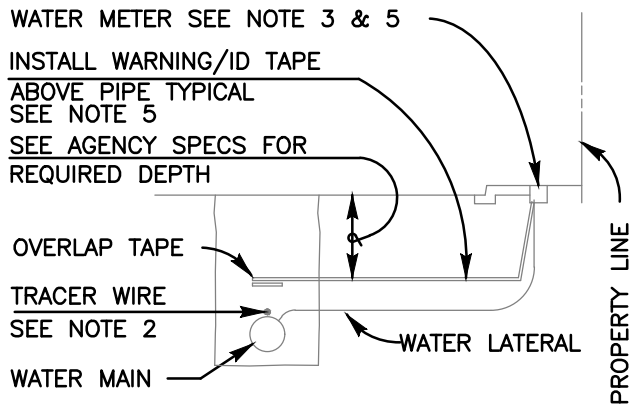


CHAIN HASP DETAIL

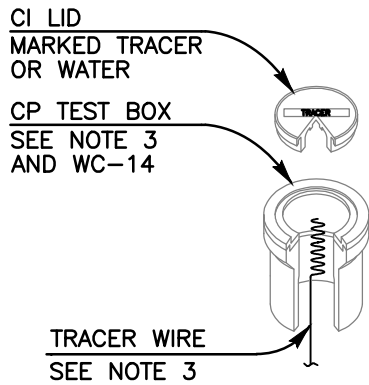
NOTES:

- 1) TYPE "A" AND TYPE "B" PROTECTION POSTS SHALL BE INSTALLED WHERE INDICATED ON THE APPROVED PLANS OR AS DIRECTED BY THE ENGINEER. SDG&E REQUIREMENTS DICTATE IN AREAS OF SDG&E EQUIPMENT
- 2) CHAIN TO BE 1/4" PROOF COIL CHAIN GALVANIZED STEEL. WELD 4-LINK SEGMENT TO POST AND 3-LINK SEGMENT TO SLEEVE
- 3) TYPE "A" AND TYPE "B" PROTECTION POSTS SHALL BE COATED USING SAFETY YELLOW IN ACCORDANCE WITH AGENCY'S STANDARDS

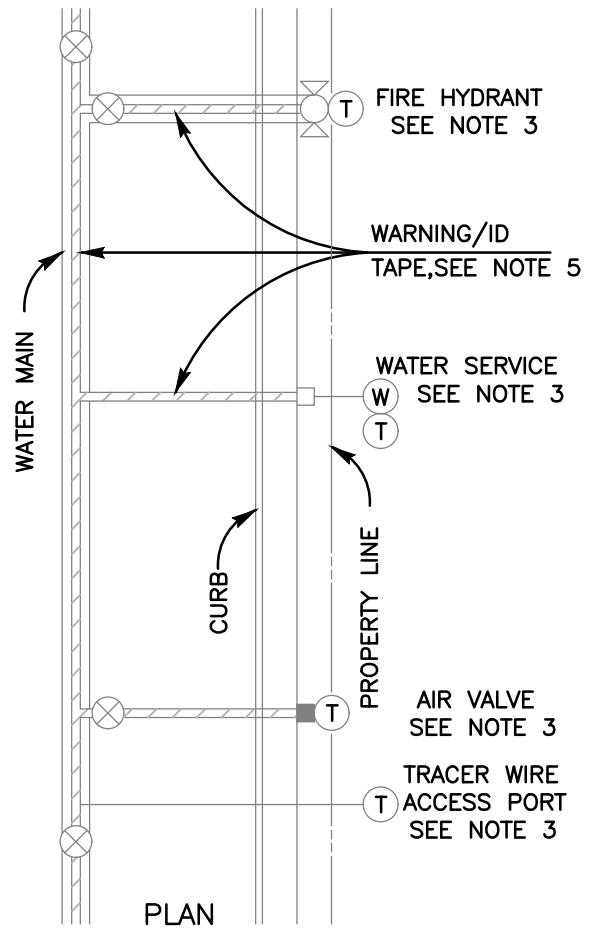
Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING		RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		Kercheval	12/75	PROTECTION POST INSTALLATION		 03/24/2022 Chairperson R.C.E. 52241 Date
Delete Metric	MR	B. KNOLL	03/11			
Updated	BK	B. KNOLL	10/18			
Reviewed	RP	S. Engeda	03/22			
				DRAWING NUMBER		WM-04



SECTION AT WATER LATERALS



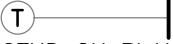
TRACER WIRE ACCESS PORT (CP BOX) DETAIL




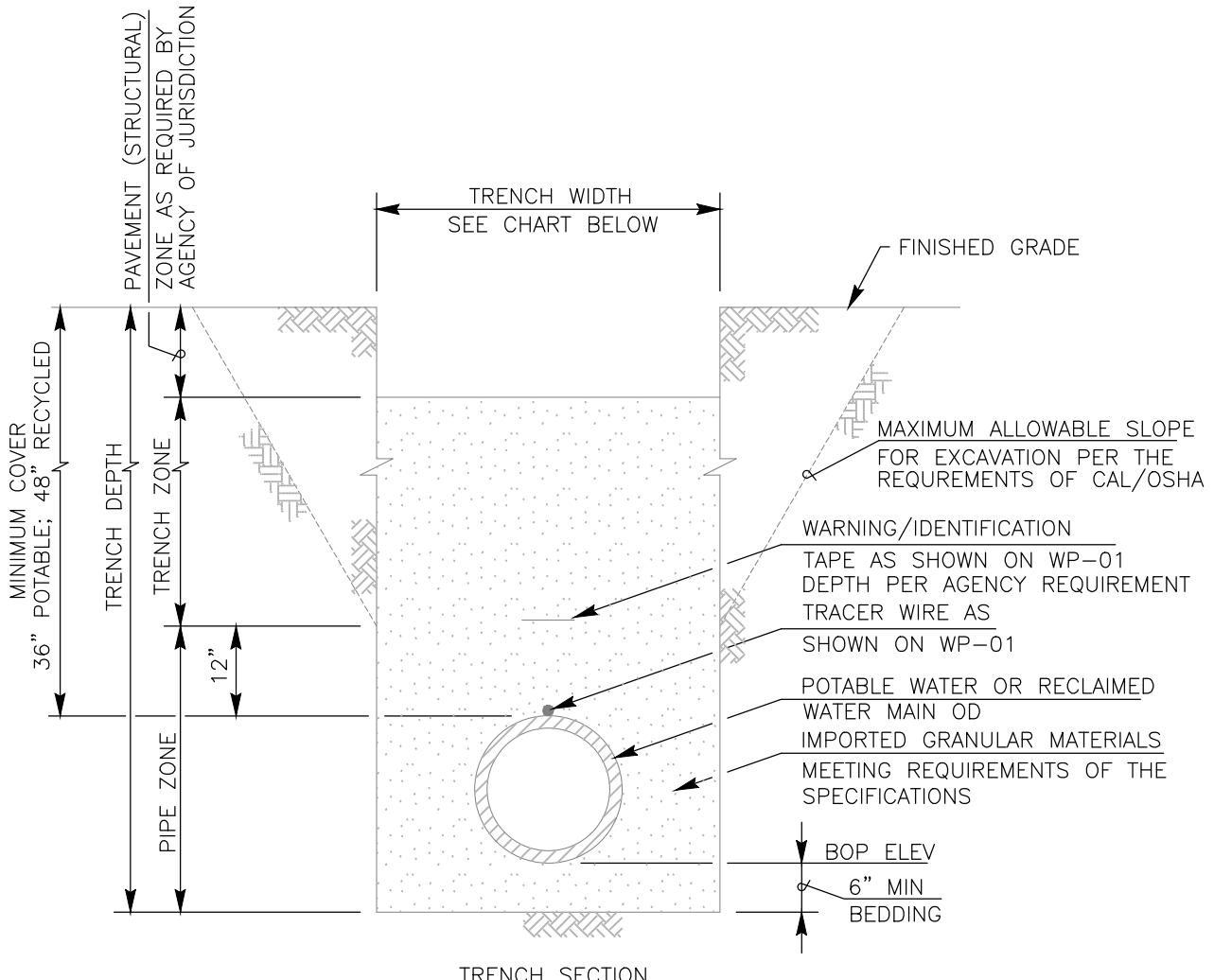
PLAN

NOTES:

- 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
- 2) WHERE SPECIFIED, TRACER WIRE AND OR WARNING ID TAPE, TO RUN CONTINUOUSLY ALONG THE ENTIRE LENGTH OF WATER MAINS. WIRE SHALL BE SECURED TO THE PIPE AND MAINTAINED ON PIPE CENTERLINE DURING TRENCH BACKFILL
- 3) TRACER WIRE ACCESS PORTS SHALL BE INSTALLED WITHIN THE CONCRETE SPLASH PAD OF ALL FIRE HYDRANTS IN ACCORDANCE WITH THE STANDARD DRAWINGS. TRACER WIRE MAY TERMINATE WITHIN METER BOX, BLOWOFF BOX OR AIR VALVE PER AGENCY'S SPECIFICATIONS. TRACER WIRE MAY TERMINATE IN A CP TEST BOX ONLY IF NO OTHER APPURTENANCE EXISTS WITHIN THE REQUIRED 1,000' INTERVAL. ALL BURIED WIRES THAT REQUIRE TRENCHING TO A TEST BOX LOCATION SHALL BE INSTALLED, WITHOUT SPLICE, IN A CONDUIT IN THE TRENCH AT A MINIMUM DEPTH OF 24"
- 4) WIRE SPLICE CONNECTORS SHALL BE SILICONE FILLED TYPE
- 5) WARNING/IDENTIFICATION TAPE SHALL BE INSTALLED ABOVE THE PIPE AS SPECIFIED AND RUN CONTINUOUSLY ALONG THE ENTIRE LENGTH OF THE PIPE AND ALL RELATED APPURTENANCES
- 6) FOR PIPE BEDDING AND TRENCH BACKFILL SEE WP-02
- 7) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST


 LEGEND ON PLANS
 (TRACER WIRE)

Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		Kercheval	12/75	WARNING/IDENTIFICATION TAPE AND TRACER WIRE INSTALLATIONS	 03/24/2022 Chairperson R.C.E. 52241 Date
Delete Metric	MR	B. KNOLL	03/11		
Updated	BK	B. KNOLL	10/18		
Reviewed	RP	S. Engeda	03/22		
				DRAWING NUMBER	WP-01



TRENCH SECTION

NOTES:

- 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
- 2) PAVING OR PAVEMENT REPAIR TO BE DONE IN ACCORDANCE TO CITY OR COUNTY STANDARDS
- 3) EXCAVATE BELL HOLES AT EACH PIPE JOINT TO PERMIT PROPER ASSEMBLY AND INSPECTION OF THE ENTIRE JOINT
- 4) ALL PIPELINE TRENCHES SHALL BE EXCAVATED SO THAT THE DISTANCE BETWEEN TRENCH WALLS AT THE TOP OF PIPE SHALL BE AS SHOWN BELOW:

TRENCH WIDTH

NOMINAL PIPE INSIDE DIAMETER	MINIMUM DISTANCE	MAXIMUM DISTANCE
4" & SMALLER	18"	28"
6" & 8"	24"	32"
10" & 12"	28"	36"
16" THRU 36"	OD PLUS 24"	OD PLUS 36"

Revision	By	Approved	Date
ORIGINAL		Kercheval	12/75
Delete Metric	MR	B. KNOLL	03/11
Updated	BK	B. KNOLL	10/18
Reviewed	RP	S. Engeda	03/22

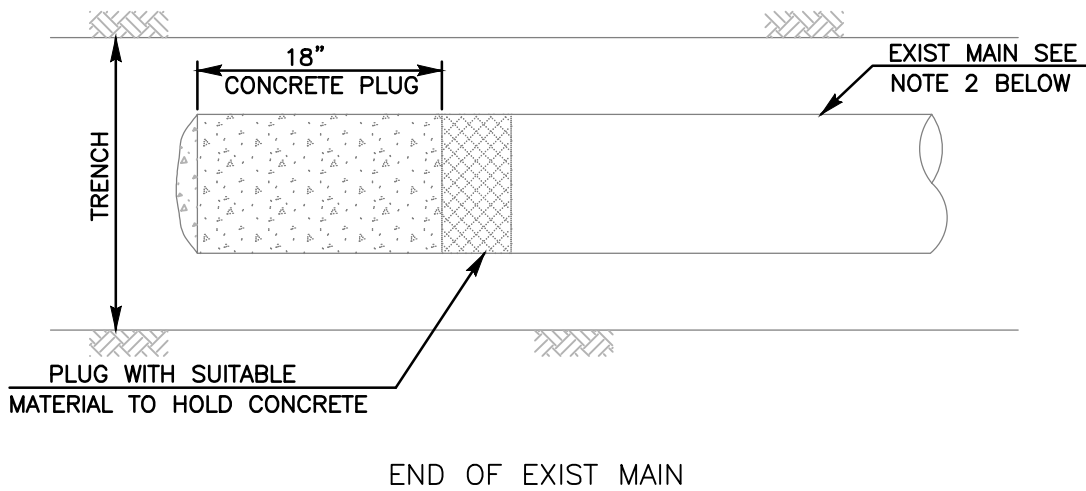
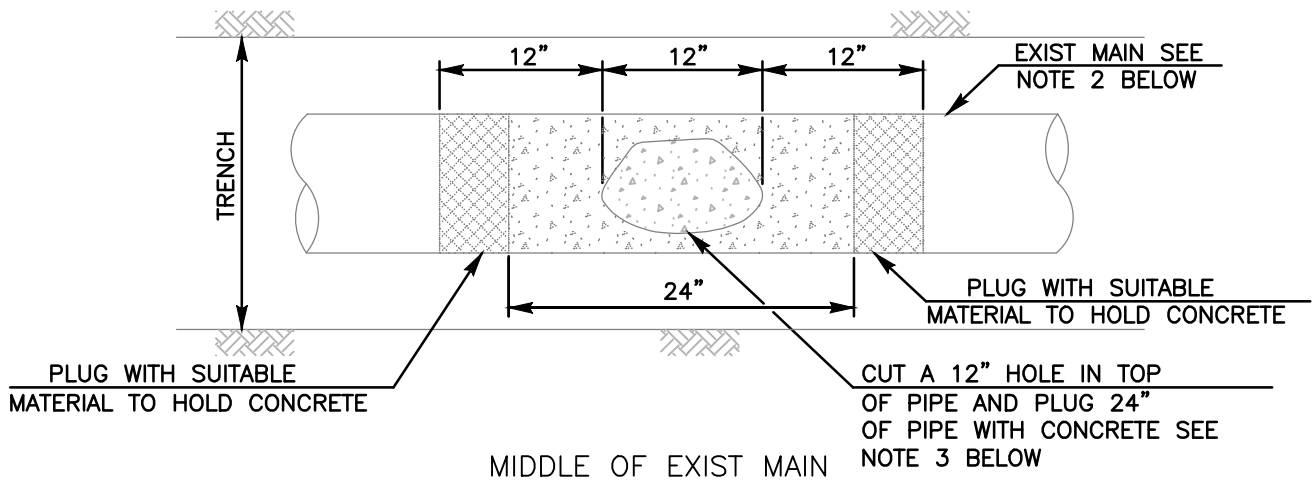
SAN DIEGO REGIONAL STANDARD DRAWING

