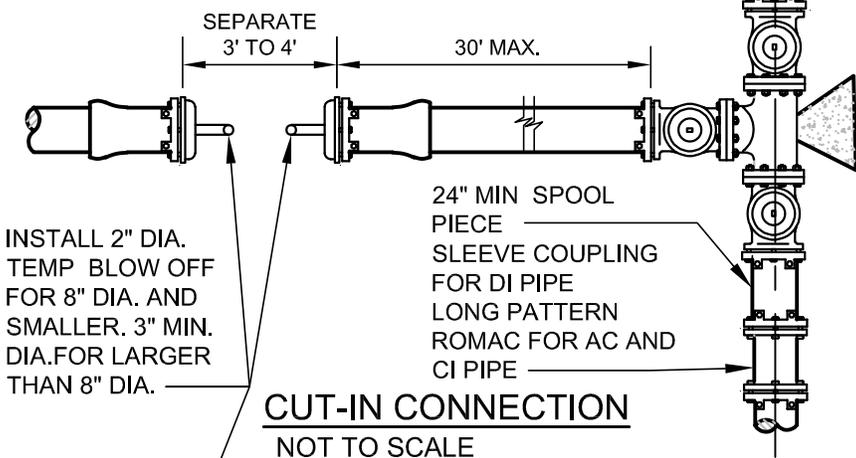
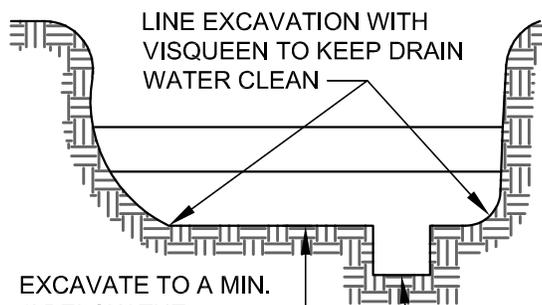
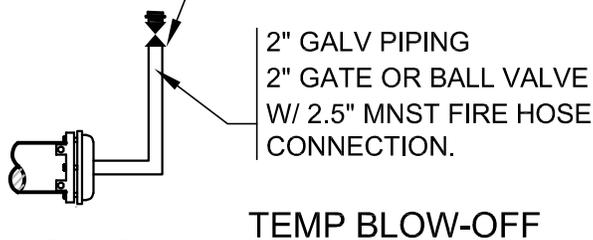


PIPE MAY DIRECTLY CONNECT AND EXTEND OUT OF THE STREET PER CONDITIONS IN NOTE 10. ALL PIPE AND FITTINGS SHALL BE RESTRAINED JOINTS. MAX LENGTH 30' UNLESS APPROVED.

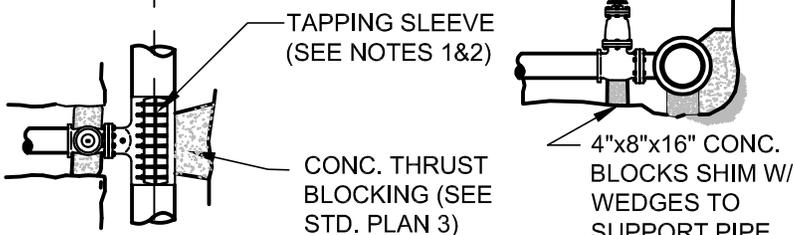


INSTALL 2" DIA. TEMP BLOW OFF FOR 8" DIA. AND SMALLER. 3" MIN. DIA. FOR LARGER THAN 8" DIA.



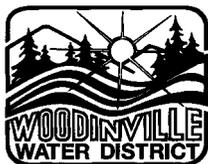
PROVIDE DEEP SUMP FOR PUMPING OUT WATER

TRENCH PREPARATION



NOTES:

1. CONTRACTOR SHALL SUBMIT A WRITTEN REQUEST BY EMAIL FOR SHUT DOWN. WATER OUTAGE ONLY ALLOWED TUESDAY THROUGH THURSDAY, 9AM TO 3PM. SEVEN (7) WORKING DAYS NOTICE REQUIRED. AFTER HOUR CONNECTIONS MAY BE REQUIRED IF A BUSINESS, SCHOOL, ETC. IS IMPACTED.
2. TAPPED CONNECTIONS NOT ALLOWED WITHOUT SPECIFIC APPROVAL FROM THE DISTRICT.
3. NO CONNECTION WILL BE ALLOWED UNTIL ALL PRESSURE TESTING IS COMPLETED AND SATISFACTORY BACTERIOLOGICAL TEST RECEIVED. SEE CROSS CONNECTION SECTION IN SPECIFICATIONS.
4. TAPPING SLEEVE TO BE STAINLESS STEEL FOR AC PIPE AND EPOXY COATED STEEL FOR DUCTILE OR CAST IRON PIPE. CLOSEST EDGE OF TAPPING SLEEVE MUST BE 3' MIN. FROM COUPLING ON AC PIPE.
5. SEE STANDARD PLANS 6 (VALVE BOX), 3 (THRUST BLOCKING) & 2 (PIPE AND FITTING RESTRAINT REQUIREMENTS).
6. BACKFILL PER JURISDICTIONAL REQUIREMENTS WHEN IN ASPHALT. ALL OTHER AREAS PER STANDARD SPECIFICATIONS.
7. TEMP BLOW OFF'S MUST BE PROTECTED FROM DAMAGE. PLACE IN TRAFFIC BOX. TEMP BLOW OFFS IN PUBLIC R/W AREAS SHALL BE PLACED OUT OF PAVING. PROVIDE 2.5" MNST FIRE HOSE CONNECTIONS. SEE DETAIL ABOVE.
8. ALL MJ JOINTS TO BE MEGALUG OR EQUAL.
9. SIMILAR TEMP B.O. REQUIREMENTS FOR TAPPED CONNECTIONS. LOCATE BLOW OFF OUT OF ASPHALT WHEN POSSIBLE.
10. ALL PIPE FITTINGS AND OTHER COMPONENTS USED IN CONNECTIONS AND THE STUB ON TO SITE SHALL BE STERILE SWABBED WITH PIPE SIZE FOAM PIG AS PART OF THE PROJECT PIGGING REQUIREMENTS. CONNECTIONS SHALL BE TESTED UNDER FULL LINE PRESSURE PRIOR TO BACKFILL. THE STUB ON TO SITE SHALL BE PRESSURE TESTED AT 200PSI IN THE PRESENCE OF THE DISTRICT INSPECTOR.



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Water District

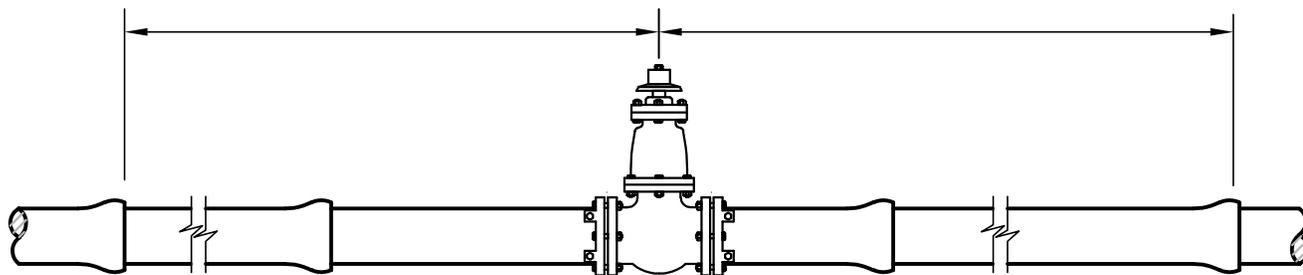
CONNECTION
REQUIREMENTS



WATER STD.
PLAN NO. 1

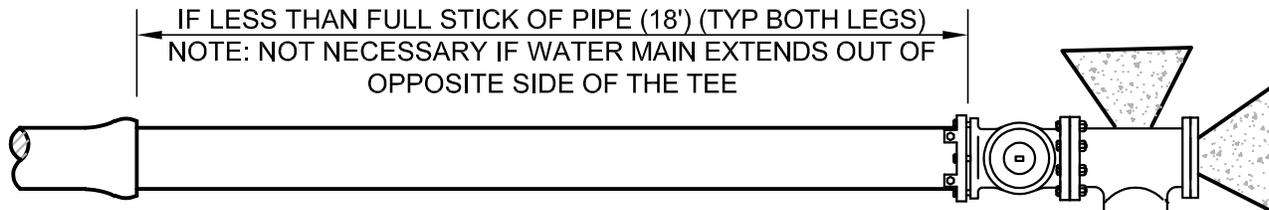
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RESTRAIN PIPE JOINTS W/ FIELD
LOCK GASKETS (MIN. 35') EACH SIDE OF IN-LINE VALVE



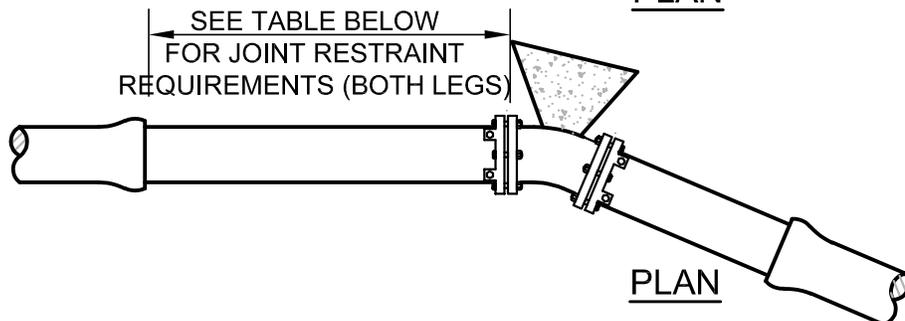
ELEVATION

INSTALL FIELD LOCK GASKET IN PIPE JOINT
IF LESS THAN FULL STICK OF PIPE (18') (TYP BOTH LEGS)
NOTE: NOT NECESSARY IF WATER MAIN EXTENDS OUT OF
OPPOSITE SIDE OF THE TEE



PLAN

SEE TABLE BELOW
FOR JOINT RESTRAINT
REQUIREMENTS (BOTH LEGS)

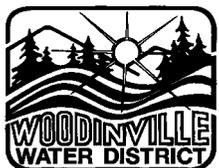


PLAN

DEGREE OF BEND	RESTRAIN PIPE JOINT IF CLOSER THAN
11 1/4° BEND	NA
22 1/2° BEND	NA
45° BEND	8'
90° BEND	18'

NOTES:

1. THRUST BLOCKING REQUIRED. SEE STANDARD PLAN NO. 3.
2. ADDITIONAL RESTRAINT MAY BE REQUIRED (AS DIRECTED BY THE DISTRICT) FOR POOR GROUND CONDITIONS.
3. MEGALUGS (EBAA IRON OR EQUAL) SHALL BE INSTALLED ON ALL MECHANICAL JOINTS.
4. SEE STANDARD PLANS NO. 4 FOR VERTICAL BEND REQUIREMENTS.



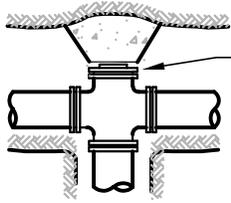
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PIPE AND FITTING
RESTRAINT REQUIREMENTS



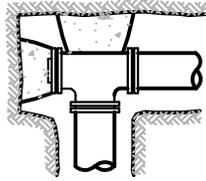
WATER STD.
PLAN NO. (2)

REVISION DATE
04/25

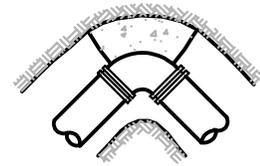


STEEL PLATE.
FORM TO ALLOW
FOR BOLT
REMOVAL

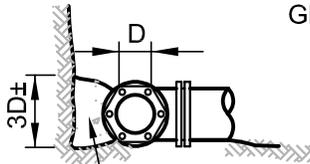
CROSS WITH PLUG



PLUGGED TEE



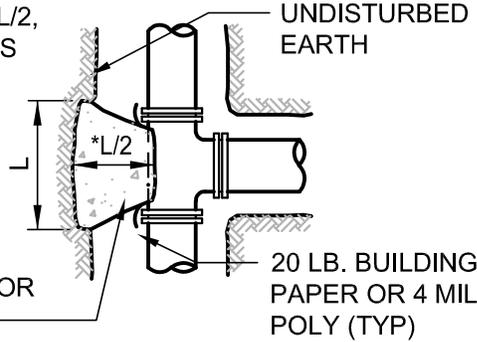
HORIZONTAL BEND



* USE 12" OR L/2,
WHICHEVER IS
GREATER.

3000 PSI CONCRETE
FORMED TO ALLOW FOR
REMOVAL OF BOLTS

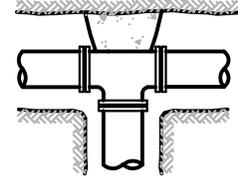
ELEVATION



UNDISTURBED
EARTH

20 LB. BUILDING
PAPER OR 4 MIL
POLY (TYP)

PLAN



TEE

THRUST BLOCK TABLE

PIPE SIZE	TEE OR END PLUG	90°	45°	22 1/2°	11 1/4°
4" OR 6"	3	4	2	2	2
8"	6	7	4	2	2
10" OR 12"	12	16	9	5	3
16"	21	29	16	8	4

MINIMUM BEARING AREA AGAINST UNDISTURBED EARTH (SQURE FEET)

NOTES:

1. BEARING AREA OF CONC. THRUST BLOCK BASED ON 200 PSI PRESSURE AND SOIL BEARING LOAD OF 2000 POUNDS PER SQUARE FOOT.
2. AREAS MUST BE ADJUSTED FOR OTHER SIZE PIPES, PRESSURES, AND SOIL CONDITIONS.
3. CONCRETE BLOCKING SHALL BE CAST IN PLACE AND HAVE A MINIMUM OF 1/2 SQUARE FOOT BEARING AGAINST THE FITTING. SIDES SHALL BE FORMED WITH PLYWOOD OR EQUIVALENT.
4. THRUST BLOCK SHALL BEAR AGAINST FITTING ONLY AND SHALL BE CLEAR OF JOINTS TO PERMIT DISMANTLING OF THE JOINTS.
5. CONCRETE TO BE 3000 PSI MINIMUM. PRE-MIX CONCRETE IS PREFERRED. IF CONCRETE IS HAND MIXED THE PROPORTIONS SHALL BE ACCORDANCE WITH THE SPECIFICATIONS. COMPRESSIVE TESTS OF "HAND-MIXED" CONCRETE MAY BE REQUIRED. PRE-INSPECTIONS OF BLOCKING AREA REQUIRED PRIOR TO PLACEMENT OF CONCRETE.
6. CONTRACTOR SHALL INSTALL BLOCKING ADEQUATE TO WITHSTAND FULL TEST PRESSURE AS WELL AS TO CONTINUOUSLY WITHSTAND OPERATING PRESSURE UNDER ALL CONDITIONS OF SERVICE.
7. SEE STANDARD PLAN NO. 2 FOR PIPE AND FITTING RESTRAINT REQUIREMENTS.
8. INSPECTION REQUIRED PRIOR TO BACKFILL.



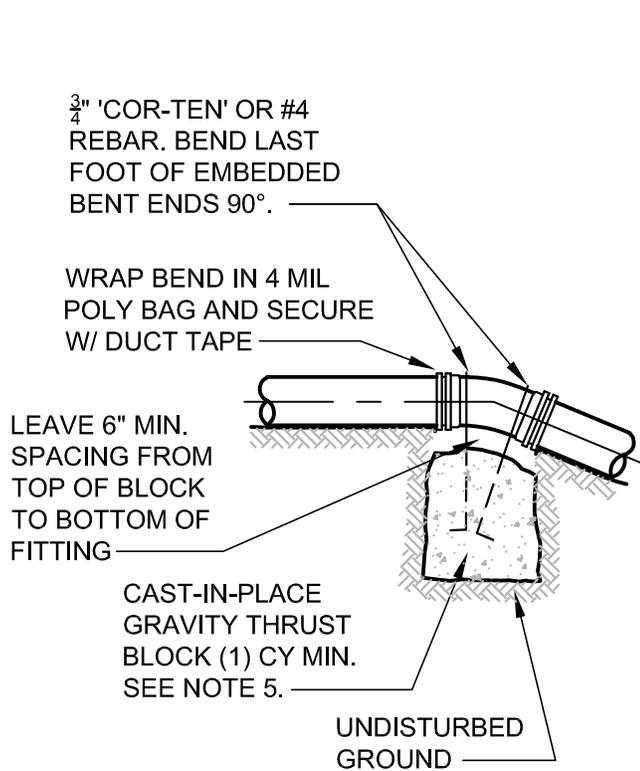
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THRUST BLOCKING
REQUIREMENTS

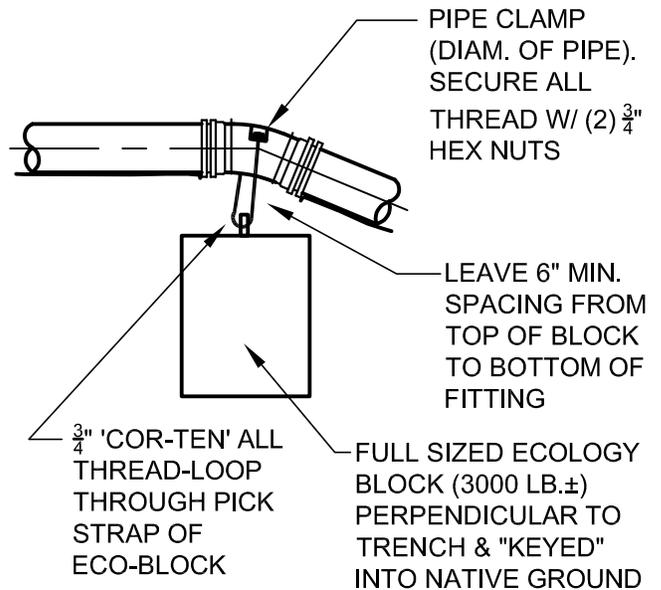


WATER STD.
PLAN NO. **3**

REVISION DATE
04/25



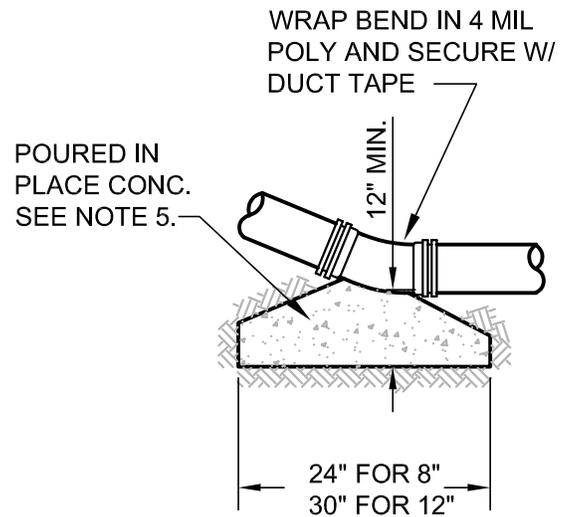
CAST IN PLACE OPTION



ECOLOGY BLOCK OPTION

RESTRAINED JOINT REQUIREMENTS

BEND SIZE	MIN. REQUIRED DISTANCE (LF) PIPE RESTRAINT EA. SIDE W/O VERTICAL BLOCKING		MIN. REQUIRED DISTANCE (LF) PIPE RESTRAINT EA. SIDE WITH VERTICAL BLOCKING	
	4" TO 8"	12"	4" TO 8"	10" TO 12"
11 1/4°	30	30	0	0
22 1/2°	40	40	10	20
45°	NA	NA	20	30



REVERSE VERTICAL BENDS

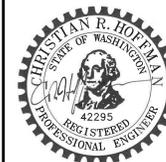
NOTES:

1. DRAWING SUBMITTAL REQUIRED FOR APPROVAL BY THE DISTRICT WHEN PIPE DIAMETER EXCEEDS 12" OR VERTICAL DEFLECTION MORE THAN 45 DEGREES.
2. EBAA IRON MEG-A-LUGS OR EQUAL REQUIRED ON ALL MECHANICAL JOINTS.
3. POOR GROUND CONDITIONS WILL REQUIRE ADDITIONAL RESTRAINT AS DIRECTED BY THE DISTRICT.
4. ALL REVERSE VERTICAL BENDS SHALL BE BLOCKED AS SHOWN.
5. CONCRETE TO BE MIN. 3000 PSI COMPRESSIVE STRENGTH.



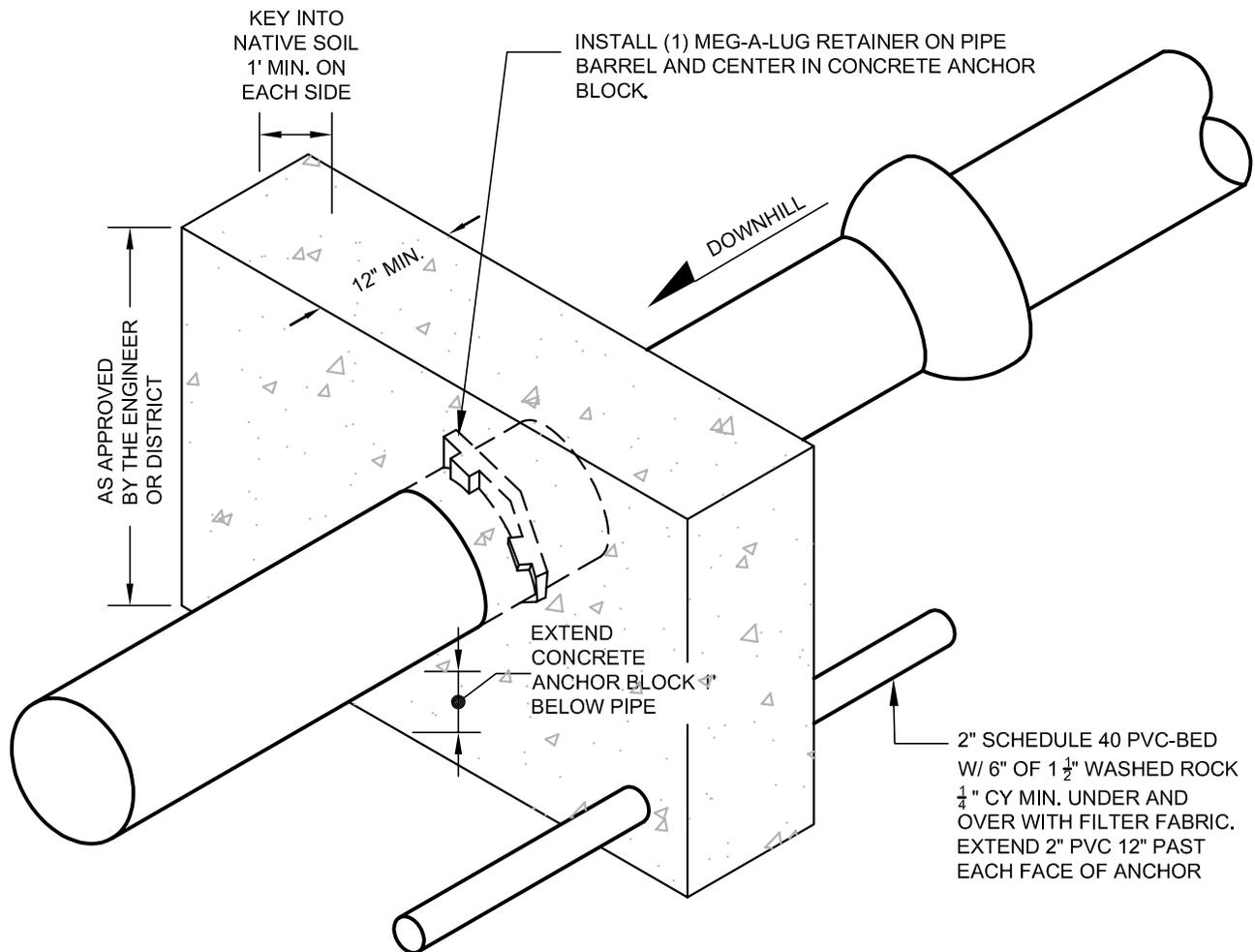
Woodinville
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VERTICAL BLOCKING
RESTRAINT REQUIREMENTS



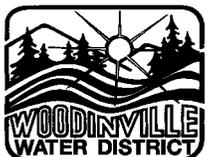
WATER STD.
PLAN NO. 4

REVISION DATE
04/25



NOTES:

1. HILLHOLDER PIPE ANCHORS REQUIRED ON SLOPES MORE THAN 20% OR AS DIRECTED BY THE DISTRICT.
2. SPACING AS APPROVED BY THE DISTRICT'S ENGINEER.
3. RESTRAINED JOINTS REQUIRED ON WATERLINE.
4. LOCATE PIPE ANCHOR/ SLOPE RETAINER ON DOWN HILL SIDE OF PIPE BELL WHEN PRACTICAL.



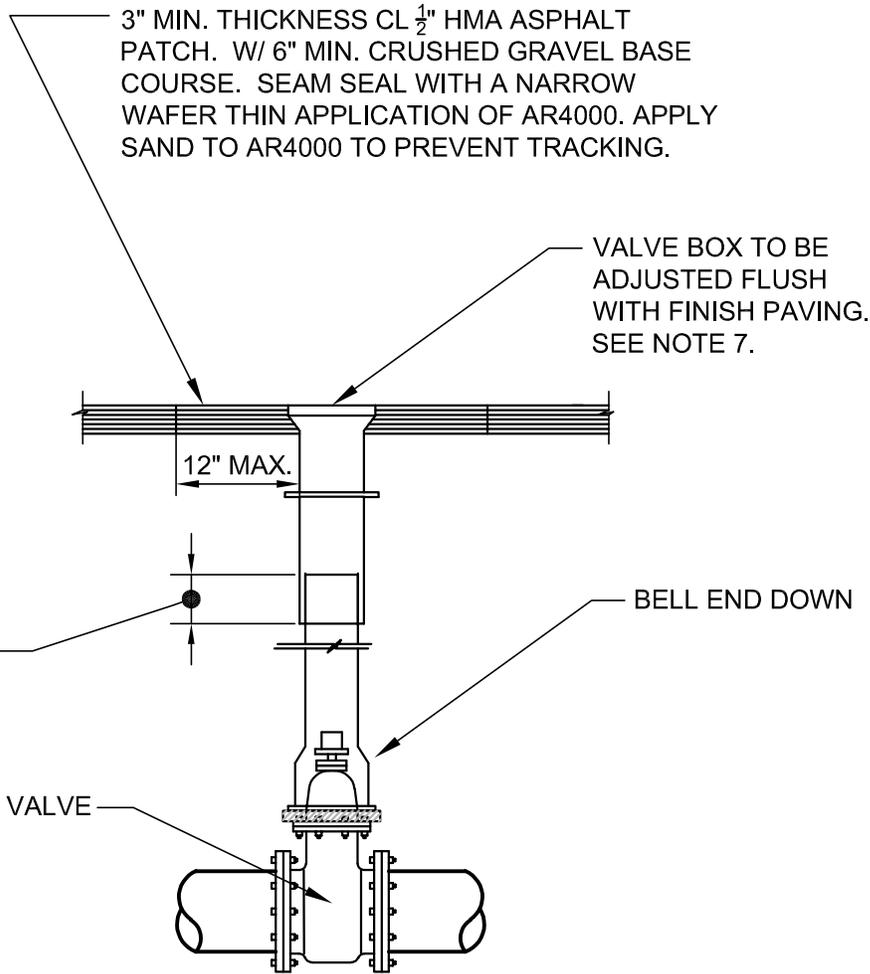
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PIPE ANCHOR /
SLOPE RETAINER



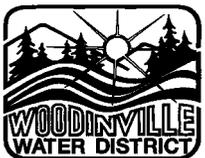
WATER STD.
PLAN NO. **5**

REVISION DATE
04/25



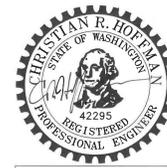
NOTES:

1. THE CONTRACTOR SHALL OFFSET STAKE ALL EXISTING VALVE BOX LOCATIONS. DIMPLES SHALL BE LEFT IN THE OVERLAY FOR LOCATING PURPOSES AND EMERGENCY ACCESS.
2. VALVE BOX & LID TO BE EAST JORDAN IRON WORKS PRODUCT NO. 85552737 CATALOG NO. 8555.
3. VALVE BOX LIDS TO BE A MIN. 3.5 INCHES IN OVERALL DEPTH. LOCKING VALVE BOX LIDS REQUIRED IF LIDS WILL NOT STAY PUT DUE TO TRAFFIC OR AS REQUIRED BY THE DISTRICT.
4. SAWCUT VALVE BOX COMPONENTS BROKEN OR JAGGED VALVE BOX SECTIONS NOT ACCEPTABLE.
5. USE OF OVERLAY RINGS REQUIRED APPROVAL FROM WWD AND RIGHT OF WAY JURISDICTION.
6. VALVE BOX LIDS TO BE PAINTED (2) COATS OF SAFETY BLUE PAINT. SEE MW-24 FOR PAINT SPECIFICATIONS.
7. VALVE BOXES SHALL BE ADJUSTED AFTER OVERLAY AND PATCHED AS SHOWN ABOVE. VALVES SHALL BE ADJUSTED WITHIN (3) WORKING DAYS OF THE OVERLAY.
8. IF ANY PART OF THE VALVE BOX NEEDS TO BE REPLACED INSTALLATION SHALL BE PER STANDARD PLAN NO. 6.