PIPE BEDDING AND TRENCH BACKFILL FOR
POTABLE AND RECYCLED WATER MAINS

RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE

Saman Engeda 03/24/2022
Chairperson R.C.E. 52241 Date

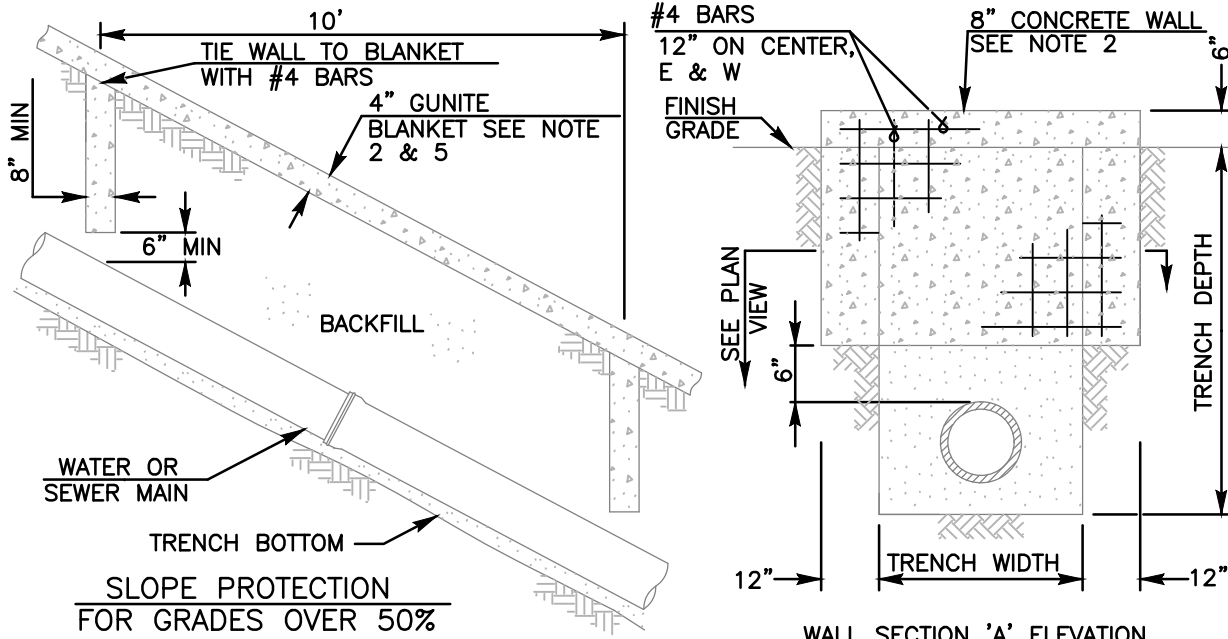
DRAWING NUMBER **WP-02**



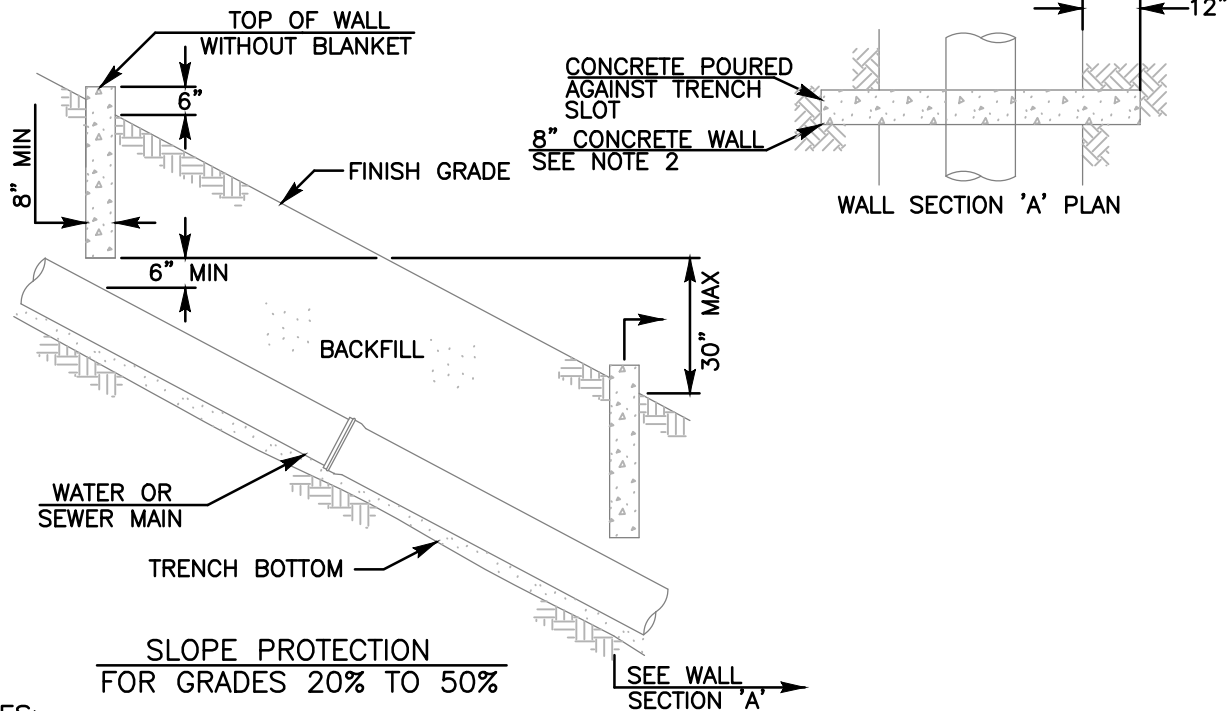
NOTES:

- 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
- 2) WATER AND RECYCLED WATER MAINS AND SEWER LATERALS 4" DIAMETER AND SMALLER SHALL HAVE A SHORT SECTION OF PIPE REMOVED AND PIPE ENDS ENCASED IN CONCRETE
- 3) EXISTING MAIN TO BE PLUGGED WITH CONCRETE OR PRESSURE GROUTED AT INTERVALS OF ABOUT 200' OR AS DIRECTED BY THE ENGINEER
- 4) EXISTING MAINS 16" AND LARGER REQUIRE THE ENTIRE LENGTH OF THE PIPE TO BE FILLED BY PRESSURE GROUTING OR BY BLOWN SAND
- 5) EXISTING VALVES SHALL BE TURNED TO THE CLOSED POSITION. REMOVE GATE WELL AND REPLACE WITH COMPACTED BACKFILL
- 6) FOR ABANDONMENT OF MANHOLES SEE SM-08
- 7) PRIOR AGENCY APPROVAL REQUIRED FOR CUTTING AND PLUGGING

Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		J. Tomasulo	10/04		CUTTING AND PLUGGING ABANDONED WATER, RECYCLED WATER AND SEWER MAINS
Delete Metric	MR	B. KNOLL	03/11	Chairperson R.C.E. 52241 Date	
Updated	BK	B. KNOLL	10/18	DRAWING NUMBER	
Reviewed	RP	S. Engeda	03/22	WP-03	



WALL SECTION 'A' ELEVATION

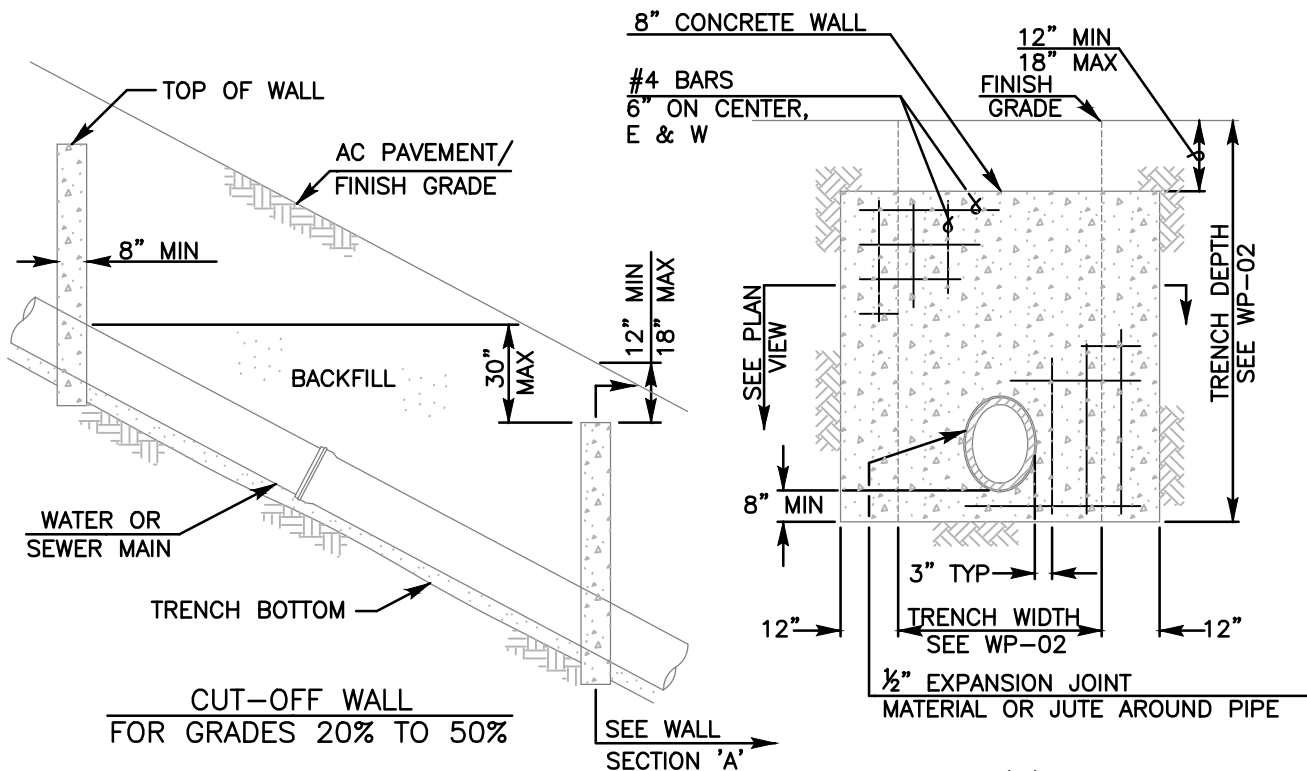


NOTES:

- 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
- 2) THE DETAILS SHOWN REPRESENT THE MINIMUM REQUIRED. THE ENGINEER OF WORK IS REQUIRED TO PROVIDE A SUBMITTAL TO THE AGENCY OF JURISDICTION FOR REVIEW AND APPROVAL BY THE AGENCY'S ENGINEER PRIOR TO INSTALLATION
- 3) WALLS SHALL BE REINFORCED CONCRETE OR 8" x 8" x 16" CONCRETE BLOCK, REINFORCED AND ALL CORES FILLED WITH GROUT SEE SPECIFICATIONS
- 4) FOR GRADES OVER 50%, SLOPE PROTECTION SHALL ALSO INCLUDE AC PAVING, CONCRETE SLAB OR GUNITE BLANKET PLACED OVER THE PIPELINE ALIGNMENT
- 5) 4" GUNITE BLANKET WITH 6" SQUARE x 10 GAGE WIRE FABRIC AT THE ENGINEERS DISCRETION

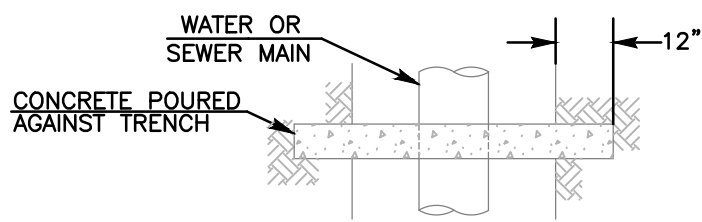
LEGEND ON PLANS

Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		J. Tomasulo	10/04		SLOPE PROTECTION INSTALLATIONS
Delete Metric	MR	B. KNOLL	03/11		
Updated	BK	B. KNOLL	10/18		
Reviewed	RP	S. Engeda	03/22		
					 03/24/2022 Chairperson R.C.E. 52241 Date
					DRAWING NUMBER WP-05



CUT-OFF WALL
FOR GRADES 20% TO 50%

WALL SECTION 'A' ELEVATION



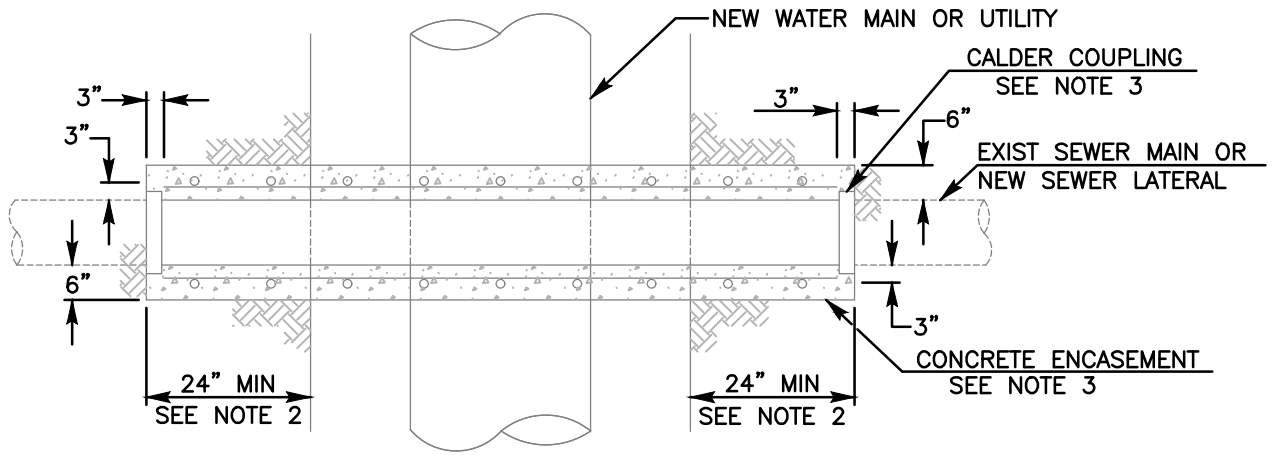
WALL SECTION 'A' PLAN

NOTES:

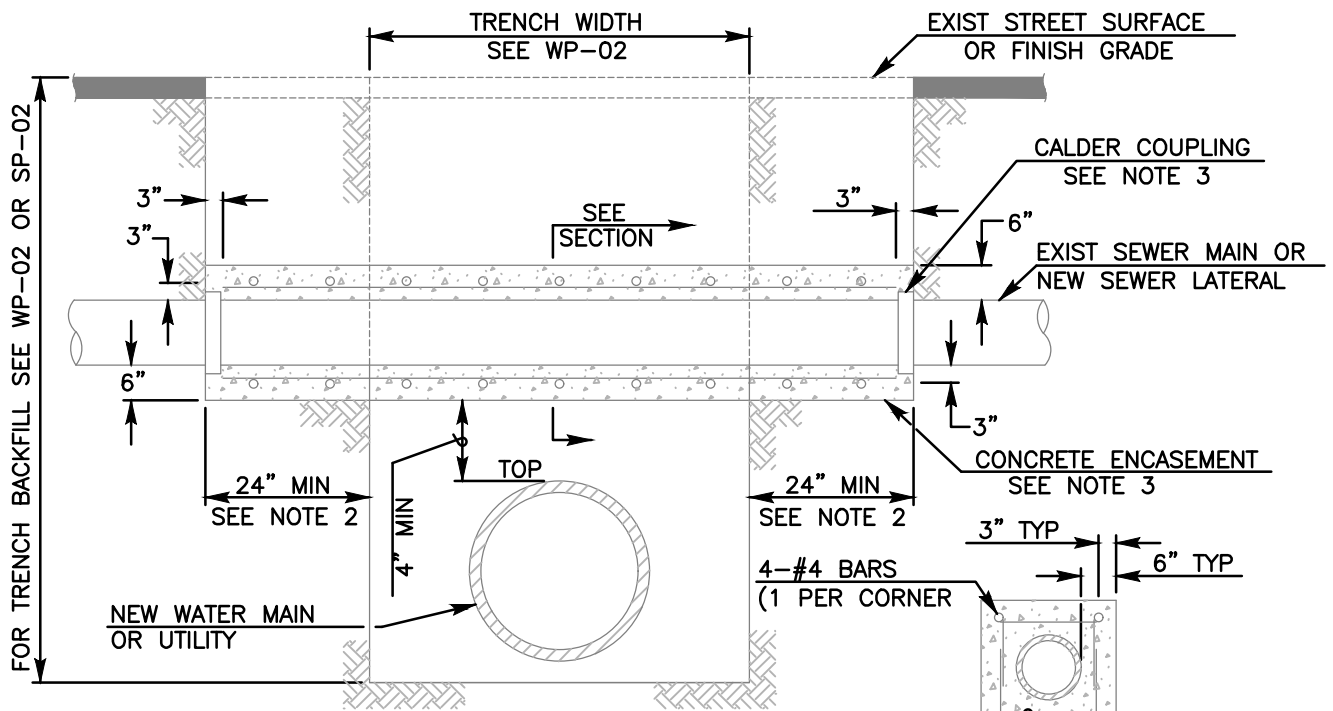
- 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
- 2) FOR USE AS TRENCH BACKFILL STABILIZATION IN TRAVELED AREAS
- 3) THE DETAILS SHOWN REPRESENT THE MINIMUM REQUIRED. THE ENGINEER OF WORK IS REQUIRED TO PROVIDE A SUBMITTAL TO THE AGENCY OF JURISDICTION FOR REVIEW AND APPROVAL BY THE AGENCY'S ENGINEER PRIOR TO INSTALLATION
- 4) WALLS SHALL BE REINFORCED CONCRETE OR 8" x 8" x 16" CONCRETE BLOCK, REINFORCED AND ALL CORES FILLED WITH GROUT SEE SPECIFICATIONS
- 5) FOR GRADES OVER 50% SEE WP-05/SP-05

— — — —
LEGEND ON PLANS

Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		J. Tomasulo	10/04		
Delete Metric	MR	B. KNOLL	03/11	CUT-OFF WALL INSTALLATION IN TRAVELED AREAS	<i>Samson Engeda</i> 03/24/2022
Updated	BK	B. KNOLL	10/18		Chairperson R.C.E. 52241 Date
Reviewed	RP	S. Engeda	03/22		DRAWING NUMBER WP-07



PLAN



ELEVATION

ENCASEMENT SECTION

NOTES:

- 1) REFER TO AGENCY SPECIFICATIONS FOR PROTECTION OF EXISTING FACILITIES
- 2) ENCASEMENT SHALL EXTEND TO FIRST JOINT BEYOND BOTH SIDES OF TRENCH (24" MIN, 48" MAX OF SUITABLE NATIVE SUPPORT BEYOND EDGE OF TRENCH).
- 3) CONCRETE ENCASEMENT REQUIRED FOR SEWER MAINS ONLY. CALDER COUPLINGS REQUIRED FOR SEWER LATERALS ONLY. SEWER LATERALS TO BE REPLACED WITH SCH. 80 PVC WITH NO INTERMEDIATE JOINTS.
- 4) FOR PIPE BEDDING AND TRENCH BACKFILL SEE WP-02 OR SP-02.



LEGEND ON PLANS

Revision	By	Approved	Date
ORIGINAL		J. Tomasulo	10/04
Delete Metric	MR	B. KNOLL	03/11
Updated	BK	B. KNOLL	10/18
Reviewed	RP	S. Engeda	03/22

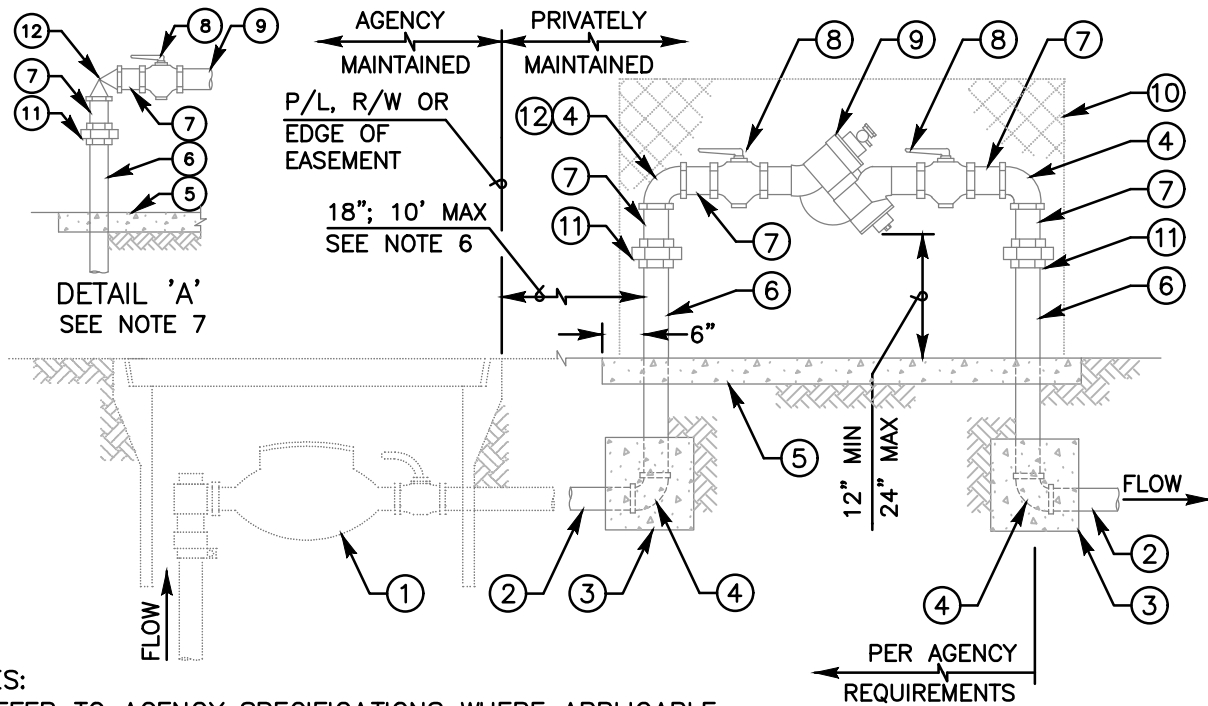
SAN DIEGO REGIONAL STANDARD DRAWING

PIPE SUPPORT FOR UNDERCUT
SEWER MAINS OR SEWER LATERALS

RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE

Saman Engeda 03/24/2022
Chairperson R.C.E. 52241 Date

DRAWING NUMBER WP-09




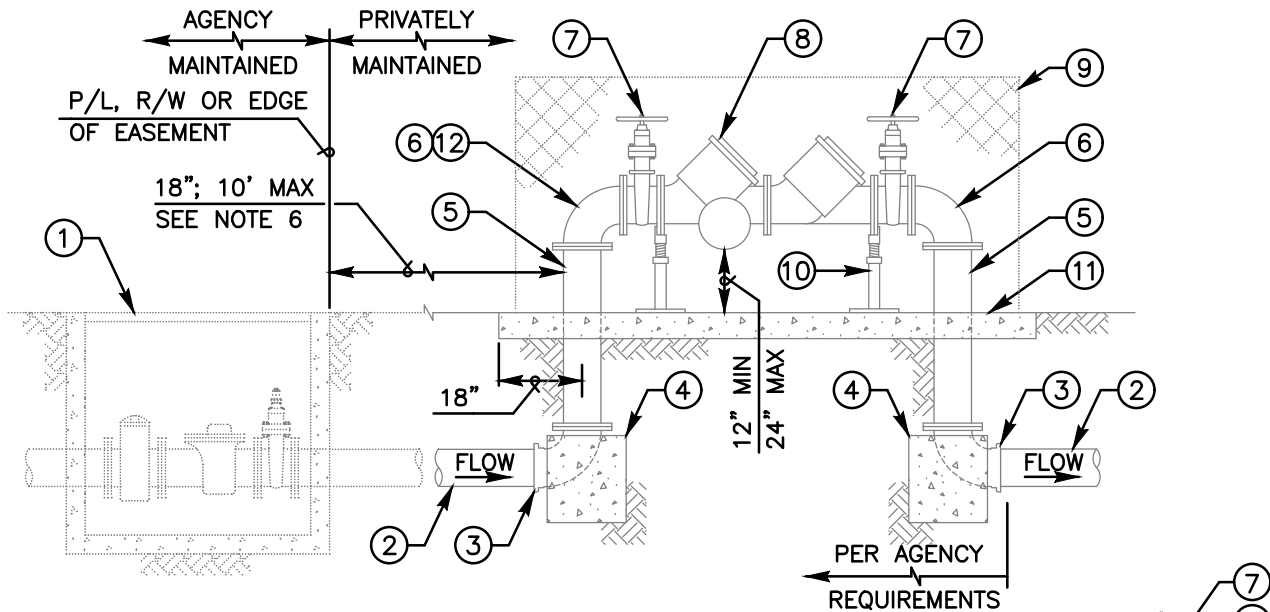
NOTES:

- 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
- 2) INSTALL WARNING/IDENTIFICATION TAPE AS SHOWN ON WP-01
- 3) LOCATE BACKFLOW PREVENTION DEVICE (BPD) IN SUCH A MANNER THAT WILL ALLOW THE DEVICE TO BE READILY ACCESSIBLE FOR INSPECTION AND REPAIR
- 4) STRAINERS SHALL NOT BE INSTALLED PRIOR TO THE FIRST SHUT-OFF VALVE
- 5) ALL ABOVE GROUND PIPING, UNIONS, ELBOWS, & NIPPLES SHALL BE SOLDERED OR THREADED BRASS
- 6) INSTALL A CASING ENCASED IN CONCRETE WHEN THE DISTANCE BETWEEN THE METER BOX AND THE RISER TO THE BPD EXCEEDS 18"
- 7) INSTALL AN ANGLE PRESSURE REDUCING VALVE IN LIEU OF THE FIRST 90° ELL WHEN SYSTEM PRESSURE EXCEEDS 150 PSI PER AGENCY SPECIFICATIONS
- 8) TESTING SHALL BE CONDUCTED IN ACCORDANCE WITH AGENCY SPECIFICATIONS PRIOR TO ACCEPTANCE
- 9) BPD & APPURTENANCES INSTALLED FOR THE USE OF RECYCLED WATER SHALL BE IDENTIFIED AS DESCRIBED IN AGENCY SPECIFICATIONS
- 10) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST
- 11) BACKFLOW AND WATER METER SHALL BE OF EQUAL SIZE

RP W ———— |
 RP RW ———— |
 LEGEND ON PLANS

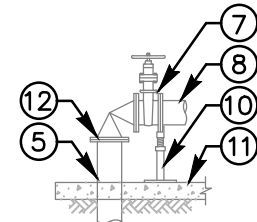
ITEM NO	SIZE AND DESCRIPTION	ITEM NO	SIZE AND DESCRIPTION
①	METER BOX & METER ASSEMBLY SEE WS-01 & WS-02	⑥	BRASS OR COPPER PIPE SEE NOTE 5
②	SCH 80 PVC, BRASS OR COPPER PIPE	⑦	3" LONG NIPPLE SEE NOTE 5
③	CONCRETE THRUST BLOCK SEE WT-01	⑧	BALL VALVE "SHUT-OFF"
④	90° ELL SEE NOTES 5 & 7	⑨	REDUCED PRESSURE BACKFLOW DEVICE
⑤	CONCRETE SLAB, MINIMUM 4" THICK x 18" WIDE	⑩	ENCLOSURE (OPTIONAL)
		⑪	UNION SEE NOTE 5
		⑫	ANGLE PRV SEE NOTES 5 & 7

Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		Kercheval	12/75		
Add Note 11	BK	B. KNOLL	04/15	3/4" THRU 2" REDUCED PRESSURE BACKFLOW PREVENTION DEVICE	 03/24/2022 Chairperson R.C.E. 52241 Date
Updated	BK	B. KNOLL	10/18		
Reviewed	RP	S. Engeda	03/22		
				DRAWING NUMBER	WR-01

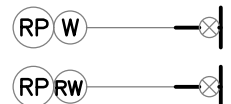


NOTES:

- 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
- 2) INSTALL WARNING/IDENTIFICATION TAPE AS SHOWN ON WP-01
- 3) LOCATE BACKFLOW PREVENTION DEVICE (BPD) IN SUCH A MANNER THAT WILL ALLOW THE DEVICE TO BE READILY ACCESSIBLE FOR INSPECTION AND REPAIR
- 4) STRAINERS SHALL NOT BE INSTALLED PRIOR TO THE FIRST SHUT-OFF VALVE
- 5) INSTALL A CASING ENCASED IN CONCRETE WHEN THE DISTANCE BETWEEN THE METER BOX AND THE RISER TO THE BPD EXCEEDS 18"
- 6) INSTALL AN ANGLE PRESSURE REDUCING VALVE IN LIEU OF THE FIRST 90° ELL WHEN SYSTEM PRESSURE EXCEEDS 150 PSI PER AGENCY SPECIFICATIONS
- 7) TESTING SHALL BE CONDUCTED IN ACCORDANCE WITH AGENCY SPECIFICATIONS PRIOR TO ACCEPTANCE
- 8) BPD & APPURTENANCES INSTALLED FOR THE USE OF RECYCLED WATER SHALL BE IDENTIFIED AS DESCRIBED IN AGENCY SPECIFICATIONS
- 9) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST




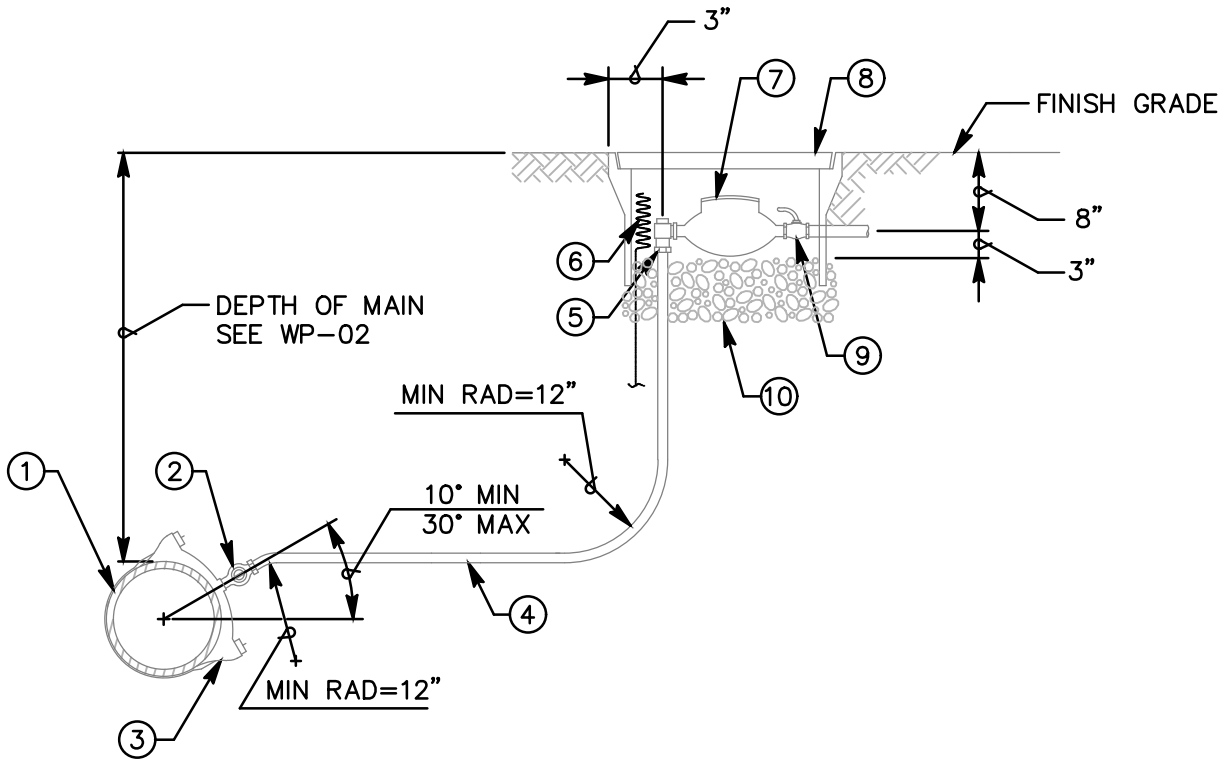
DETAIL 'A'
SEE NOTE 7



LEGEND ON PLANS

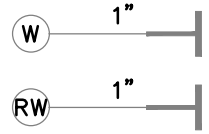
ITEM NO	SIZE AND DESCRIPTION	ITEM NO	SIZE AND DESCRIPTION
①	METER VAULT & METER ASSEMBLY SEE WS-04	⑦	FLANGED RESILIENT WEDGE GATE VALVE
②	PVC OR DUCTILE IRON PIPE	⑧	REDUCED PRESSURE BACKFLOW DEVICE
③	FLG x FLG OR MJ/PO x FLG 90° BEND	⑨	ENCLOSURE (OPTIONAL)
④	CONCRETE THRUST BLOCK SEE WT-01	⑩	ADJUSTABLE VALVE SUPPORT
⑤	FLANGED DUCTILE IRON PIPE	⑪	CONCRETE SLAB, MINIMUM 4" THICK x 36" WIDE
⑥	FLANGED 90° BEND, SEE NOTE 6	⑫	FLANGED ANGLE PRESSURE REDUCING VALVE SEE NOTE 6

Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		Kercheval	12/75		
Delete Metric	MR	B. KNOLL	03/11	3" AND LARGER REDUCED PRESSURE BACKFLOW PREVENTION DEVICE	 Chairperson R.C.E. 52241 Date 03/24/2022
Updated	BK	B. KNOLL	10/18		
Reviewed	RP	S. Engeda	03/22		
				DRAWING NUMBER	WR-02



NOTES:

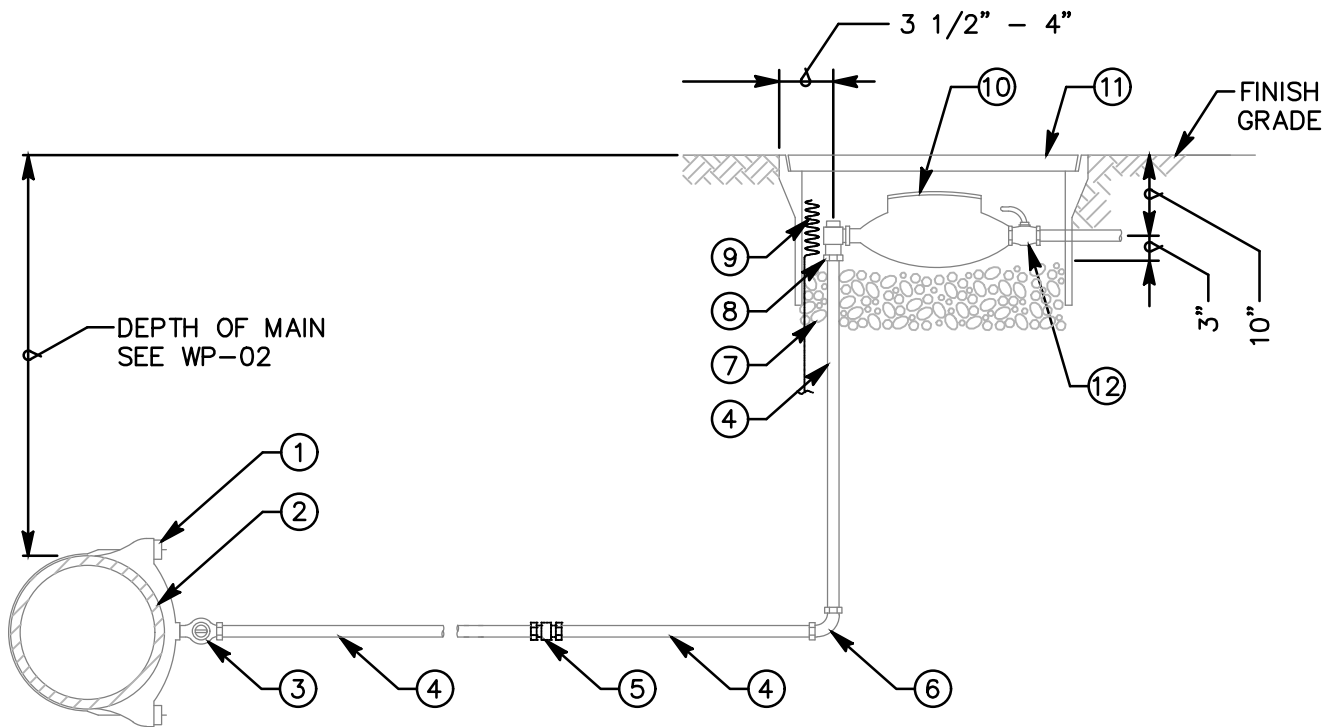
- 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
- 2) INSTALL CORPORATION STOP WITH KEY IN THE SIDE POSITION
- 3) SET TOP OF METER BOX FLUSH WITH SIDEWALK, CURB, OR FINISH GRADE
- 4) LOCATE METER BOX AS SHOWN ON WS-03
- 5) INSTALL WARNING/IDENTIFICATION TAPE AS SHOWN ON WP-01
- 6) WATER LATERALS INSTALLED FOR THE USE OF RECYCLED WATER SHALL BE IDENTIFIED AS DESCRIBED IN AGENCY SPECIFICATIONS
- 7) SILVER SOLDER JOINTS SHALL NOT BE USED
- 8) ON STEEL MAINS USE WELD ON COUPLINGS, ON DUCTILE IRON MAINS USE DUCTILE IRON SERVICE SADDLES (INSULATING BUSHINGS ARE REQUIRED)
- 9) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST



LEGEND ON PLANS

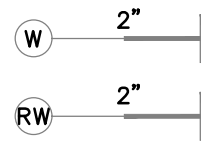
ITEM NO	SIZE AND DESCRIPTION	ITEM NO	SIZE AND DESCRIPTION
①	WATER MAIN	⑦	WATER METER FURNISHED & INSTALLED BY THE WATER AGENCY OF JURISDICTION
②	1" BRONZE CORPORATION STOP	⑧	METER BOX WITH LID, 10" x 20"
③	SIZE x 1" SERVICE SADDLE	⑨	CUSTOMER SHUT-OFF VALVE (LOCKABLE) FURNISHED AND INSTALLED BY THE WATER AGENCY OF JURISDICTION
④	1" x REQUIRED LENGTH COPPER PIPE TYPE "K" SOFT	⑩	3/8" ROCK, 4" TO 6" DEEP
⑤	1" BRONZE ANGLE METER STOP WITH LOCKWING		
⑥	TRACER WIRE (AS REQUIRED), SEE WP-01		

Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		Kercheval	12/75		
Delete Metric	MR	B. KNOLL	03/11	1" WATER SERVICE INSTALLATION	<i>Samsen Engeda</i> 03/24/2022
Updated	BK	B. KNOLL	10/18		Chairperson R.C.E. 52241 Date
Reviewed	RP	S. Engeda	03/22		DRAWING NUMBER WS-01



NOTES:

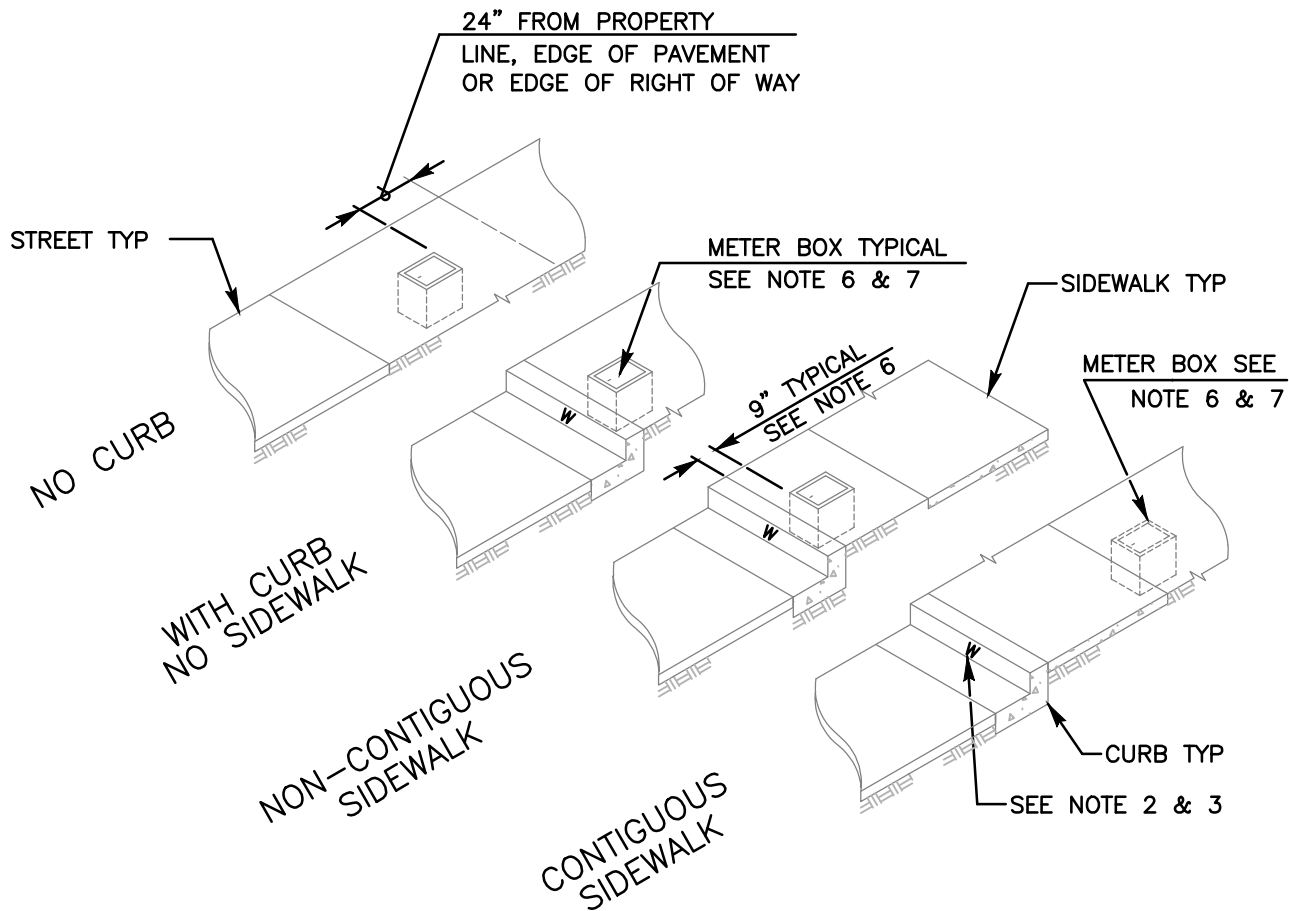
- 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
- 2) INSTALL CORPORATION STOP WITH KEY IN THE SIDE POSITION
- 3) SET TOP OF METER BOX FLUSH WITH SIDEWALK, CURB, OR FINISH GRADE
- 4) LOCATE METER BOX AS SHOWN ON WS-03
- 5) INSTALL WARNING/IDENTIFICATION TAPE AS SHOWN ON WP-01
- 6) WATER LATERALS INSTALLED FOR THE USE OF RECYCLED WATER SHALL BE IDENTIFIED AS DESCRIBED IN AGENCY SPECIFICATIONS
- 7) SILVER SOLDER JOINTS SHALL NOT BE USED
- 8) ON STEEL MAINS USE WELD ON COUPLINGS, ON DUCTILE IRON MAINS USE DUCTILE IRON SERVICE SADDLES (INSULATING BUSHINGS ARE REQUIRED)
- 9) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST



LEGEND ON PLANS

ITEM NO	SIZE AND DESCRIPTION	ITEM NO	SIZE AND DESCRIPTION
①	SIZE x 2" SERVICE SADDLE	⑦	3/8" ROCK, 4" TO 6" DEEP
②	WATER MAIN	⑧	2" BRONZE ANGLE METER STOP WITH LOCKWING
③	2" BRONZE CORPORATION STOP	⑨	TRACER WIRE (AS REQUIRED), SEE WP-01
④	2" x REQUIRED LENGTH COPPER PIPE TYPE "K" SOFT/RIGID OR UNLESS OTHERWISE SPECIFIED BY AGENCY OF JURISDICTION	⑩	WATER METER FURNISHED AND INSTALLED BY THE WATER AGENCY OF JURISDICTION
⑤	2" BRONZE COMPRESSION COUPLING COPPER TO COPPER (IF REQUIRED)	⑪	METER BOX WITH LID, 17"x 30"
⑥	2" BRONZE COMPRESSION ELL	⑫	CUSTOMER SHUT-OFF VALVE (LOCKABLE)

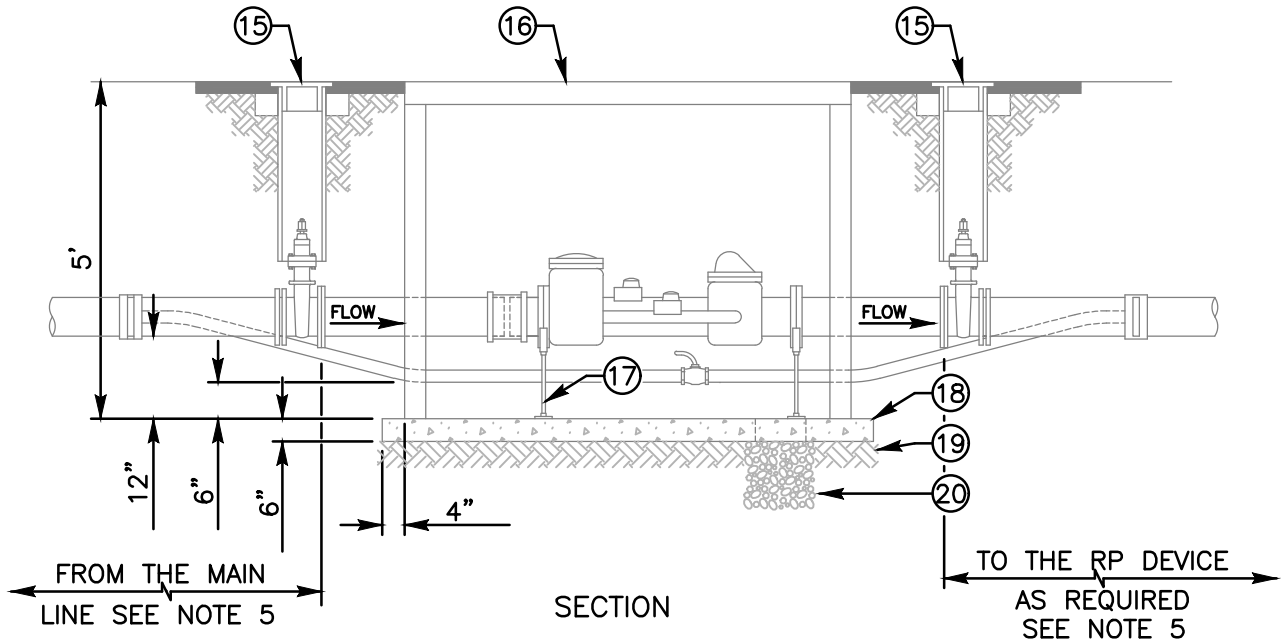
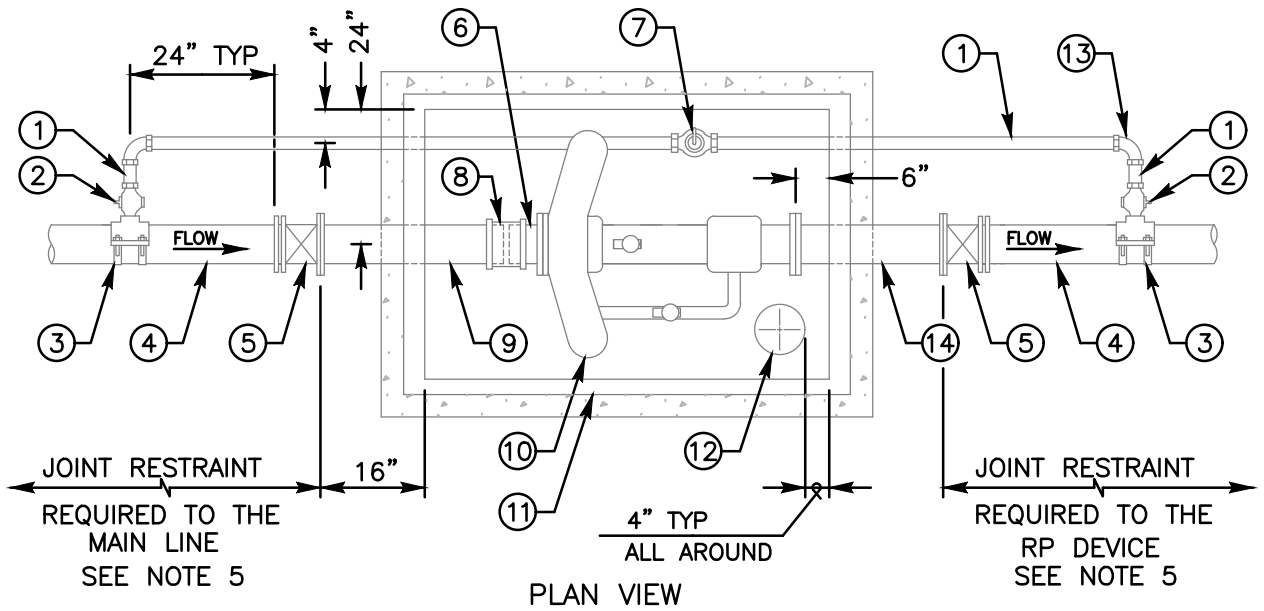
Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING 2" WATER SERVICE INSTALLATION	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE <i>Samsin Engeda</i> 03/24/2022 Chairperson R.C.E. 52241 Date
ORIGINAL		Kercheval	12/75		
Delete Metric	MR	B. KNOLL	03/11		
Updated	BK	B. KNOLL	10/18		
Reviewed	RP	S. Engeda	03/22		
					DRAWING NUMBER WS-02



NOTES:

- 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
- 2) STAMP OR CHISEL A 2" HIGH 'W' IN CURB FACE TO IDENTIFY POTABLE WATER SERVICE LOCATION
- 3) STAMP OR CHISEL A 2" HIGH 'RW' IN CURB FACE TO IDENTIFY RECYCLED WATER SERVICE LOCATION
- 4) METER BOXES ARE NOT TO BE INSTALLED IN DRIVEWAYS, SIDEWALKS OR WITHIN PAVED ROADWAYS
- 5) MULTIPLE METER BOXES SHALL BE INSTALLED WITH A MINIMUM OF 9" BETWEEN BOXES
- 6) METER BOX SHALL BE INSTALLED 9" FROM THE BACK OF BERM, CURB, OR SIDEWALK (TYP)
- 7) AN EASEMENT MAY BE NEEDED DEPENDING ON LOCATION OF METER BOX
- 8) METER BOXES INSTALLED FOR THE USE OF RECYCLED WATER SHALL BE IDENTIFIED AS DESCRIBED IN AGENCY'S SPECIFICATIONS
- 9) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST

Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE	
ORIGINAL		Kercheval	12/75		METER BOX LOCATIONS FOR WATER AND RECYCLED WATER APPURTENANCES	<i>Samson Engeda</i> 03/24/2022
Delete Metric	MR	B. KNOLL	03/11	Chairperson R.C.E. 52241		Date
Updated	BK	B. KNOLL	10/18	DRAWING NUMBER		WS-03
Reviewed	RP	S. Engeda	03/22			



FOR MATERIAL DESCRIPTIONS AND NOTES SEE WS-04 (2 OF 2)

(INDICATE SIZE)



LEGEND ON PLANS

Revision	By	Approved	Date
ORIGINAL		J. Tomasulo	10/04
Delete Metric	MR	B. KNOLL	03/11
Updated	BK	B. KNOLL	10/18
Reviewed	RP	S. Engeda	03/22