Woodinville
Water District

VALVE BOX ADJUSTMENT
IN ASPHALT OVERLAY



WATER STD.
PLAN NO. 6A

REVISION DATE
04/25

6.5" OF $\frac{5}{8}$ " CRUSHED GRAVEL (MIN.) REQUIRED IN HARD SURFACED AREAS. COMPACT TO 95% MAX. DENSITY. LOCAL JURISDICTIONAL REQUIREMENTS SHALL OVERRIDE.

SURFACE RESTORATION IN ACCORDANCE WITH LOCAL JURISDICTIONAL REQUIREMENTS. MINIMUM REQUIREMENTS SHOWN IN TRENCH PAVEMENT & SURFACE RESTORATION DETAIL NO. 8.

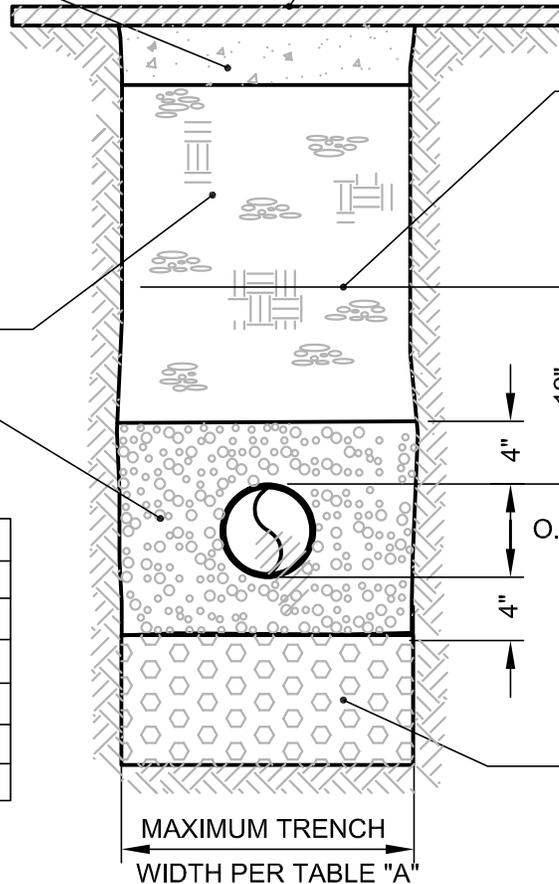
SELECT NATIVE MATERIAL OR IMPORTED GRAVEL. COMPACT TO MIN. 95% MAX. DENSITY. SEE SPECIFICATIONS. SEE NOTE 1.

SPECIAL PRECAUTIONS SHALL BE TAKEN TO PROTECT PIPE TO THIS LEVEL. SEE SPECIFICATIONS FOR MAXIMUM PARTICLE SIZE.

BEDDING GRAVEL

TABLE "A"

6" PIPE	2'-6"
8" PIPE	2'-6"
10" PIPE	3'-0"
12" PIPE	3'-0"
15", 16" PIPE	3'-6"
18" PIPE	4'-0"
24" PIPE	4'-0"



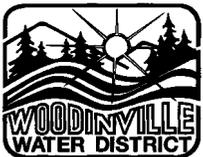
O.D. OF WATER MAIN

FOUNDATION GRAVEL (PER SPECIFICATIONS) AS REQUIRED BY THE ENGINEER

TRENCH SECTION

NOTES:

1. LOCAL JURISDICTIONAL REQUIREMENTS OVERRIDE ALL APPLICABLE SECTIONS OF THIS DETAIL. WHEN WORKING IN A STREET R/W PLEASE REFER TO ALL LOCAL JURISDICTIONAL REQUIREMENTS FOR TRENCH EXCAVATION AND BACKFILL.
2. FILL AREAS SHALL BE FILLED AND COMPACTED PRIOR TO INSTALLATION OF WATER MAINS. 95% COMPACTIONS PER ASTM-D-1557 REQUIRED IN FILL AREAS. REPORTS REQUIRED PRIOR TO TRENCHING.
3. BEDDING REQUIRED ONLY IF DIRECTED BY THE DISTRICT DUE TO NATIVE SOIL CONDITIONS. BEDDING SHALL BE $\frac{5}{8}$ " CRUSHED SURFACING.
4. PUMPING SOILS SHALL BE REMOVED FROM THE TRENCH BACKFILL IMMEDIATELY.
5. USE OF NATIVE SOILS FOR BACKFILL REQUIRES PROCTOR SAMPLES BE TAKEN PRIOR TO EXCAVATION. COMPACTION TESTS SUBMITTED DAILY ON NATIVE AND IMPORTED BACKFILL. BACKFILL SHALL BE REMOVED AND RECOMPACTED OR REPLACED UNTIL PASSING TEST RESULTS ARE OBTAINED.



Woodinville
Water District

TYPICAL
LONGITUDINAL
TRENCH SECTION



WATER STD.
PLAN NO. 7

REVISION DATE
04/25

6.5" OF $\frac{5}{8}$ " CRUSHED GRAVEL (MIN.) REQUIRED IN HARD SURFACED AREAS. COMPACT TO 95% MAX. DENSITY. LOCAL JURISDICTIONAL REQUIREMENTS SHALL OVERRIDE.

SURFACE RESTORATION IN ACCORDANCE WITH LOCAL JURISDICTIONAL REQUIREMENTS. MINIMUM REQUIREMENTS SHOWN IN TRENCH PAVEMENT & SURFACE RESTORATION DETAIL NO. 8.

1 $\frac{1}{4}$ " CRUSHED BACK FILL. SEE NOTE 1.

SPECIAL PRECAUTIONS SHALL BE TAKEN TO PROTECT PIPE TO THIS LEVEL. SEE SPECIFICATIONS FOR MAXIMUM PARTICLE SIZE.

BEDDING GRAVEL

O.D. OF WATER MAIN

12"
4"
4"

FOUNDATION GRAVEL (PER SPECIFICATIONS) AS REQUIRED BY THE ENGINEER

TABLE "A"

6" PIPE	2'-6"
8" PIPE	2'-6"
10" PIPE	3'-0"
12" PIPE	3'-0"
15", 16" PIPE	3'-6"
18" PIPE	4'-0"
24" PIPE	4'-0"

MAXIMUM TRENCH WIDTH PER TABLE "A"

TRENCH SECTION

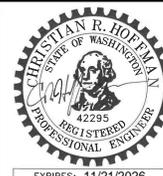
NOTES:

1. LOCAL JURISDICTIONAL REQUIREMENTS OVERRIDE ALL APPLICABLE SECTIONS OF THIS DETAIL. WHEN WORKING IN A STREET R/W PLEASE REFER TO ALL LOCAL JURISDICTIONAL REQUIREMENTS FOR TRENCH EXCAVATION AND BACKFILL.
2. FILL AREAS SHALL BE FILLED AND COMPACTED PRIOR TO INSTALLATION OF WATER MAINS. 95% COMPACTION PER ASTM D-1557 REQUIRED IN FILL AREAS. REPORTS REQUIRED PRIOR TO TRENCHING.
3. BEDDING REQUIRED ONLY IF DIRECTED BY THE DISTRICT DUE TO NATIVE SOIL CONDITIONS BEDDING SHALL BE $\frac{5}{8}$ " CRUSHED SURFACING.
4. PUMPING SOILS SHALL BE REMOVED FROM THE TRENCH BACKFILL IMMEDIATELY.
5. COMPACTION TESTS SHALL BE SUBMITTED DAILY ON IMPORTED BACKFILL. BACKFILL SHALL BE REMOVED AND RECOMPACTED OR REPLACED UNTIL PASSING TEST RESULTS ARE OBTAINED.



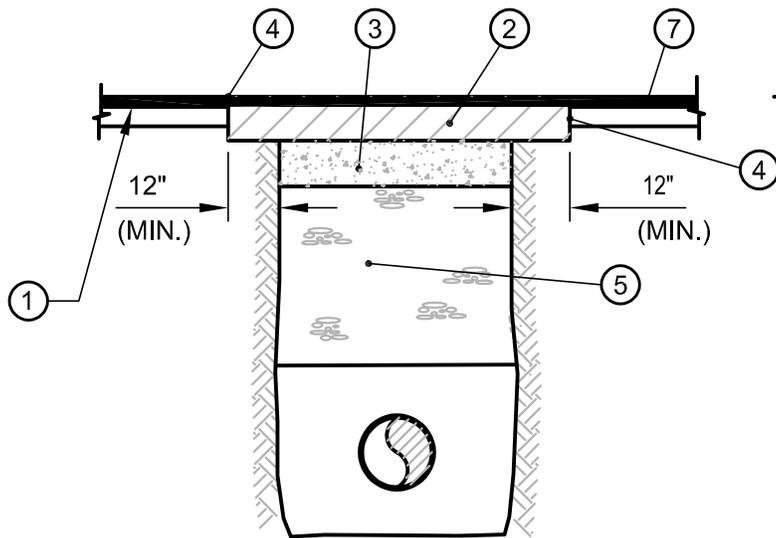
Woodinville Water District

TYPICAL TRANSVERSE TRENCH SECTION

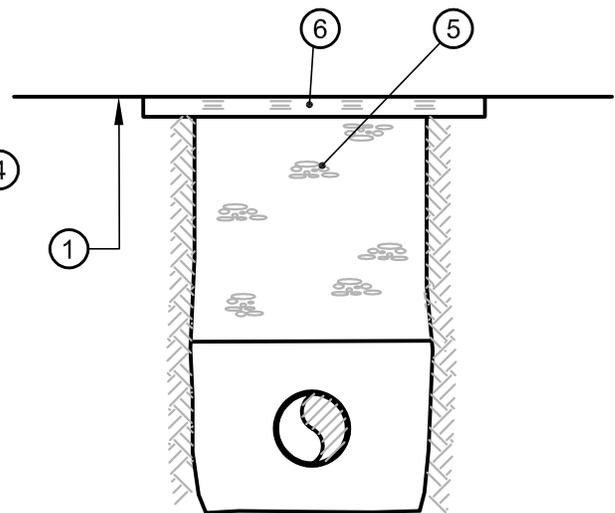


WATER STD. PLAN NO. 7A

REVISION DATE 04/25



ASPHALT/CONCRETE
RESTORATION

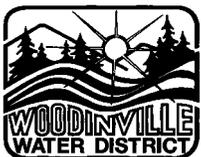


SHOULDER AND
EASEMENT RESTORATION

- ① EXISTING SURFACE
- ② PERMANENT PATCH- MATCH EXISTING DEPTH (3" MIN.) DEPTH 1/2" HMA ASPHALT. JURISDICTIONAL REQUIREMENTS OVERRIDE.
TEMPORARY PATCH- 2" MIN. DEPTH 1/2" HMA ASPHALT ON 3" MIN. CRUSHED SURFACING.
- ③ CRUSHED GRAVEL PER STD PLANS 7 & 7A LOCAL JURISDICTIONAL REQUIREMENTS OVERRIDE.
- ④ NEAT LINE ACP CUT. TACK EDGES WITH EMULSIFIED ASPHALT SEAM SEAL WITH A NARROW APPLICATION OF AR4000. UNLESS OVERLAY SCHEDULED FOR CURRENT YEAR.
- ⑤ TRENCH BACKFILL- SEE STANDARD DETAIL 7 & 7A OR PER LOCAL JURISDICTION
- ⑥ RESTORE EXISTING SURFACE. TOP SOIL, CSTC (2" MIN.) OR AS NOTED ON THE PLANS.
- ⑦ 2" ASPHALT 1/2" HMA FULL WIDTH OVERLAY, INCLUDING PAVED SHOULDERS, WHEN SPECIFIED ON THE PLANS OR REQUIRED BY THE JURISDICTIONAL AUTHORITY.

NOTES:

- 1. THESE STANDARDS ARE THE MINIMUM ALLOWABLE. LOCAL JURISDICTIONAL REQUIREMENTS SHALL OVERRIDE WHERE APPLICABLE.
- 2. SEE TYPICAL TRENCH SECTION DETAIL (STANDARD PLAN 7 & 7A).
- 3. DAILY TEMPORARY TRENCH PATCH REQUIRED IF PERMANENT PATCHING NOT IN PLACE. CONTRACTOR SHALL BE AWARE "T" IS REQUIRED SO PERMANENT PATCH RESIDES ON 12" OF UNDISTURBED MATERIAL. PERMANENT PATCH SHALL BE INSTALLED WITHIN 30 DAYS OF EXCAVATION. "T" CUT SHALL NOT BE PERFORMED UNTIL TRENCH IS BACKFILLED.