SAN DIEGO REGIONAL STANDARD DRAWING

4" OR 6" FIRELINE/MASTER METER
INSTALLATION

RECOMMENDED BY THE SAN DIEGO
REGIONAL STANDARDS COMMITTEE

Saman Engeda 03/24/2022
Chairperson R.C.E. 52241 Date


DRAWING NUMBER WS-04 (1 OF 2)

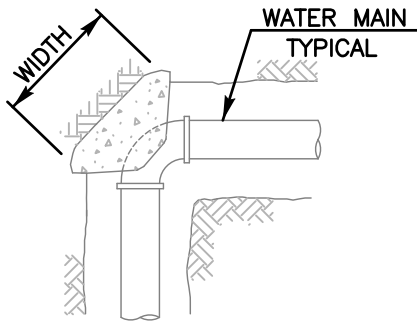
FOR DRAWING OF THE METER INSTALLATION SEE WS-04 (SHEET 1 OF 2)

NOTES:

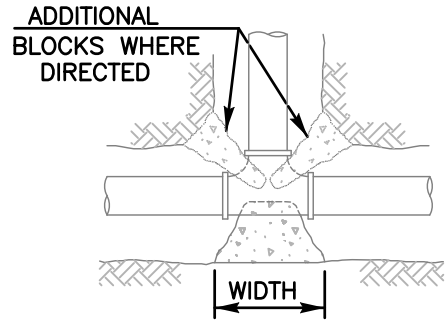
- 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
- 2) TO BE USED WHERE BOTH DOMESTIC SERVICE AND FIRE PROTECTION ARE INSTALLED ON THE SAME PRIVATE SYSTEM
- 3) LOCATION OF METER SHALL BE APPROVED BY THE DISTRICT ENGINEER PRIOR TO INSTALLATION IN ACCORDANCE WITH STANDARD DWG WS-06
- 4) 8" OR 10" METERS TO BE DESIGNED BY AN ENGINEER AND SUBMITTED FOR AGENCY'S APPROVAL AS NEEDED ON A CASE-BY-CASE BASIS
- 5) JOINT RESTRAINT SHALL BE IN ACCORDANCE WITH AGENCY SPECIFICATIONS
- 6) METERS SHALL BE FURNISHED AND INSTALLED BY THE AGENCY OF JURISDICTION
- 7) 4" METER REQUIRES A 48" x 60" VAULT 6" METER REQUIRES A 48" x 72" VAULT
- 8) IN AREAS WHERE GROUND WATER IS PRESENT THE AGENCY'S ENGINEER MAY REQUIRE A SEALED SUMP TO BE CONSTRUCTED
- 9) CONNECTIONS TO STEEL WATER MAINS SHALL BE IN ACCORDANCE WITH AGENCY SPECIFICATIONS
- 10) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST

ITEM NO	SIZE AND DESCRIPTION	ITEM NO	SIZE AND DESCRIPTION
①	2" x REQUIRED LENGTH TYPE "K" COPPER PIPE	⑪	FRP VAULT WITH HINGED ACCESS DOOR, SEE NOTE 7
②	2" BRONZE CORPORATION STOP	⑫	12" DIAMETER x 6" LONG PVC PIPE
③	LINE SIZE x 2" SERVICE SADDLE	⑬	2" 90° COMPRESSION ELL (TYPICAL)
④	4" OR 6" PVC PIPE	⑭	LINE SIZE x 24" LONG FLANGED DUCTILE-IRON SPOOL
⑤	4" OR 6" FLG x MJ RWGV MECHANICALLY RESTRAINED, SEE NOTE 5	⑮	8" GATE WELL. SEE WV-01 & WV-02
⑥	LINE SIZE x 6" LONG FLG x PE DUCTILE-IRON SPOOL	⑯	HINGED VAULT ACCESS DOOR
⑦	2" COMPRESSION, LOCKABLE BALL VALVE	⑰	ADJUSTABLE PIPE SUPPORT (TYPICAL)
⑧	4" OR 6" FLEXIBLE COUPLING	⑱	6" CLASS "B" CONCRETE FLOOR WITH #3 BARS @ 12" C.C.
⑨	LINE SIZE x 30" LONG FLG x PE DUCTILE-IRON SPOOL	⑲	6" DG BASE COMPACTED TO 90%
⑩	4" OR 6" FIRELINE METER SEE NOTE 6	⑳	12" DIAMETER x 12" DEEP, ¾" GRAVEL SUMP, SEE NOTE 8

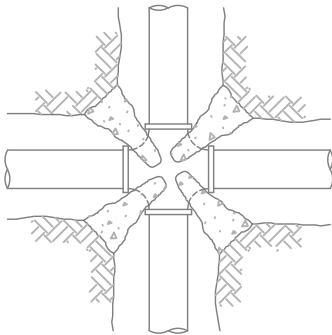
Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING 4" OR 6" FIRELINE/MASTER METER INSTALLATION	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		J. Tomasulo	10/04		 Chairperson R.C.E. 52241 Date
Delete Metric	MR	B. KNOLL	03/11		
Updated	BK	B. KNOLL	10/18		
Reviewed	RP	S. Engeda	03/22		
				DRAWING NUMBER WS-04 (2 OF 2)	



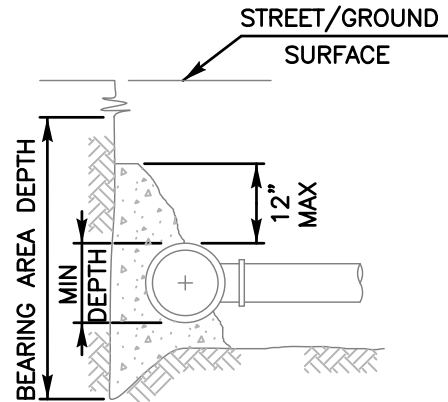
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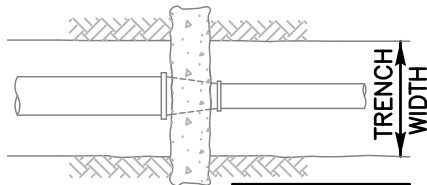
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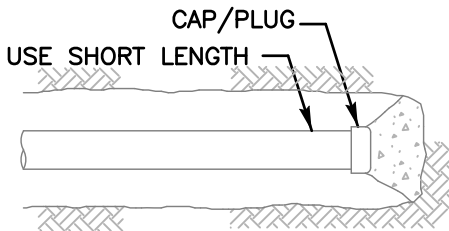
CROSS



TEE ELEVATION

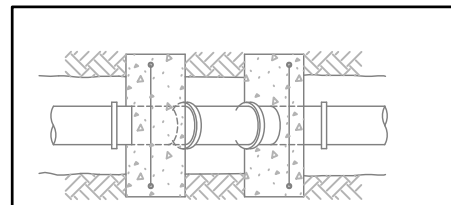


18" MINIMUM INTO NATIVE MATERIAL REDUCER

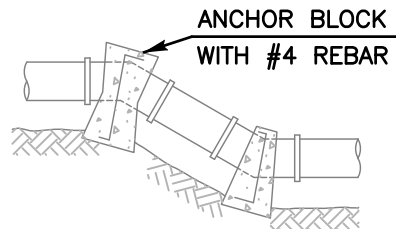


END CAP

SEE NOTE 2 BELOW



VERT BENDS PLAN



VERT BENDS ELEVATION

NOTES:

- 1) FOR ADDITIONAL THRUST BLOCKS, ANCHOR BLOCKS AND NOTES SEE WT-01 (2 OF 3) & (3 OF 3)
- 2) THE ANCHOR BLOCKS ON VERTICAL BENDS REQUIRE AGENCY APPROVAL

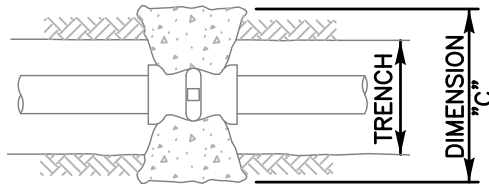
Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		Kercheval	12/75		
Reviewed	MR	B. KNOLL	10/15	CONCRETE THRUST AND ANCHOR BLOCK INSTALLATIONS	<i>Somasa Engeda</i> 03/24/2022
Reviewed	MR	B. KNOLL	10/18		Chairperson R.C.E. 52241 Date
Reviewed	RP	S. Engeda	03/22		DRAWING NUMBER
					WT-01 (1 OF 3)

VALVE SUPPORT BLOCK

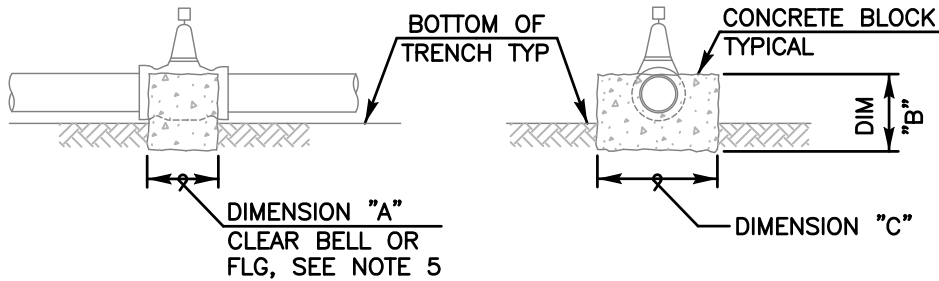
VALVE SIZE	DIMENSION "A"	DIMENSION "B"
4"	12"	12"
6"	12"	12"
8"	13"	14"
10"	14"	16"
12"	15"	18"
DIMENSION "C" = TRENCH WIDTH PLUS TWO TIMES THE PIPE DIAMETER		

THRUST AND ANCHOR BLOCKS

MINIMUM BEARING AREA IN SQUARE FOOT SEE NOTE 2				
MAIN SIZE	TEES	90° BEND	45° BEND	22½° BEND
4"	4	5	3	1.5
6"	8	10	5	2.5
8"	12	16	9	4.5
10"	17	24	13	6.5
12"	24	33	19	9.5



VALVE SUPPORT PLAN

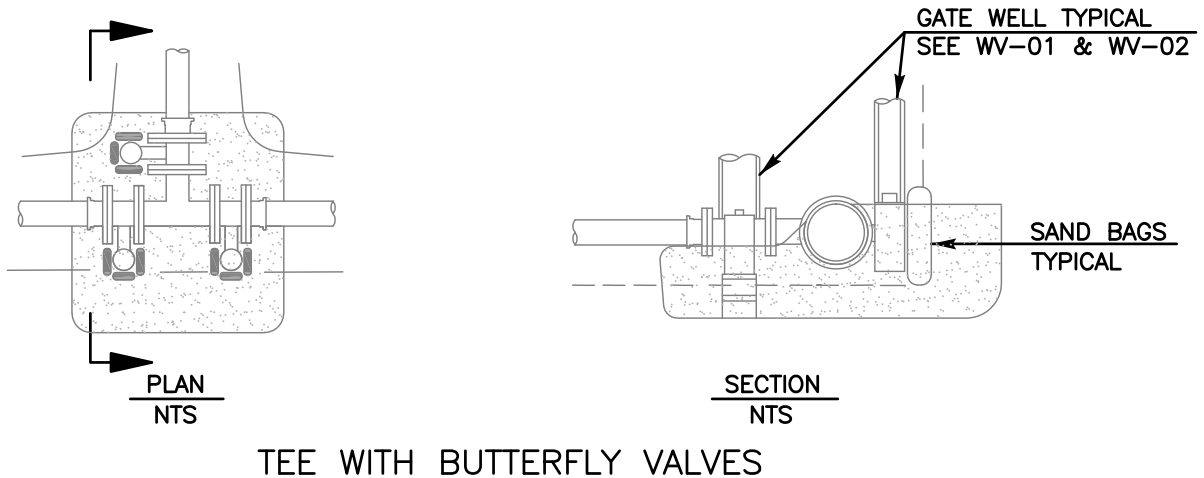
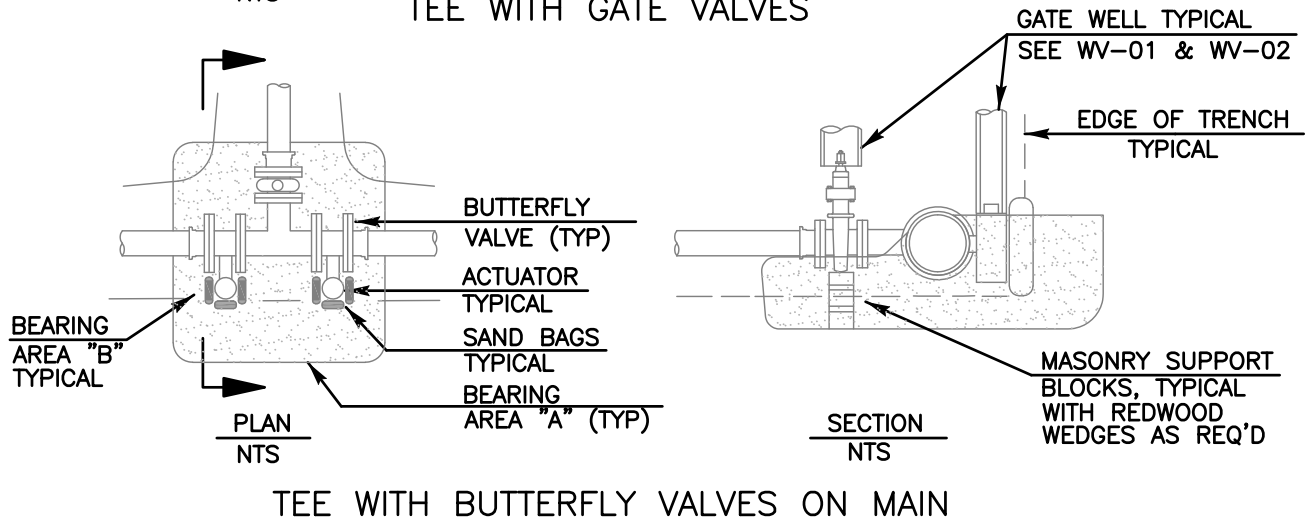
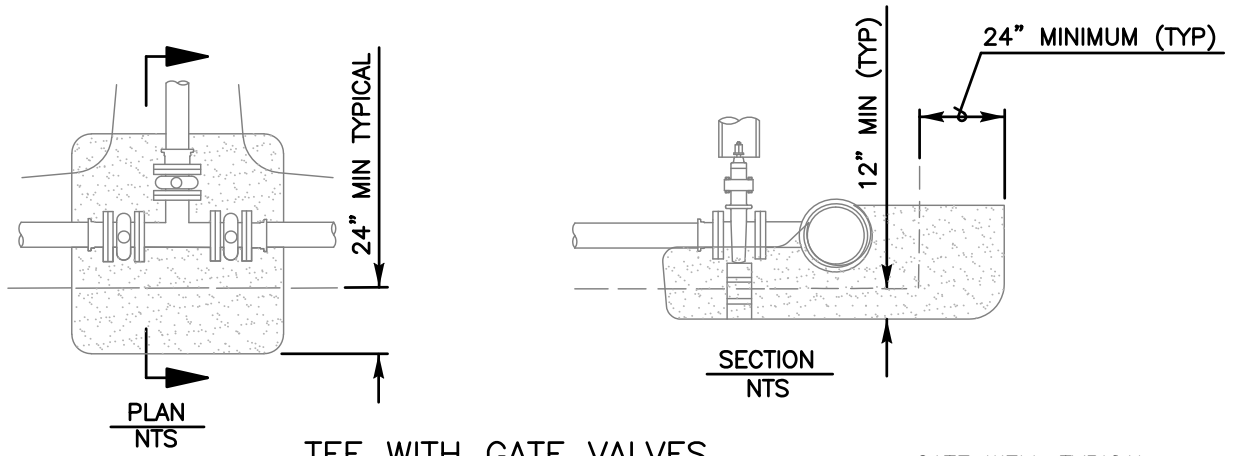


VALVE SUPPORT ELEVATION

NOTES:

- REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
- BEARING AREA BASED ON SOIL BEARING VALUE OF 1500 PSF AND 225 PSI LINE PRESSURE AND A MINIMUM OF 36" COVER
FOR BEARING= 1000 PSF, 1.5 x AREA SHOWN
FOR BEARING= 500 PSF, 3.0 x AREA SHOWN
- DESIGN ENGINEER SHALL DETERMINE SIZES, REFER TO AGENCY SPECIFICATIONS FOR THRUST AND ANCHOR BLOCK SIZING
- THRUST BLOCKS SHALL BE CENTERED ON THE FITTING SO THAT THE BEARING AREA IS EXACTLY OPPOSITE THE RESULTANT DIRECTION OF THRUST
- CONCRETE SHALL BE PLACED SO THAT FITTINGS AND VALVES WILL BE ACCESSIBLE FOR REPAIR OR REPLACEMENT
- ALL THRUST AND ANCHOR BLOCKS SHALL BE POURED AGAINST WETTED UNDISTURBED SOIL
- FOR MINIMUM CONCRETE CURING TIME REFER TO AGENCY SPECIFICATIONS
- FOR ADDITIONAL THRUST BLOCKS SEE WT-01 (1 OF 3) & (3 OF 3)

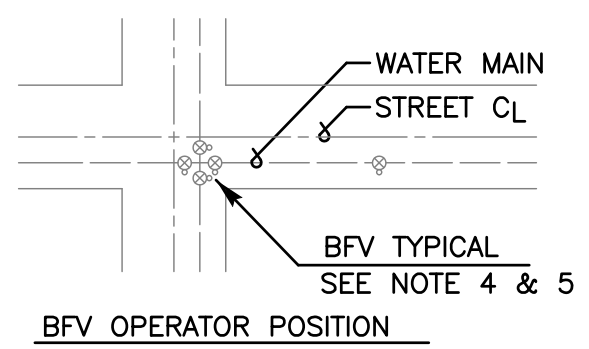
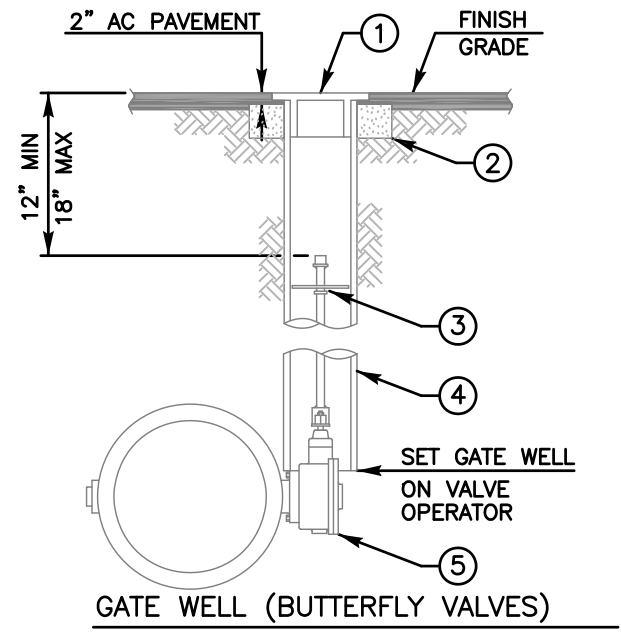
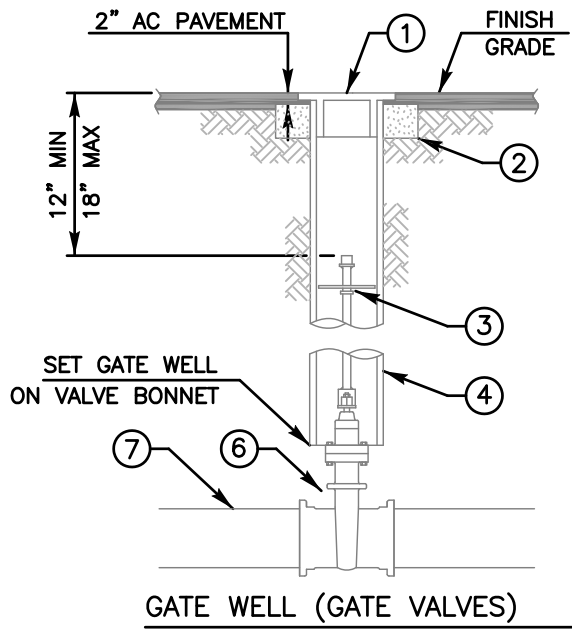
Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		Kercheval	12/75		
Reviewed	MR	B. KNOLL	10/15	CONCRETE THRUST AND ANCHOR BLOCK INSTALLATIONS	<i>Samsir Engeda</i> 03/24/2022
Reviewed	MR	B. KNOLL	10/18		Chairperson R.C.E. 52241 Date
Reviewed	RP	S. Engeda	03/22		DRAWING NUMBER WT-01 (2 OF 3)



NOTES:

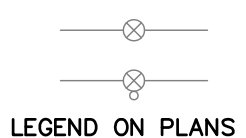
- 1) BEARING AREA "B" MUST BE EQUAL TO OR GREATER THAN THE AREA REQUIRED FOR A 90° ELBOW INSTALLATION
- 2) INSTALL SAND BAGS AROUND BUTTERFLY VALVE ACTUATOR TO ISOLATE IT FROM CONCRETE
- 3) BFV'S INSTALLED AT CROSSES OR TEES REQUIRE A FLANGED DUCTILE IRON SPOOL TO BE INSTALLED BETWEEN THE FITTING AND VALVE IN ACCORDANCE WITH THE AGENCY SPECIFICATIONS

Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		Kercheval	12/75		CONCRETE THRUST AND ANCHOR BLOCK INSTALLATIONS
Reviewed	MR	B. KNOLL	10/15	Chairperson R.C.E. 52241 Date	
Reviewed	MR	B. KNOLL	10/18	DRAWING NUMBER WT-01 (3 OF 3)	
Reviewed	RP	S. Engeda	03/22		




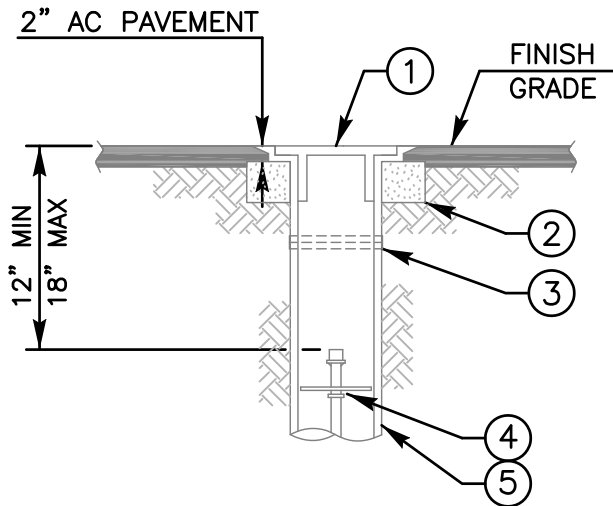
NOTES:

- 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
- 2) VALVES DEEPER THAN 5' REQUIRE A VALVE STEM EXTENSION
- 3) EXTENSION STEMS SHALL NOT BE ATTACHED/BOLTED TO OPERATING NUT
- 4) GATE WELL AND CAP SHALL BE SET SO THAT NO MORE THAN TWO 1" ADJUSTMENT RINGS ARE USED
- 5) BFV OPERATORS TO BE LOCATED TO THE CURBLIN SIDE OF WATER MAIN
- 6) BFV'S INSTALLED AT CROSSES OR TEES REQUIRE A FLANGED DUCTILE IRON SPOOL TO BE INSTALLED BETWEEN THE FITTING AND VALVE IN ACCORDANCE WITH THE AGENCY'S SPECIFICATIONS
- 7) GATE WELLS AND CAPS SHALL BE IDENTIFIED AS DESCRIBED ON WV-03
- 8) FOR INLINE VALVE ANCHOR BLOCK INSTALLATION SEE WT-02
- 9) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST

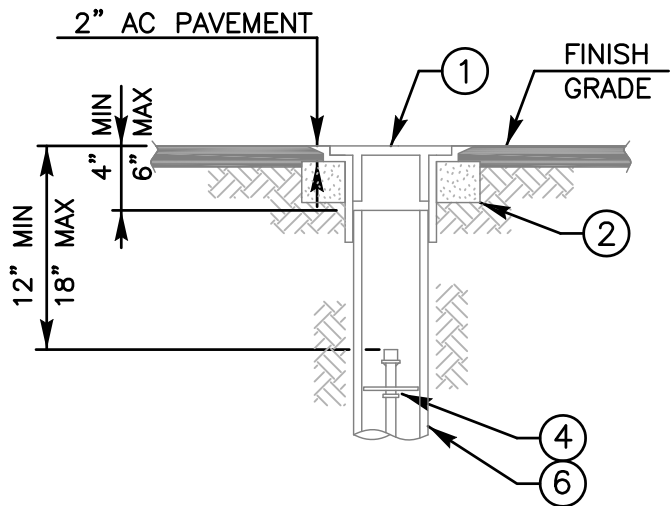


ITEM NO	SIZE AND DESCRIPTION	ITEM NO	SIZE AND DESCRIPTION
①	GATE WELL WITH CAP SEE NOTE 7	④	8" PVC CL 200, C-900 PIPE x REQUIRED LENGTH GATE WELL SEE NOTE 7
②	6" HIGH x 6" WIDE COMPACTED ASPHALT-CONCRETE RING	⑤	BUTTERFLY VALVE
③	VALVE STEM EXTENSION SEE NOTES 2 & 3	⑥	RESILIENT WEDGE GATE VALVE
		⑦	WATER MAIN

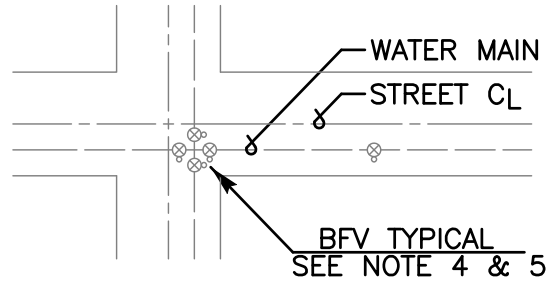
Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING GATE WELL CAP INSTALLATION, FOR VALVES 4" AND LARGER	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		Kercheval	12/75		 03/24/2022 Chairperson R.C.E. 52241 Date
Reviewed	MR	B. KNOLL	10/15		
Reviewed	MR	B. KNOLL	10/18		
Reviewed	RP	S. Engeda	03/22		
				DRAWING NUMBER	WV-01



8" GATE WELL TYPE A



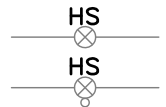
6" GATE WELL TYPE B



BFV OPERATOR POSITION

NOTES:

- 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
- 2) VALVES DEEPER THAN 5' REQUIRE A VALVE STEM EXTENSION
- 3) EXTENSION STEMS SHALL NOT BE ATTACHED/BOLTED TO OPERATING NUT
- 4) GATE WELL AND CAP SHALL BE SET SO THAT NO MORE THAN TWO 1" ADJUSTMENT RINGS ARE USED
- 5) BFV OPERATORS TO BE LOCATED TO THE CURBLINE SIDE OF WATER MAIN
- 6) BFV'S INSTALLED AT CROSSES OR TEES REQUIRE A FLANGED DUCTILE IRON SPOOL TO BE INSTALLED BETWEEN THE FITTING AND VALVE IN ACCORDANCE WITH THE AGENCY'S SPECIFICATIONS
- 7) GATE WELLS AND CAPS SHALL BE IDENTIFIED AS DESCRIBED ON WV-03
- 8) FOR INLINE VALVE ANCHOR BLOCK INSTALLATION SEE WT-02
- 9) GATE WELL TYPE AS APPROVED BY AGENCY
- 10) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST