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Water District

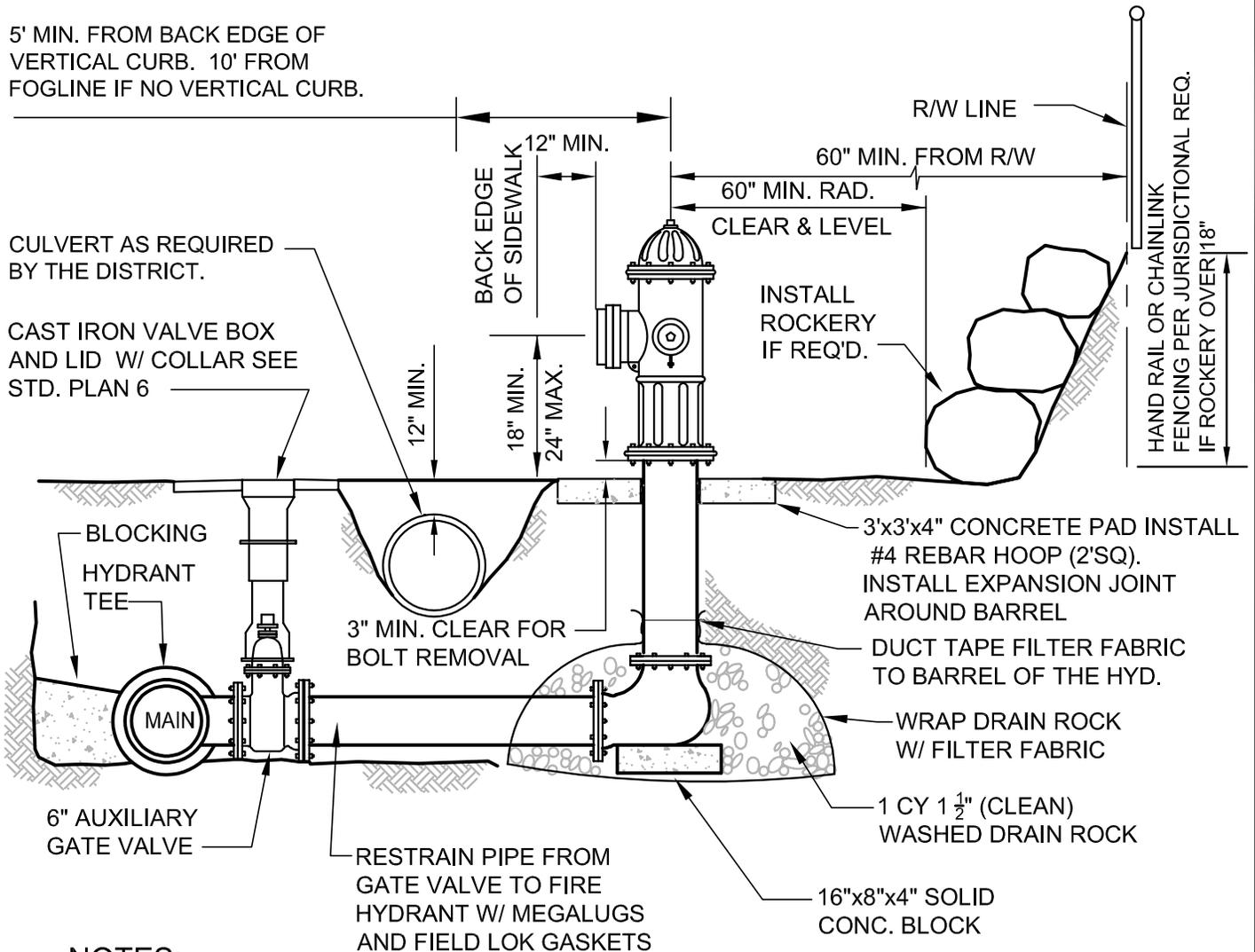
TRENCH
PAVEMENT & SURFACE
RESTORATION



WATER STD.
PLAN NO. ⑧

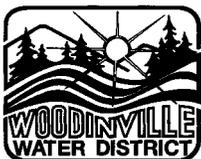
REVISION DATE
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5' MIN. FROM BACK EDGE OF VERTICAL CURB. 10' FROM FOGLINE IF NO VERTICAL CURB.



NOTES:

1. 6" DIA. CL 52 (PER SPEC'S) TO BE USED IF PIPE RUN IS 50' OR LESS. 8" PIPE REQUIRED IF OVER 50'. AN 8"x6" TEE AND 6" GATE VALVE SHALL BE PLACED AT THE END OF AN 8" PIPE RUN WITH 6" D.I. CL 52 TO THE FIRE HYDRANT LOCATION.
2. SEE STANDARD PLANS 3, (THRUST BLOCKING), 6 (VALVE BOX), 7A (TYPICAL LONGITUDINAL & TRANSVERSE TRENCH SECTION), & 8 (TRENCH RESTORATION).
3. PROVIDE LEVEL ACCESS TO FIRE HYDRANT. SEE SPECIFICATIONS.
4. SIDE PORTS SHALL BE 2 1/2" SNT/NH THREADS.
5. A 4" PUMPER PORT WITH SEATTLE THREADS REQUIRED. SEE SPECIFICATION MW-9.
6. INSTALL A 5" STORZ ADAPTER PER WOODINVILLE, BOTHELL, REDMOND, AND KIRKLAND FIRE STANDARD PLANS.
7. THE DEVELOPER SHALL PROVIDE SURVEY TO SET THE BASE ELEVATION (TOP OF CONCRETE PAD) OF THE FIRE HYDRANT. SEE THE DE SPECIFICATION FOR OTHER REQUIREMENTS.
8. MAXIMUM BURY DEPTH ON FH IS 6'. DEEPER INSTALLATION SHALL BE INSTALLED PER STANDARD PLAN 9B.
9. ROTATION OF THE FIRE HYDRANT PUMPER PORT SHALL BE DIRECTED BY THE FIRE AUTHORITY OR DISTRICT STAFF.
10. REMOVE HYDRANT CHAINS.



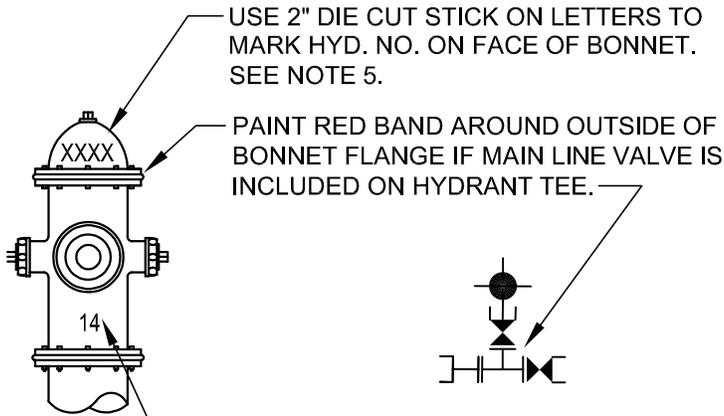
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NEW FIRE
HYDRANT INSTALLATION



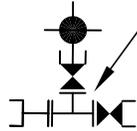
WATER STD.
PLAN NO. 9

REVISION DATE
04/25



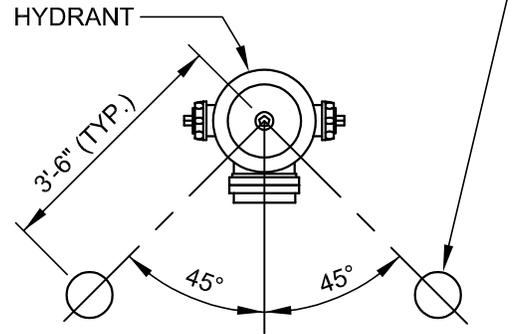
USE 2" DIE CUT STICK ON LETTERS TO MARK HYD. NO. ON FACE OF BONNET. SEE NOTE 5.

PAINT RED BAND AROUND OUTSIDE OF BONNET FLANGE IF MAIN LINE VALVE IS INCLUDED ON HYDRANT TEE.



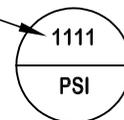
LETTER LENGTH (ROUNDED OFF TO THE NEAREST FOOT) FROM CENTER OF HYD. OPERATING NUT TO 6" GATE VALVE. LETTERING MUST FACE THE GATE VALVE. ALTERNATIVELY, THE LETTERING MAY BE PLACED ABOVE THE PUMPER PORT IF THE STANDARD LOCATION DOES NOT HAVE A SMOOTH SURFACE. IF FIRE HYDRANT HAS BEEN ROTATED, ROTATE LENGTH LETTERING ACCORDINGLY.

INSTALL BOLLARDS AS DIRECTED. TOP OF BOLLARD TO BE LEVEL W/ TOP OF OPERATING NUT.



NOTES:

1. FIRE HYDRANTS & BOLLARDS TO BE PAINTED (2) COATS OF SAFETY YELLOW PAINT. SEE MW-24 FOR PAINT SPECIFICATION.
2. VALVE BOX LIDS TO BE PAINTED (2) COATS OF SAFETY BLUE PAINT. SEE MW-24 FOR PAINT SPECIFICATION.
3. RED BAND AROUND BONNET FLANGE TO BE PAINTED (2) COATS OF SAFETY RED PAINT. SEE MW-24 FOR PAINT SPECIFICATION.
4. BOLLARDS MAY NOT BE USED WITHIN 10' OF ROADWAY EDGES. PROTECTION OF FIRE HYDRANTS MUST BE PROVIDED WHERE BOLLARDS CANNOT BE USED. DEVELOPER SHALL SUBMIT PLAN FOR FIRE HYDRANT PROTECTION.
5. SEE MW-14 FOR LETTERING SPECIFICATION.
6. SEE "APPROVED FOR CONSTRUCTION" PLANS FOR FIRE HYDRANT NUMBER. LOCATED IN UPPER PORTION OF CIRCLE. EXAMPLE



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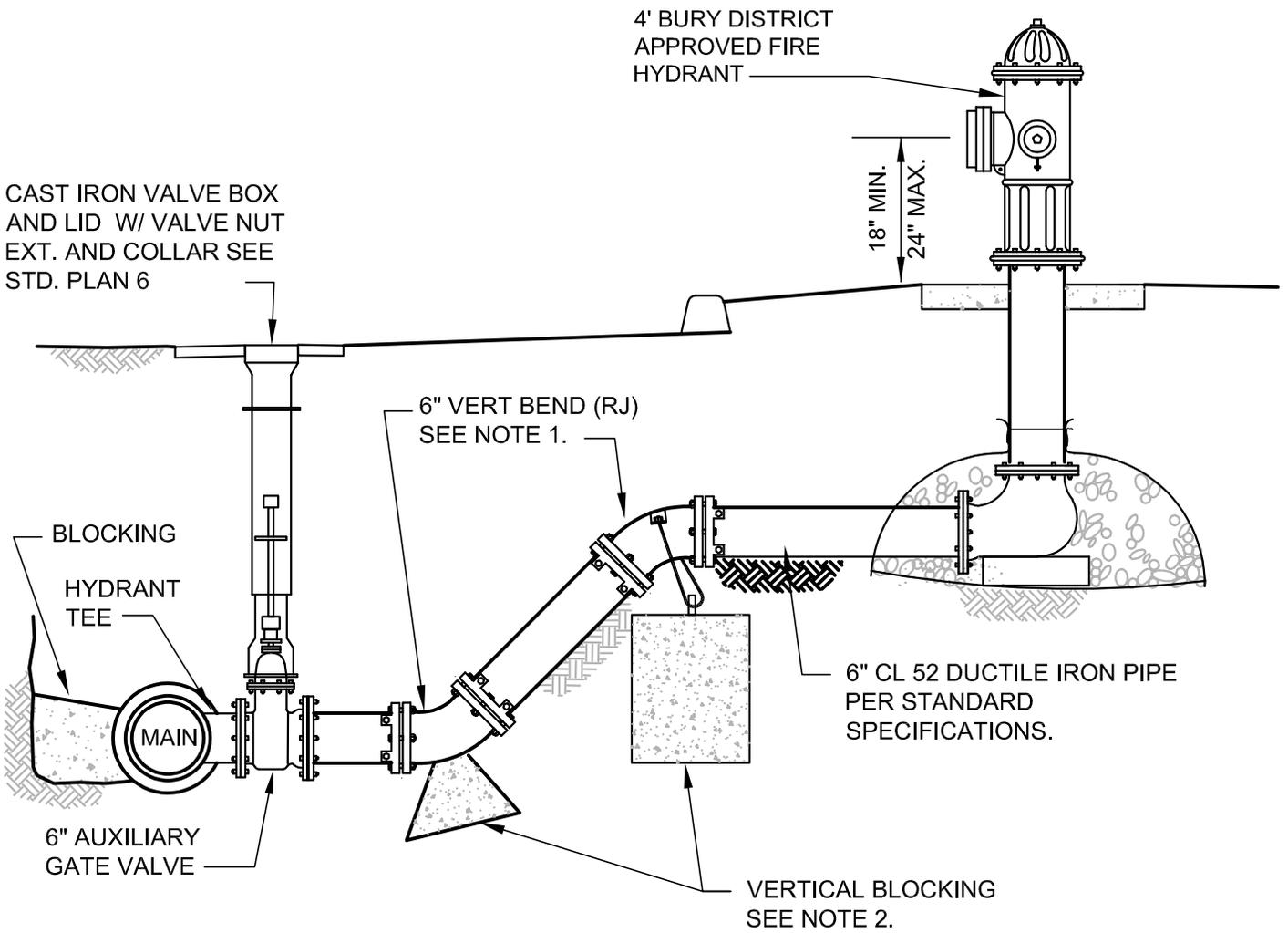
**NEW AND RELOCATED FIRE
HYDRANT DETAILS**



EXPIRES: 11/21/2026

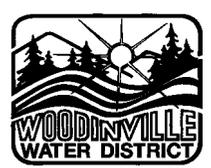
**WATER STD.
PLAN NO. 9A**

REVISION DATE
04/25



NOTES:

1. MAX BURY DEPTH FOR FIRE HYDRANTS SHALL BE 6'. FOR DEEPER INSTALLATIONS INSTALL A 4' BURY FIRE HYDRANT WITH A VERTICAL BENDS AS SHOWN. 45° MAXIMUM VERTICAL BEND.
2. INSTALL GRAVITY BLOCKING PER STANDARD PLAN NO. 4.
3. ALL APPLICABLE DETAILS FROM STANDARD PLANS 9, 9A, 9C, AND STANDARD SPECIFICATIONS FOR NEW HYDRANT INSTALLATION REQUIREMENTS APPLY TO DEEP FIRE HYDRANT INSTALLATIONS.



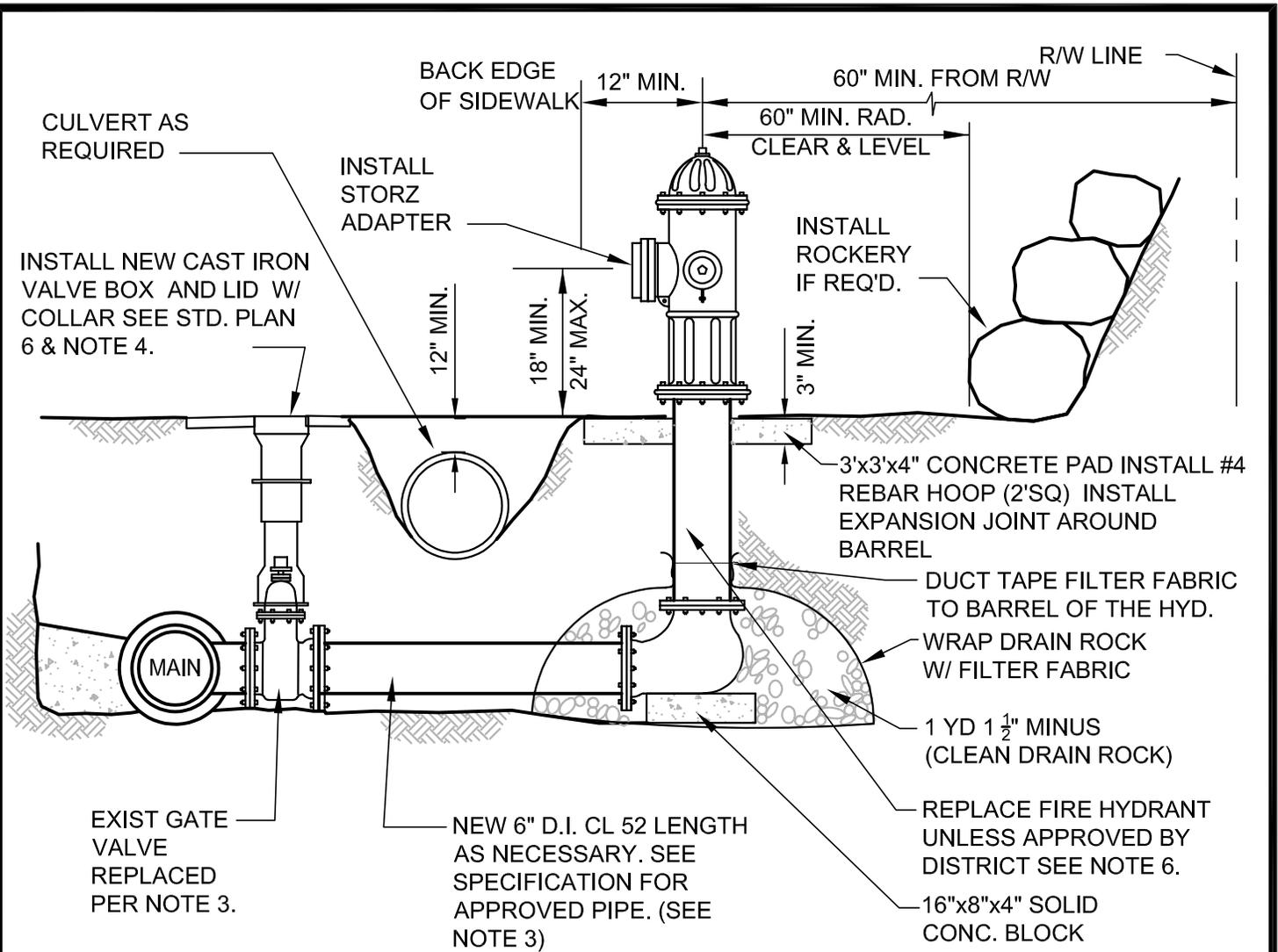
**Woodinville
Water District**

**DEEP FIRE
HYDRANT INSTALLATION**



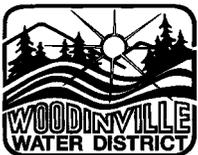
**WATER STD.
PLAN NO. 9B**

REVISION DATE
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NOTES:

1. ALL APPLICABLE DETAILS FROM STANDARD PLANS 9, 9A, AND 9B APPLY TO RELOCATED FIRE HYDRANT.
2. EXISTING FIRE HYDRANT MUST BE PRESSURE TESTED PRIOR TO RELOCATION AND RETESTED PRIOR TO ACCEPTANCE.
3. REPLACE 6" EXISTING PIPE BACK TO FOOT VALVE. ALL MECHANICAL JOINTS SHALL BE MEG -A-LUG OR EQUAL. REPLACE EXISTING GATE VALVE IF IT IS A DOUBLE DISC OR DOES NOT CONFORM TO AWWA C509 OR C515 OR IS NOT AN APPROVED GATE VALVE FOR THE DISTRICT (SEE MW-3 IN STANDARD SPECIFICATIONS)
4. REPLACE VALVE BOX PER STANDARD PLAN NO. 6.
5. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE AND INSTALL A FH BARREL EXTENSION, IF NECESSARY, TO COMPLY WITH THE CLEARANCES SHOWN ABOVE.
6. INSTALL A NEW FIRE HYDRANT PER STANDARD PLANS 9 OR 9B & 9A UNLESS THE EXISTING FIRE HYDRANT MEETS CURRENT DISTRICT STANDARDS FOR NEW FIRE HYDRANTS (SEE MW-9A IN THE STANDARD SPECIFICATIONS).
7. RELOCATED FIRE HYDRANTS SHALL BE PAINTED AND LETTERED PER THE SPECIFICATIONS. RE-USED FIRE HYDRANTS SHALL BE PRESSURE WASHED (MIN. 3000PSI) PRIOR TO PAINTING.
8. INSTALL STORZ ADAPTER PER WOODINVILLE, BOTHELL, REDMOND, AND KIRKLAND FIRE STANDARD PLANS.



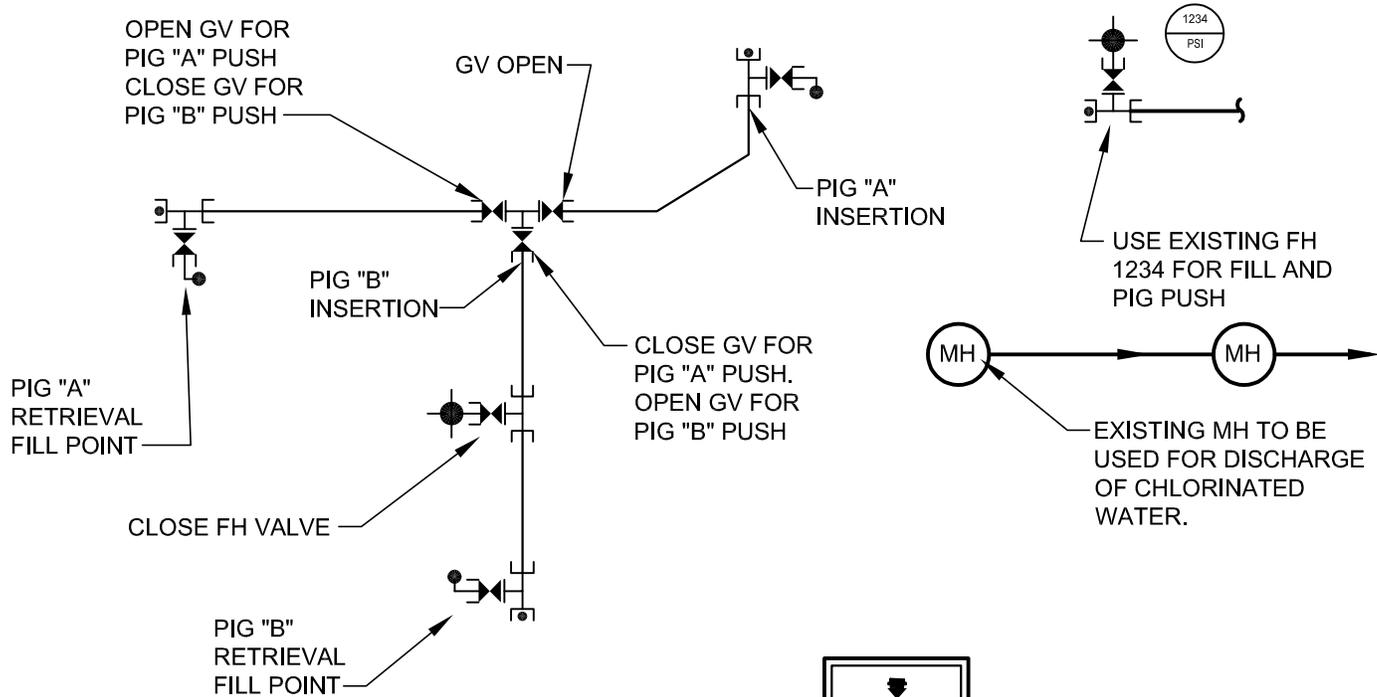
**Woodinville
Water District**

**RELOCATE EXISTING
FIRE HYDRANT**



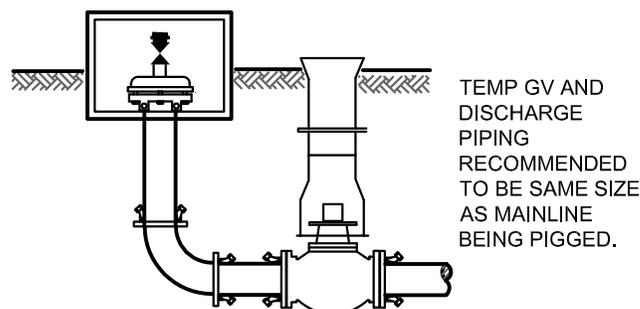
**WATER STD.
PLAN NO. 9C**

REVISION DATE
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PIG PLAN EXAMPLE

NOTE: EXAMPLE IS A TYPICAL MINIMUM OF THE REQUIRED PIGGING PLAN.



PIG RETRIEVAL POINT

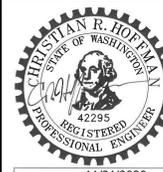
PIGGING PLAN REQUIREMENTS

1. SHOW SOURCE WATER POINT. IF EXISTING DISTRICT SYSTEM CANNOT BE USED, POTABLE WATER TRUCK MAY BE NECESSARY TO PUSH THE PIG.
2. SHOW DISCHARGE POINT. IT IS THE CONTRACTORS RESPONSIBILITY TO COORDINATE DISCHARGE INTO EXISTING SEWER SYSTEMS. IF EXISTING SEWER SYSTEM CANNOT BE USED, BAKER TANK OR WATER TRUCK MAY BE REQUIRED. CHLORINATED WATER SHALL NOT ENTER FRESH BODIES OF WATER OR STORM SYSTEMS. CONTRACTOR SHALL COORDINATE THE DECHLORINATION METHOD WITH THE DISTRICT INSPECTOR PRIOR TO BEGINNING THE PIG PUSH. SEE CW-20 FOR MORE INFORMATION.
3. SHOW PIG INSERTION AND RETRIEVAL POINTS. IF NEW SYSTEM APPURTENANCES CANNOT BE USED FOR PIG RETRIEVAL, THE CONTRACTOR SHALL USE THE PIG RETRIEVAL DETAIL PROVIDED ON THIS STANDARD PLAN.
4. SHOW ALL SECTIONS OF WATER MAIN TO BE PIGGED. INCLUDE THE DIRECTION OF FILLING THE WATERMAIN, DIRECTION OF THE PIG PUSH, AND SEQUENCE OF OPENING/CLOSING VALVES TO ACHIEVE THE PIG PUSH.
5. IF THE DISTRICT INSPECTOR DEEMS NECESSARY, MULTIPLE PIG PUSHES MAY BE REQUIRED. IF MULTIPLE PIG PUSHES ARE NECESSARY, A NEW FOAM PIG SHALL BE LOADED INTO THE MAIN IN THE SAME MANNER AS THE FIRST ATTEMPT AND THE PROCESS WILL REPEAT UNTIL ALL DEBRIS IS REMOVED FROM THE MAIN.
6. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT ANY GROUNDWATER OR DEBRIS FROM ENTERING THE NEWLY PIGGED WATERMAIN DURING THE PIG RETRIEVAL. ANY GROUNDWATER OR DEBRIS ENTERING THE MAIN SHALL REQUIRE RECHLORINATING AND PIGGING THE WATERMAIN AT THE CONTRACTORS EXPENSE.



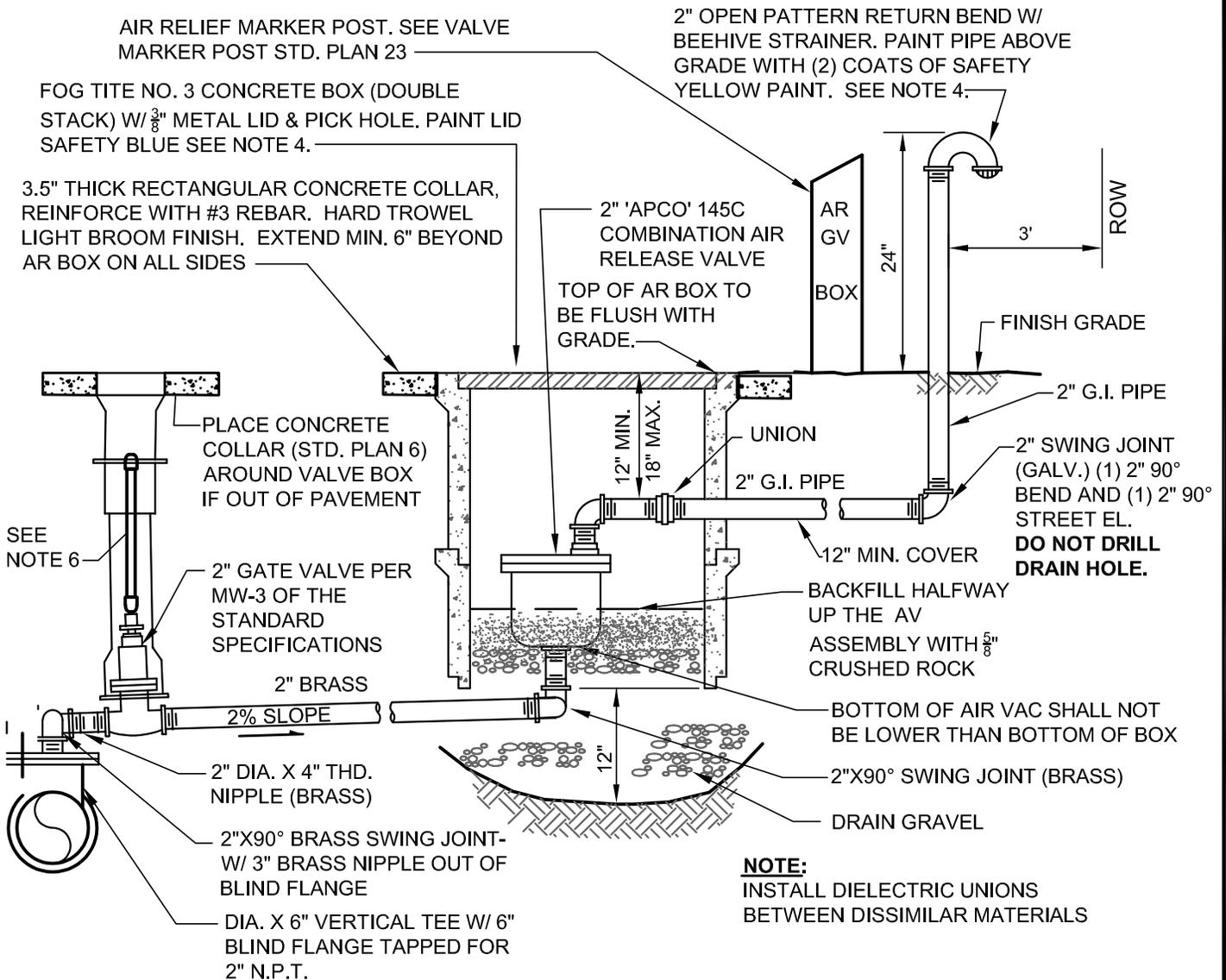
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PIGGING DETAIL AND REQUIREMENTS