LEGEND ON PLANS

ITEM NO	SIZE AND DESCRIPTION	ITEM NO	SIZE AND DESCRIPTION
①	GATE WELL WITH CAP SEE NOTE 7	④	VALVE STEM EXTENSION SEE NOTES 2 & 3
②	6" HIGH x 6" WIDE COMPACTED ASPHALT-CONCRETE RING	⑤	8" PVC CL 200, C-900 PIPE x REQUIRED LENGTH GATE WELL SEE NOTE 7
③	CAULDER COUPLING	⑥	6" PVC CL 200, C-900 PIPE x REQUIRED LENGTH GATE WELL SEE NOTE 7

Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		Kercheval	12/75		
Reviewed	MR	B. KNOLL	10/15	GATE WELL CAP & CAN INSTALLATION, FOR VALVES 4" AND LARGER	<i>Samson Engeda</i> 03/24/2022
Reviewed	MR	B. KNOLL	10/18		Chairperson R.C.E. 52241 Date
Reviewed	RP	S. Engeda	03/22		DRAWING NUMBER WV-02



RECYCLED
WATER



POTABLE
WATER

GATE WELL LIDS
SEE NOTE 2 BELOW

COLOR	GATE WELL LIDS USED FOR:
RED	NORMALLY CLOSED SYSTEM VALVES (NCV)
PURPLE	RECYCLED WATER VALVES: LINE VALVES & AIR VALVES
YELLOW	POTABLE WATER VALVES: LINE VALVES, FIRE SERVICES, & AIR VALVES
WHITE	FIRE HYDRANTS

GATE WELL LID COLORS
SEE NOTE 5 BELOW

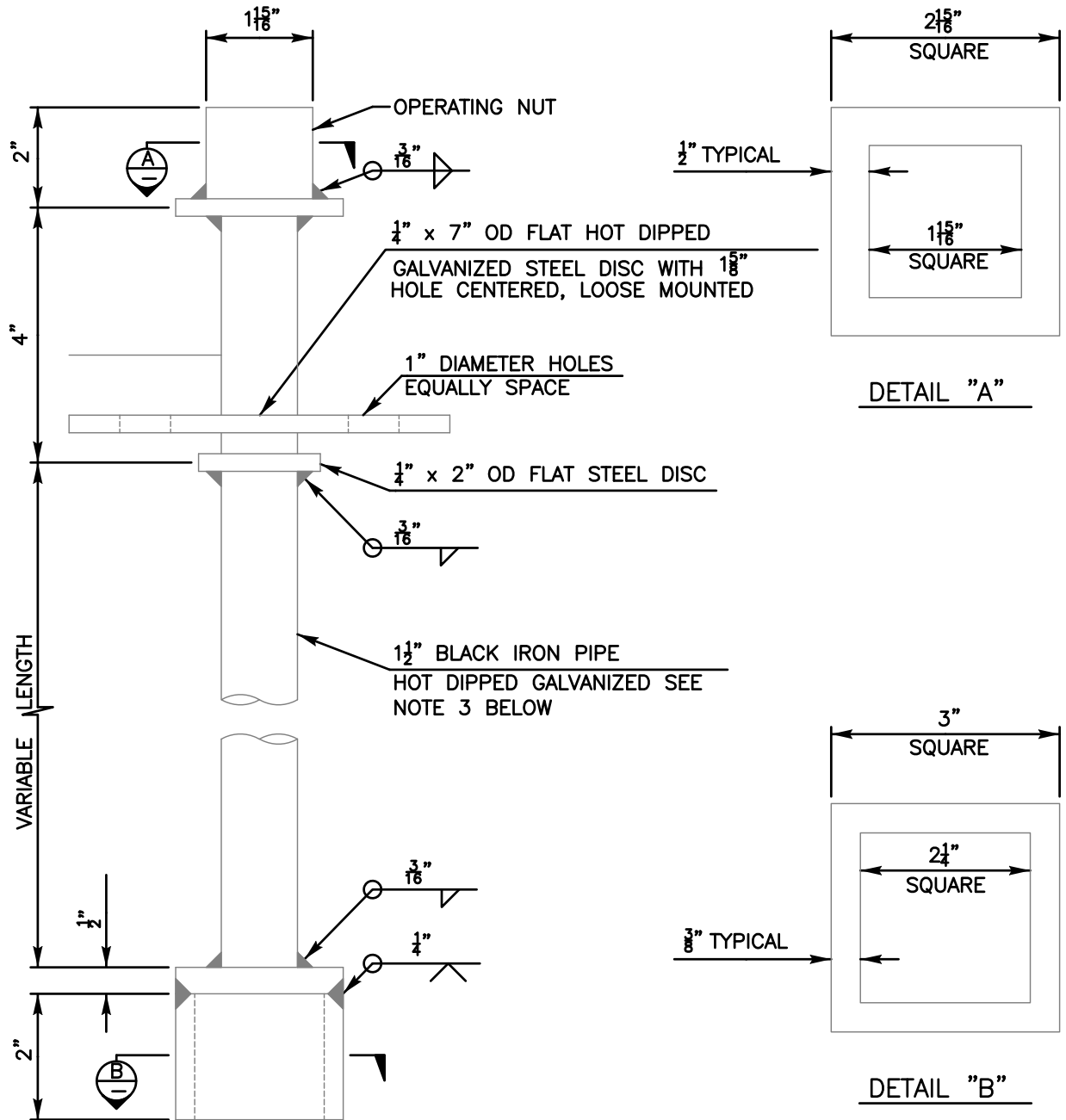
COLOR	GATE WELL AND LIDS USED FOR:
RED	NORMALLY CLOSED SYSTEM VALVES (NCV)
WHITE	RESILIENT WEDGE GATE VALVES
GREEN	BUTTERFLY VALVES

PAINTED IDENTIFICATION MARKING
SEE NOTE 4 BELOW

NOTES:

- 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
- 2) GATE WELL LIDS SHALL BE CAST WITH THE "AGENCY NAME" AND THE WORD "WATER" FOR USE WITH POTABLE WATER SYSTEMS AND "RECYCLED" FOR USE WITH RECYCLED WATER SYSTEMS. LIDS SHALL INCLUDE A 1" LIFTING SLOT
- 3) PVC GATE WELLS SHALL BE MANUFACTURED IN WHITE OR BLUE FOR USE WITH POTABLE WATER, AND PURPLE FOR USE WITH RECYCLED WATER
- 4) THE INSIDE PORTIONS OF THE GATE WELL LID AND PVC GATE WELL SHALL BE IDENTIFIED WITH A PAINTED IDENTIFICATION MARKING.
- 5) THE TOP EXTERIOR PORTION OF GATE WELL LIDS SHALL BE PAINTED WITH COLORS TO IDENTIFY THE USE OF THE VALVE INSTALLED, AS SHOWN ABOVE
- 6) INSTALLATION FOR THE USE OF RECYCLED WATER SHALL BE IDENTIFIED AS DESCRIBED IN AGENCY'S SPECIFICATIONS AND AS NOTED ABOVE
- 7) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST

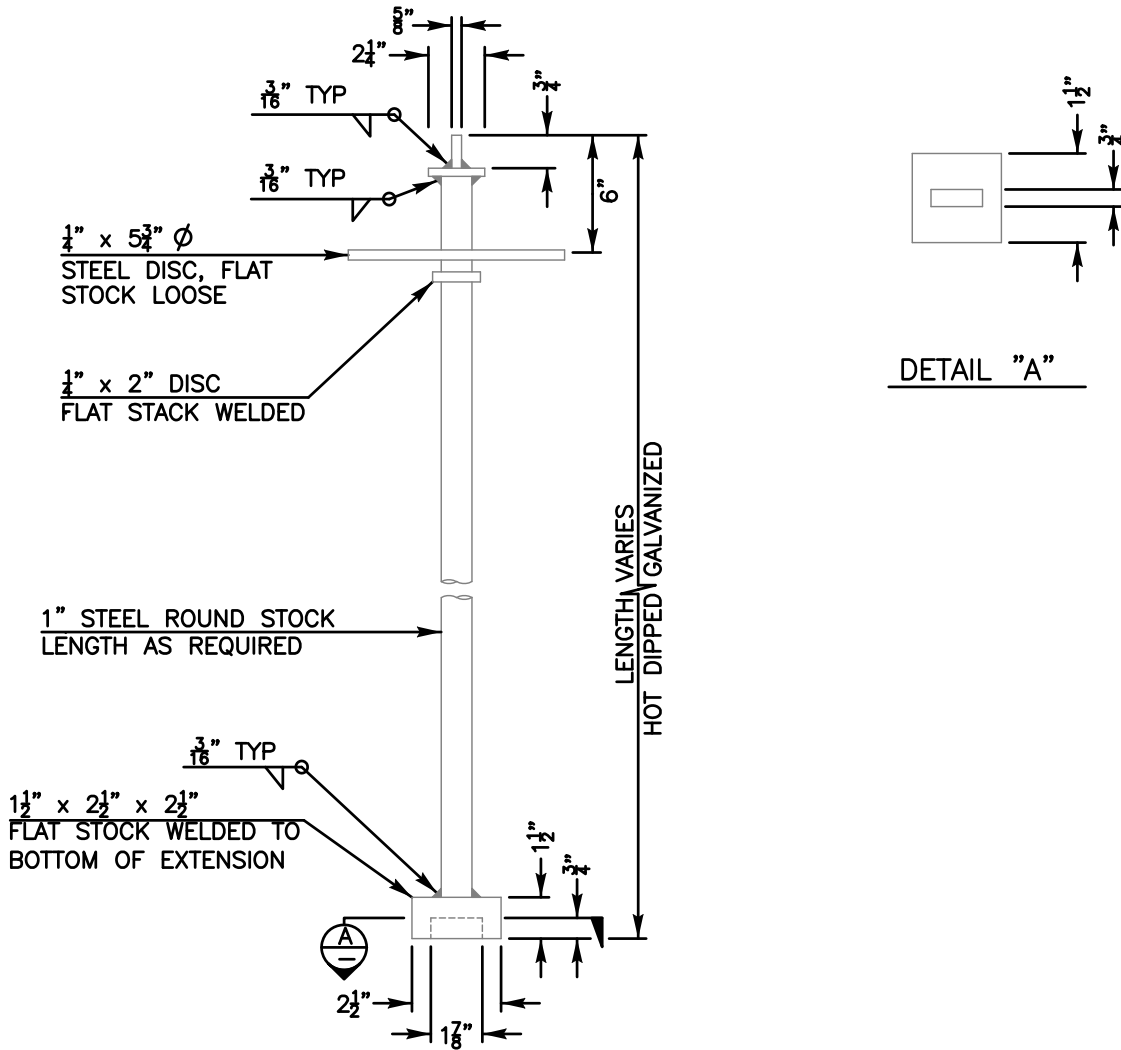
Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		Kercheval	12/75		
Reviewed	MR	B. KNOLL	10/15	GATE WELL IDENTIFICATION	<i>Samson Engeda</i> 03/24/2022
Reviewed	MR	B. KNOLL	10/18		Chairperson R.C.E. 52241 Date
Reviewed	RP	W. Engeda	03/22		DRAWING NUMBER
					WV-03



NOTES:

- 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE AND STANDARD DRAWINGS WV-01 AND WV-02
- 2) STEEL EXTENSION STEMS SHALL BE USED ONLY WHERE THE MAXIMUM LENGTHS OF THE EXTENSION EXCEEDS 8' AND AT THE REQUEST OF THE AGENCY'S ENGINEER
- 3) EXTENSION STEMS SHALL BE ROUND OR SQUARE STEEL TUBING OF SOLID DESIGN (NO PINNED COUPLINGS PERMITTED)
- 4) VALVES DEEPER THAN 5' REQUIRE A VALVE STEM EXTENSION
- 5) EXTENSION STEMS SHALL NOT BE ATTACHED/BOLTED TO OPERATING NUT OF THE VALVE
- 6) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST

Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		G.Parkinson	5/92		
Reviewed	MR	B. KNOLL	10/15	STEEL VALVE STEM EXTENSION FOR VALVES 4" AND LARGER	<i>Samsir Engeda</i> 03/24/2022
Reviewed	MR	B. KNOLL	10/18		Chairperson R.C.E. 52241 Date
Reviewed	RP	S. Engeda	03/22		DRAWING NUMBER WV-04



NOTES:

- 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
- 2) EXTENSION STEMS SHALL BE ROUND STEEL TUBING OF SOLID DESIGN (NO PINNED COUPLINGS PERMITTED)
- 3) VALVES DEEPER THAN 5' AND 2" AIR VALVES REQUIRE A VALVE STEM EXTENSION OR AS REQUIRED BY THE AGENCY OF JURISDICTION
- 4) EXTENSION STEMS SHALL NOT BE ATTACHED/BOLTED TO OPERATING NUT OF THE VALVE
- 5) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST

Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		G.Parkinson	5/92		
Reviewed	MR	B. KNOLL	10/15	STEEL VALVE STEM EXTENSION FOR VALVES 2" AND SMALLER	<i>Samantha Engeda</i> 03/24/2022
Reviewed	MR	B. KNOLL	10/18		Chairperson R.C.E. 52241 Date
Reviewed	RP	S. Engeda	03/22		DRAWING NUMBER WV-05