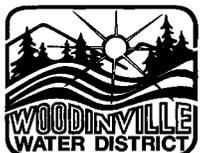
WATER STD.
PLAN NO. 10

REVISION DATE
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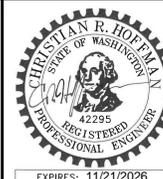
NOTES:

1. CONTRACTOR SHALL LOCATE DIA. X 6" TEE AT HIGH POINT IN THE MAIN. THE MAINLINE GENERALLY NEEDS TO BE DEEPER THAN 3' TO PROVIDE BURY DEPTH AT THE AIR RELEASE BOX AND 2" GALV. DISCHARGE PIPING. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
2. SEE STANDARD PLAN 6 FOR VALVE BOX REQUIREMENTS.
3. METAL LID TO HAVE A PICK HOLE OR PICK NOTCH. METER FLAP NOT ALLOWED.
4. AIR VAC PIPING TO BE PAINTED (2) COATS OF SAFETY YELLOW. VALVE & AIR VAC BOX LIDS TO BE PAINTED (2) COATS OF SAFETY BLUE. SEE MW-24 FOR PAINT SPECIFICATIONS.
5. AIR RELEASE AND PIPING SHALL BE INCLUDED IN PRESSURE TESTING.
6. PLACE VALVE TYPE AND SIZE INDICATOR IN VALVE CHAMBER. **SEE STANDARD PLAN 23.**



Woodinville
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AIR RELEASE
ASSEMBLY



WATER STD.
PLAN NO. 11

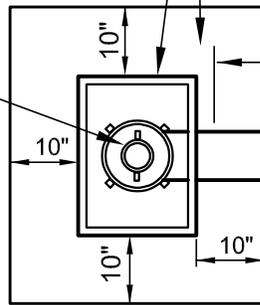
REVISION DATE
04/25

OLD CASTLE 1324BCF-18 WITH DUCTILE IRON LID (H₂O LOADING) & HINGED METAL FLAP LOCATE BLOW-OFF BOX AWAY FROM DRAINAGE OR HIGH WATER AREAS. PAINT LID SAFETY BLUE SEE NOTE 2.

$\frac{3}{8}$ " THICK CONCRETE COLLAR TO DIMENSIONS SHOWN. FLUSH WITH FINISH GRADE. REINFORCE WITH #3 REBAR.

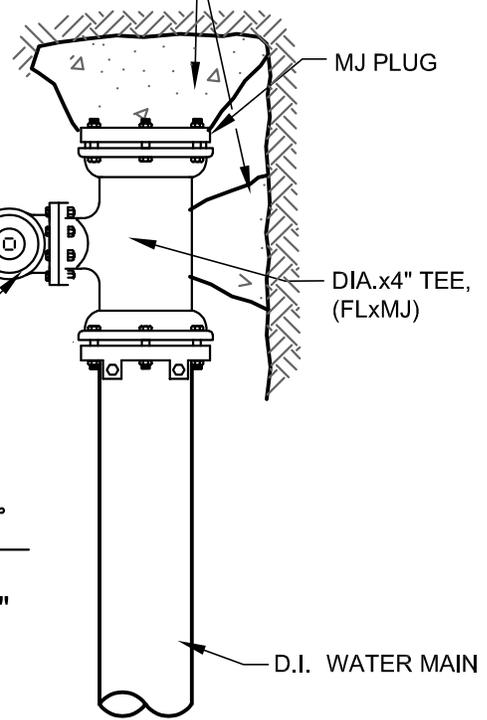
SEE THRUST BLOCK DETAILS

CENTER BLOW-OFF CAP IN BOX



4" CL 52 RESTRAINED PIPE
(SEE NOTE 1) LENGTH AS REQUIRED

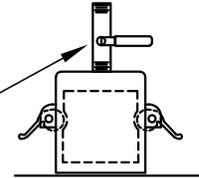
4" GATE VALVE, (FLxMJ)



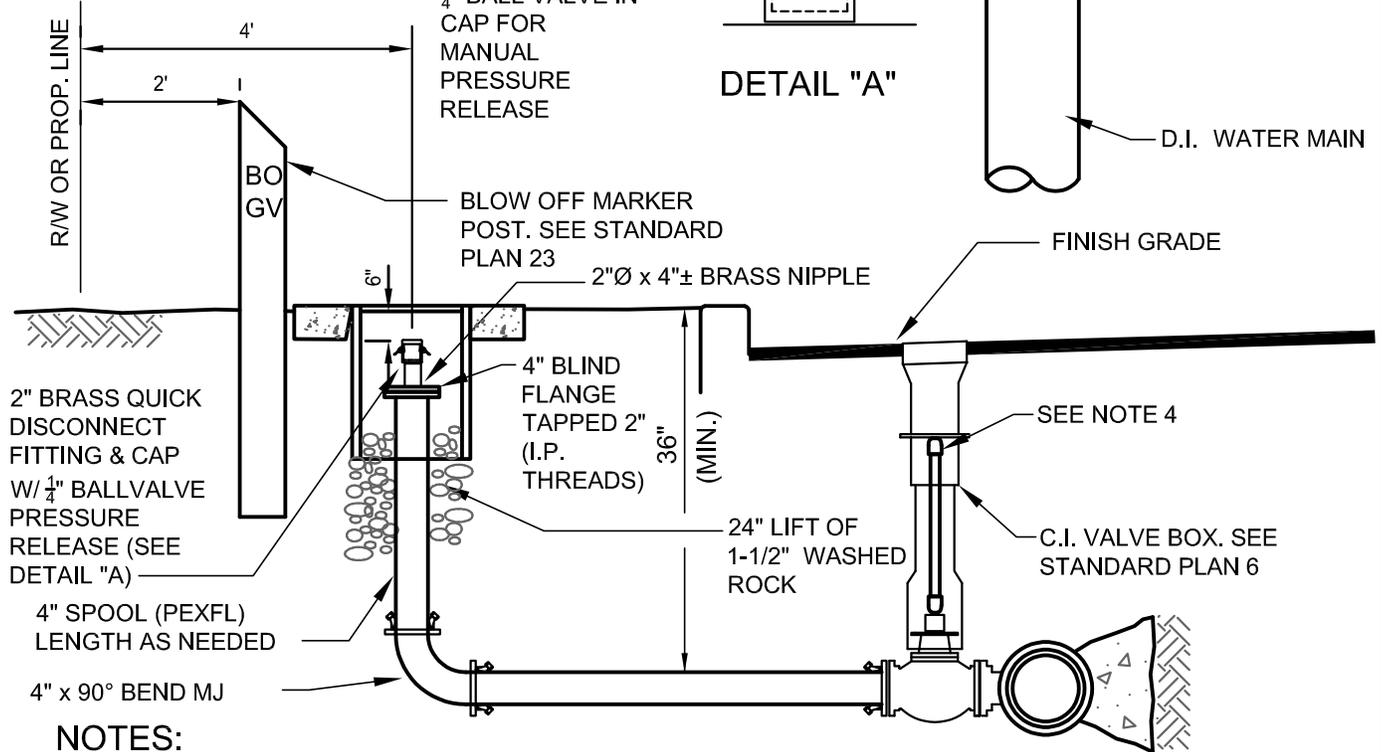
BLOW OFF MARKER POST SEE STD. PLAN 23.

PLAN

CENTER MOUNT $\frac{1}{4}$ " BALL VALVE IN CAP FOR MANUAL PRESSURE RELEASE

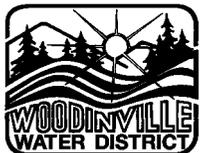


DETAIL "A"



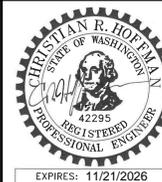
NOTES:

1. MECHANICAL JOINTS (MJ) TO BE RESTRAINED WITH EBBA IRON MEG-A-LUGS. INSTALL FIELD LOK GASKETS IN PIPE JOINTS.
2. VALVE MARKERS TO BE PAINTED (2) COATS OF SAFETY YELLOW. BLOW-OFF BOX LID AND VALVE BOX LIDS TO BE PAINTED (2) COATS OF SAFETY BLUE. SEE MW-24 FOR PAINT SPECIFICATIONS.
3. BLOW OFF BOX NOT ALLOWED IN THE STREET.
4. PLACE VALVE TYPE AND SIZE INDICATOR IN VALVE CHAMBER. SEE STANDARD PLAN 23.



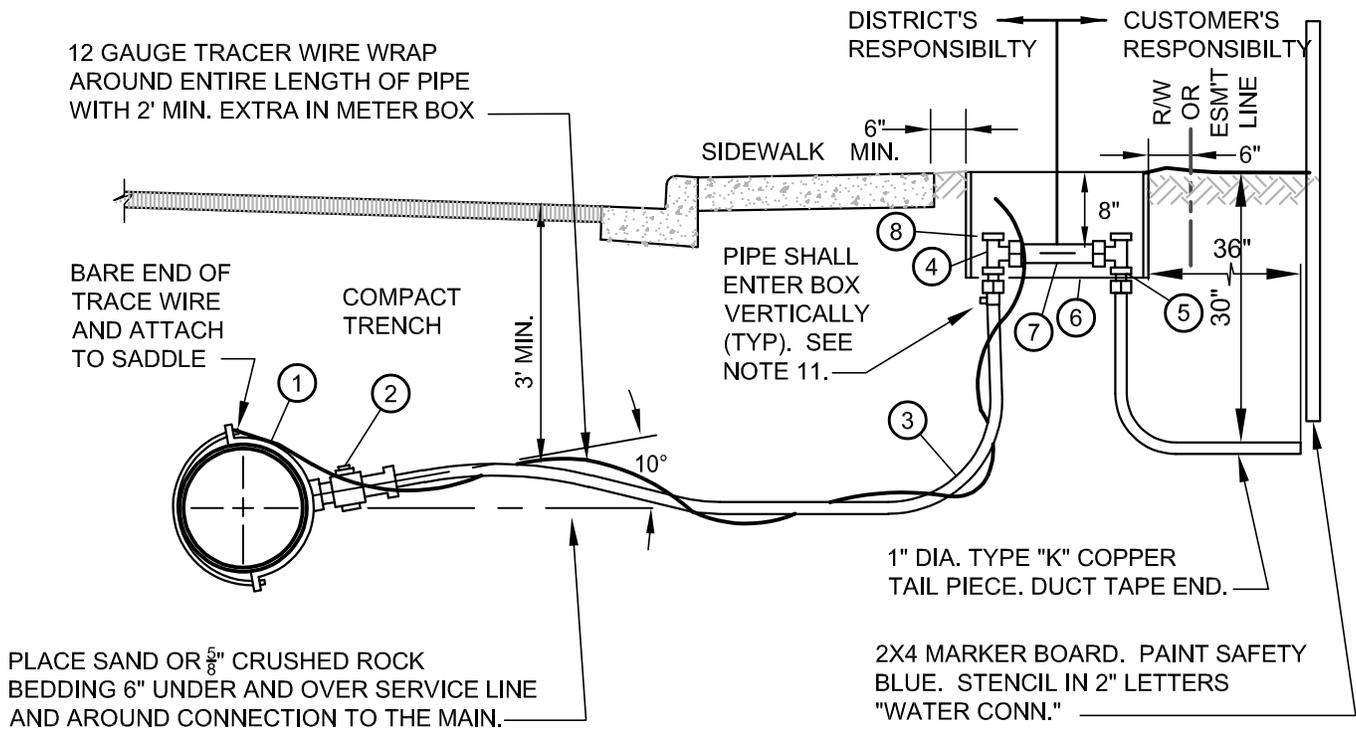
**Woodinville
Water District**

**BLOW OFF
ASSEMBLY**



WATER STD.
PLAN NO. **12**

REVISION DATE
04/25

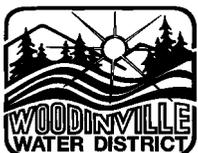


SEE STANDARD PLAN 13B FOR MATERIAL LIST

NOTE - CIRCLED NUMBERS ABOVE REFER TO MATERIALS LISTED ON STD PLAN 13B.

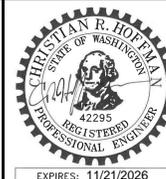
NOTES

1. LOT CORNERS AND PROPERTY LINES MUST BE ESTABLISHED BEFORE SERVICES ARE INSTALLED.
2. CONTRACTOR TO PROVIDE ALL MATERIALS PER STD. PLAN 13M.
3. CONTACTOR SHALL SCHEDULE SERVICE FLUSH WITH THE DISTRICT INSPECTOR. TAPPING COUPON TO BE PRESENTED TO THE DISTRICT INSPECTOR. SERVICES TO BE TESTED UNDER MAINLINE PRESSURE.
4. TRACE WIRES MUST BE VISIBLE IN METER BOX.
5. NO SPLICES ALLOWED IN SERVICE LINES.
6. CORP STOP LOCATION SHALL BE OFFSET PRECISELY FOR GPS SURVEY.
7. METER INSTALLATION BY THE DISTRICT. METER WILL NOT BE SET UNTIL PROJECT ACCEPTED.
8. METER BOX SHALL BE PERPENDICULAR TO SIDEWALK, PROPERTY LINE, OR AS DIRECTED. TOP OF BOX SHALL BE FLUSH WITH FINISH GRADE.
9. SINGLE FAMILY FIRE OR IRRIGATION SERVICES SHALL HAVE BACKFLOW PROTECTION PER STANDARD PLAN 21. BACKFLOW BOX SHALL BE INLINE BEHIND METER BOX.
10. NO METER OR DCVA BOXES ALLOWED IN DRIVEWAYS OR HARD SURFACES.
11. METER BOXES INSTALLED ON SLOPES MAY REQUIRE A LANDSCAPE BLOCK WALL TO ACHIEVE A CLEAR AND LEVEL AREA.
12. IF AN EXISTING SERVICE IS BEING MOVED TO A NEW LOCATION INSULATE METER PER WATER STANDARD PLAN 13B NOTE 8.
13. ALL FITTINGS AND BRASS COMPONENTS SHALL CONFORM TO THE LATEST VERSIONS OF NSF 61 AND ANSI/AWWA STANDARD C800 AND SHALL BE STAMPED / EMBOSSED TO SHOW THE PRODUCT IS MADE FROM A NO LEAD ALLOY.



**Woodinville
Water District**

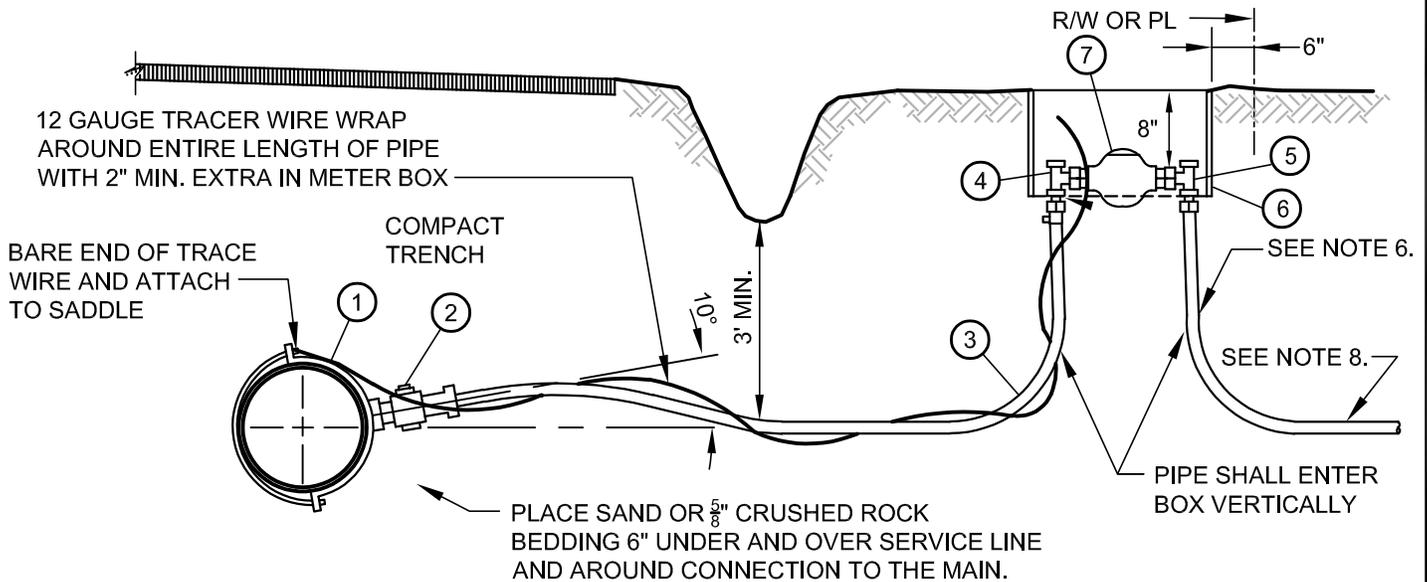
**SINGLE FAMILY
SERVICE INSTALLATION**



**WATER STD.
PLAN NO. 13**

REVISION DATE

04/25

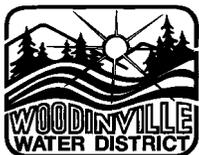


1" SEE STANDARD PLAN 13B FOR MATERIAL LIST

NOTE - CIRCLED NUMBERS ABOVE REFER TO MATERIALS LISTED ON STD PLAN 13B.

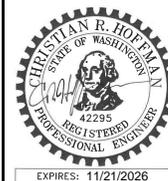
NOTES:

1. CONTRACTOR TO PROVIDE ALL MATERIALS AS SHOWN EXCEPT METERS.
2. TRACE WIRES MUST BE VISIBLE IN METER BOX.
3. NO SPLICES ALLOWED IN SERVICE LINES.
4. CONTRACTOR SHALL SCHEDULE SERVICE FLUSH WITH THE DISTRICT INSPECTOR. TAPPING COUPON TO BE PRESENTED TO THE DISTRICT INSPECTOR. SERVICES TO BE TESTED UNDER MAINLINE PRESSURE.
5. EXISTING SERVICE SHALL BE MAINTAINED UNTIL THE NEW SYSTEM IS PRESSURE TESTED, FLUSH AND SATISFACTORY BACTERIOLOGICAL TEST RECEIVED. THEN THE CONTRACTOR SHALL COORDINATE WITH THE INDIVIDUAL OWNER AND THE DISTRICT TO SCHEDULE CONNECTION TO THE NEW SYSTEM. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
6. METER BOX SHALL BE PERPENDICULAR TO SIDEWALK, PROPERTY LINE OR AS DIRECTED. METERS SHALL BE CENTERED IN THE METER BOX AND PARALLEL. BOTH ANGLE METER STOPS SHALL BE VERTICAL AND ACCESSIBLE FOR SHUT OFF WITH A METER KEY. METER BOX NOT ALLOWED IN SIDEWALK. PRIOR APPROVAL REQUIRED FOR INSTALLATIONS IN TRAFFIC AREAS.
7. BACKSIDE CONNECTIONS SHALL BE MADE WITH 1" TYPE 'K' COPPER. FOR LARGER SINGLE FAMILY METERS, SIZE THE BACKSIDE TYPE 'K' COPPER TO THE SIZE OF THE METER. "NO LEAD" BRASS FITTINGS AND CONNECTORS SHALL BE USED FOR RECONNECTION. CONTRACTOR TO PROVIDE ALL MATERIALS.
8. EXISTING METERS TO BE REUSED EXCEPT THOSE IDENTIFIED BY THE DISTRICT TO BE REPLACED. NEW METERS WILL BE SUPPLIED BY THE DISTRICT AND INSTALLED BY THE CONTRACTOR. BACKFILL INSIDE METER BOX TO BOTTOM OF METER REGISTER PER STANDARD PLAN 13B NOTE 8. AMR COMPONENTS SHALL BE TRANSFERRED. CONTRACTOR SHALL REQUEST INSTRUCTION IF UNFAMILIAR WITH OUR AMR COMPONENTS.
9. CONTRACTOR SHALL VERIFY NO INDIVIDUAL PRV EXISTS BETWEEN EXISTING AND NEW CONNECTION POINTS. PRESSURE SHALL MATCH THE PRIOR PRESSURE. IF DIFFERENT, ADDITIONAL STEPS MUST BE TAKEN.
11. METER BOXES INSTALLED ON SLOPES MAY REQUIRE A LANDSCAPE BLOCK WALL TO ACHIEVE A CLEAR AND LEVEL AREA.
12. ALL APPLICABLE DETAILS FROM WATER STANDARD PLAN 13 APPLY TO SINGLE FAMILY SERVICE RECONNECTION.



**Woodinville
Water District**

**SINGLE FAMILY
SERVICE RECONNECTION**



**WATER STD.
PLAN NO. 13A**

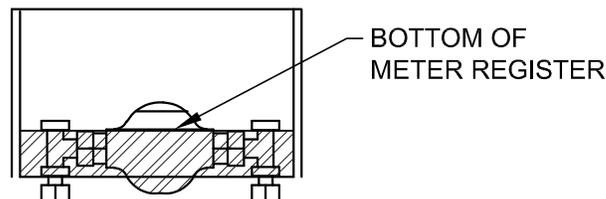
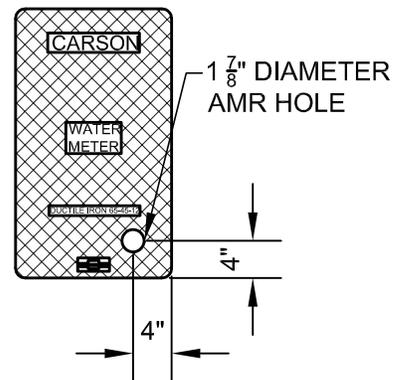
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1" SERVICE MATERIAL LIST

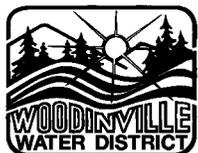
- ① SERVICE SADDLE
ROMAC 101-S, FORD FS101 WITH I.P. THREADS & STAINLESS STEEL STRAP.
- ② BALL CORP. STOP (WITH 1" I.P. THREADS)
AY MCDONALD 73131B WITH 74754-3Q COMP. WITH STIFFENER
MUELLER B-20013 WITH H-15456 INSTA-TITE.
- ③ SERVICE PIPE
1" CENTENNIAL PLASTICS INC. CENCORE HIGH DENSITY POLYETHYLENE SERVICE PIPE MEETING
AWWA C901 REQUIREMENTS; ASTM D2239, SIDR 7 PRESSURE CLASS 250 PSI, I.P.S. COLOR - BLUE
- ④ BALL, ANGLE METER STOP (WITH 1" I.P. THREADS & CONNECTION TO 1" POLY PIPE
FOR 1" METER
1"x1" AY MCDONALD 74644B WITH 1" 74753-33 PJxFIP ADAPT IPS/PEP
1"x1" MUELLER B-24265 WITH H-15426 INSTA-TITE
1"x1" FORD BA13-444W-NL WITH C86-44-NL, PACK JOINT

FOR $\frac{3}{4}$ " METER
INSTALL (2) FORD A24-NL $\frac{3}{4}$ "x1" ADAPTERS
- ⑤ BALL ANGLE METER STOP (WITH 1" I.P. THREADS & CONNECTION TO 1" COPPER PIPE
FOR 1" METER
1"x1" MUELLER 110 COMPRESSION FITTING OR APPROVED EQUAL.

- ⑥ METER BOX
OLD CASTLE 1324BCF-18 ENCLOSURE WITH DUCTILE IRON LID (H2O
LOADING) & $1\frac{7}{8}$ " DIAMETER AMR HOLE PER DIMENSIONS SHOWN TO
RIGHT. NO READER FLAP.
NICOR POLYMER LID WITH SENSUS AMR ADAPTABILITY.
- ⑦ DEVELOPER SHALL PROVIDE (1) METER IDLER PER TYPICAL
INSTALLATION (IE. 1" OR $\frac{3}{4}$ "). THE CONTRACTOR SHALL ENSURE THE
METER IDLER IS PARALLEL TO THE METER BOX AND CENTERED IN
BOTH DIRECTIONS.
- ⑧ METER BACKFILL MATERIAL SHALL BE SAND OR $\frac{5}{8}$ " MINUS CRUSHED
ROCK. BACKFILL TO BOTTOM OF METER REGISTER.



NOTE: ALL BRASS COMPONENTS SHALL CONFIRM TO THE LATEST VERSIONS OF NSF 61 AND ANSI/AWWA STANDARD C800 AND SHALL BE STAMPED / EMBOSSED TO SHOW THE PRODUCT IS MADE FROM A NO LEAD ALLOY.



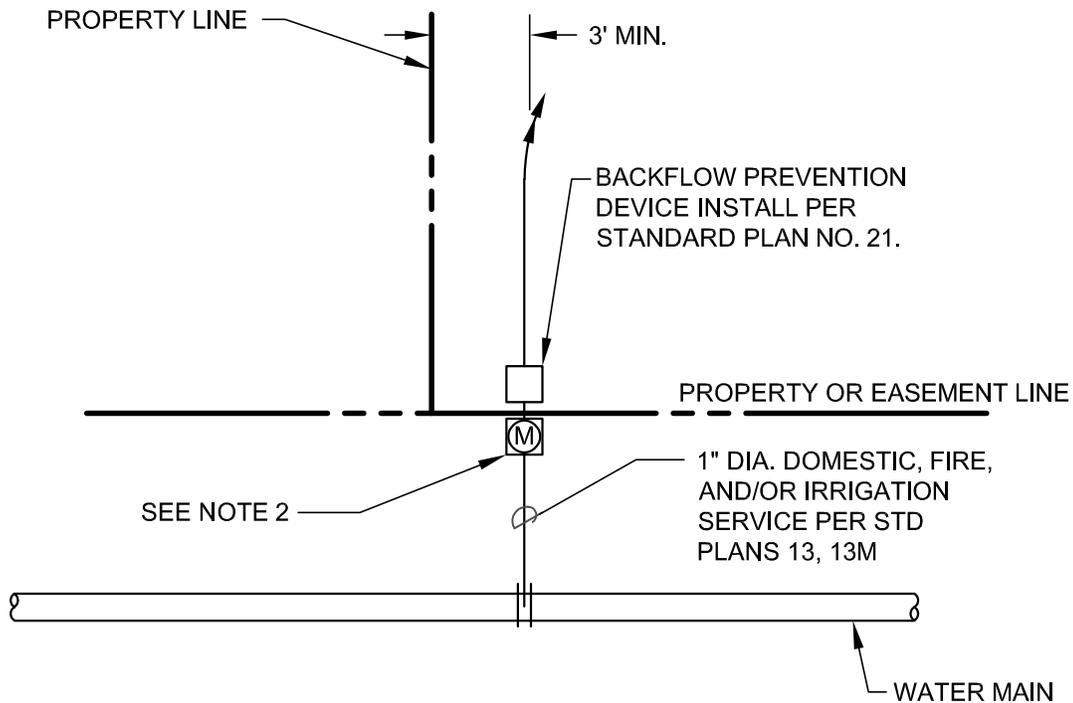
**Woodinville
Water District**

**1" POLY SERVICE
MATERIAL LIST**



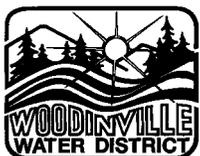
**WATER STD.
PLAN NO. (13B)**

REVISION DATE
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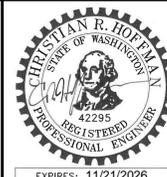
NOTES:

1. THIS STANDARD PLAN IS APPLICABLE FOR NEW OR UPDATED CONSTRUCTION THAT IS NOT PART OF A DEVELOPER'S EXTENSION.
2. IT SHALL BE THE OWNER'S RESPONSIBILITY TO INSURE THAT THE SERVICE LINES AND METER SIZES ARE ADEQUATE TO SERVE THE DOMESTIC & FIRE SPRINKLER OR IRRIGATION SYSTEMS. REFER TO LARGER METER AND BACKFLOW DEVICE DETAILS FOR SYSTEMS REQUIRING PIPE AND METER LARGER THAN 1".
3. AFTER PROJECT ACCEPTANCE AND METER SET FEES HAVE BEEN PAID, THE METERS WILL BE INSTALLED BY THE DISTRICT.
4. INSTALL DOMESTIC, FIRE, AND/OR IRRIGATION SERVICE IN ACCORDANCE WITH STANDARD PLAN 13 (SINGLE FAMILY DOMESTIC SERVICE). BACK OF METER BOX SHALL BE PLACED AT THE RIGHT OF WAY LINE OR IN THE UTILITY EASEMENT AS SHOWN.
5. THE BACKFLOW PREVENTION DEVICE SHALL BE A DOUBLE CHECK VALVE ASSEMBLY AS APPROVED BY THE WASHINGTON STATE DEPARTMENT OF HEALTH OR AS DIRECTED BY THE DISTRICT. MINIMUM SIZE OF BACKFLOW DEVICE SHALL BE 1" OR MATCH METER SIZE.
6. NO CHEMICALS ARE ALLOWED IN THE FIRE SPRINKLER PIPING SYSTEM.
7. THE BACKFLOW PREVENTION ASSEMBLY SHALL BE INSTALLED BY THE OWNER. SEE STANDARD PLAN NO. 21. THE BACKFLOW DEVICE SHALL NOT BE INSTALLED IN A BUILDING.
8. FIRE SPRINKLER SYSTEMS SHALL BE DESIGNED IN ACCORDANCE WITH THE LOCAL FIRE MARSHAL'S REQUIREMENTS AND HAVE FIRE MARSHAL APPROVAL.
9. NO METER OR DCVA BOXES ALLOWED IN DRIVEWAYS OR HARD SURFACE AREAS.
10. INSPECTION REQUIRED ON FIRE SERVICE AND BACKFLOW ASSEMBLY INSTALLATION PRIOR TO BACKFILL. CALL 425-487-4100 TO SCHEDULE.
11. INITIAL TEST OF THE DCVA IS REQUIRED TO ESTABLISHMENT OF WATER SERVICE. TEST RESULTS SHALL BE SENT TO WOODINVILLE WATER DISTRICT. ANNUAL TESTING OF THE DCVA BY A CERTIFIED BACKFLOW ASSEMBLY TESTER IS REQUIRED BY THE OWNER. TEST RESULTS SHALL BE SUBMITTED TO THE WOODINVILLE WATER DISTRICT.



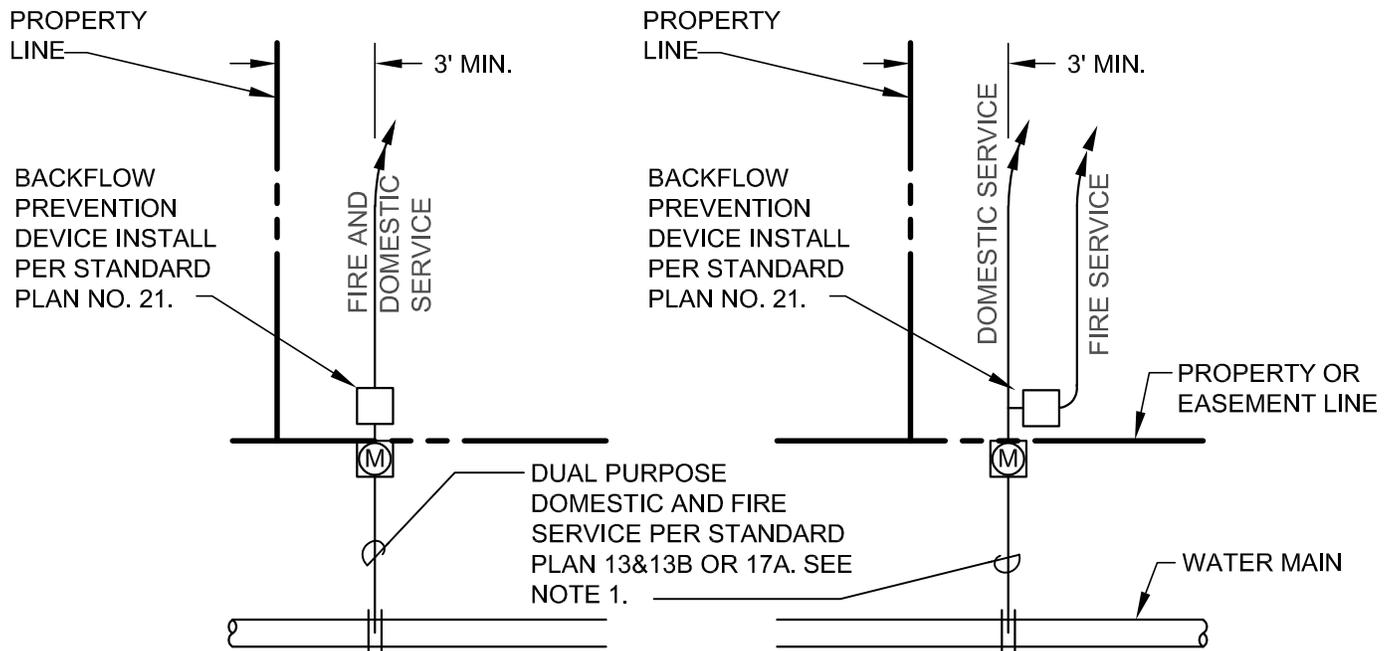
**Woodinville
Water District**

**1" SINGLE FAMILY
DOMESTIC /FIRE
/IRRIGATION
SERVICE CONNECTION**



**WATER STD.
PLAN NO. 14**

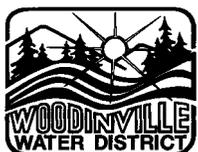
REVISION DATE
04/25



FLOW THRU SYSTEMS ◀ ▶ BRANCH SYSTEMS

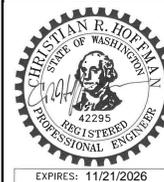
NOTES:

1. THIS STANDARD PLAN IS APPLICABLE FOR NEW OR UPDATED CONSTRUCTION THAT IS NOT PART OF A DEVELOPERS EXTENSION.
2. IT SHALL BE THE OWNER'S RESPONSIBILITY TO INSURE THAT THE SERVICE LINES AND METER SIZES ARE ADEQUATE TO SERVE THE DOMESTIC & FIRE SPRINKLER OR IRRIGATION SYSTEMS. REFER TO LARGER METER AND BACKFLOW DETAILS FOR SYSTEMS REQUIRING PIPE AND METER LARGER THAN 1".
3. INSTALL DUAL SERVICE IN ACCORDANCE WITH STANDARD PLAN 13 & 13B. BACK OF METER BOX SHALL BE PLACED AT THE RIGHT OF WAY LINE OR IN THE WATER EASEMENT IF SIDEWALK AT EDGE OF RIGHT OF WAY.
4. THE BACKFLOW PREVENTION DEVICE SHALL BE A DOUBLE CHECK ASSEMBLY AS APPROVED BY THE WASHINGTON STATE DEPARTMENT OF HEALTH OR AS DIRECTED BY THE DISTRICT. MINIMUM SIZE OF BACKFLOW DEVICE SHALL BE 1" OR MATCH METER SIZE.
5. NO CHEMICALS ARE ALLOWED IN THE FIRE SPRINKLER PIPING SYSTEM.
6. FIRE SPRINKLER SYSTEMS SHALL BE DESIGNED IN ACCORDANCE WITH THE LOCAL FIRE MARSHAL'S REQUIREMENTS AND HAVE THE FIRE MARSHAL APPROVAL.
7. NO METER OR DCVA BOXES ALLOWED IN DRIVEWAYS OR HARD SURFACED AREAS.
8. INSTALLATION OF THE BACKFLOW PREVENTER CREATES A CLOSED LOOP SYSTEM FOR YOUR PRIVATE WATER SYSTEM. CONSULT WITH THE LOCAL AUTHORITY OR A PLUMBER TO PREVENT ANY THERMAL EXPANSION PROBLEMS.
9. INSPECTION REQUIRED ON FIRE SERVICE AND BACKFLOW ASSEMBLY PRIOR TO BACKFILL. CALL 425-487-4100 TO SCHEDULE.
10. INITIAL TEST OF THE DCVA IS REQUIRED TO ESTABLISHMENT OF WATER SERVICE. TEST RESULTS SHALL BE SENT TO WOODINVILLE WATER DISTRICT. ANNUAL TESTING OF THE DCVA BY A CERTIFIED BACKFLOW ASSEMBLY TESTER IS REQUIRED BY THE OWNER. TEST RESULTS SHALL BE SUBMITTED TO THE WOODINVILLE WATER DISTRICT.



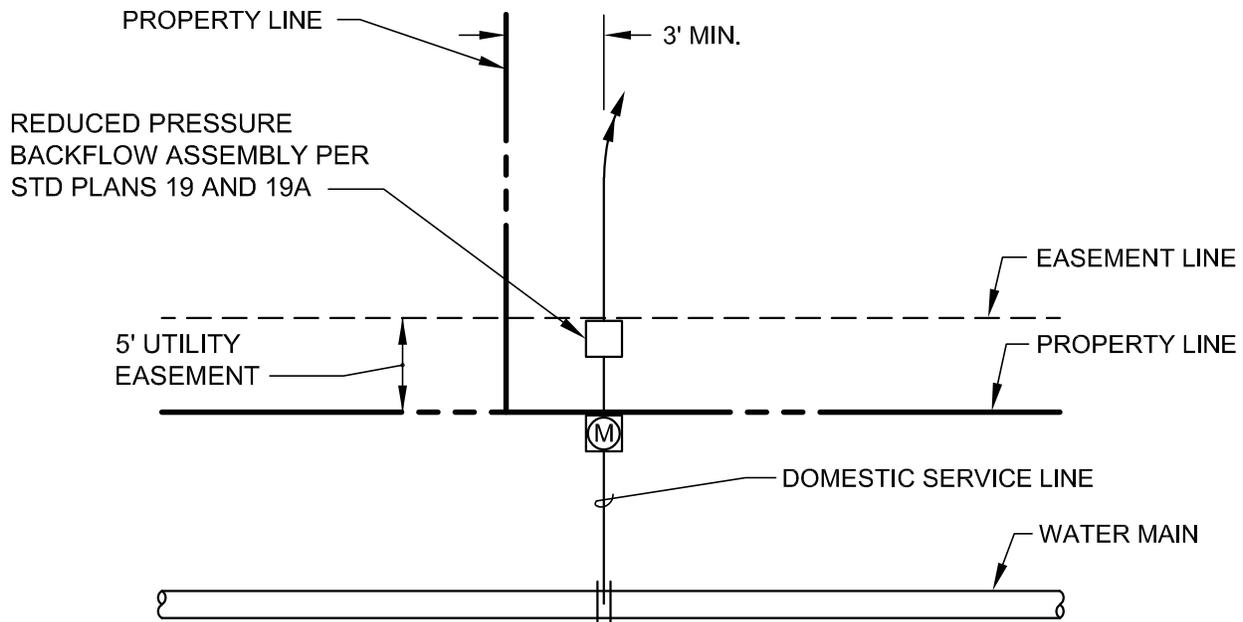
**Woodinville
Water District**

**1" SINGLE FAMILY DUAL
PURPOSE DOMESTIC
AND FIRE SERVICE
CONNECTION**



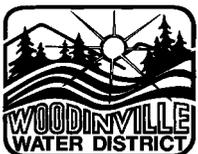
**WATER STD.
PLAN NO. 14A**

REVISION DATE
04/25



NOTES:

1. THIS STANDARD PLAN IS APPLICABLE FOR NEW OR UPDATED CONSTRUCTION THAT IS NOT PART OF A DEVELOPERS EXTENSION.
2. ALL NOTES FROM WATER STANDARD PLANS 19 AND 19A ARE APPLICABLE TO THIS INSTALLATION.
3. DOMESTIC SERVICE SHALL BE INSTALLED PER STANDARD PLAN 13 (1" SFR RESIDENTIAL SERVICE). METER BOXES SHALL BE PLACED AT THE RIGHT OF WAY LINE OR IN THE UTILITY EASEMENT AS SHOWN.
4. AFTER PROJECT ACCEPTANCE AND METER SET FEES HAVE BEEN PAID, THE METER WILL BE INSTALLED BY THE DISTRICT.
5. IT SHALL BE THE OWNER'S RESPONSIBILITY TO INSURE THAT THE SERVICE LINE AND METER SIZE ARE ADEQUATE TO SERVE THE DOMESTIC WATER SYSTEM REQUIREMENTS.
6. THE BACKFLOW PREVENTION DEVICE SHALL BE A REDUCED PRESSURE BACKFLOW ASSEMBLY AS APPROVED BY THE WASHINGTON STATE DEPARTMENT OF HEALTH OR AS DIRECTED BY THE DISTRICT.
7. PHYSICAL SEPARATION REQUIRED BETWEEN THE AUXILIARY SYSTEM AND THE DISTRICT'S DISTRIBUTION SYSTEM. INSPECTION OF THE PHYSICAL SEPARATION IS REQUIRED PRIOR TO ESTABLISHING WATER SERVICE.
8. INSTALLATION OF THE BACKFLOW PREVENTER CREATES A CLOSED LOOP SYSTEM FOR YOUR PRIVATE WATER SYSTEM. CONSULT WITH THE LOCAL AUTHORITY OR A PLUMBER TO PREVENT ANY THERMAL EXPANSION PROBLEMS.
9. THE BACKFLOW DEVICE SHALL BE INSTALLED BY THE OWNER. INSPECTION REQUIRED ON SERVICE LINE AND BACKFLOW ASSEMBLY INSTALLATION PRIOR TO BACKFILL. CALL 425-487-4100 TO SCHEDULE.
10. INITIAL TEST OF THE RPBA IS REQUIRED TO ESTABLISHMENT OF WATER SERVICE. TEST RESULTS SHALL BE SENT TO WOODINVILLE WATER DISTRICT. ANNUAL TESTING OF THE RPBA BY A CERTIFIED BACKFLOW ASSEMBLY TESTER IS REQUIRED BY THE OWNER. TEST RESULTS SHALL BE SUBMITTED TO THE WOODINVILLE WATER DISTRICT.



Woodinville
Water District

SINGLE FAMILY RESIDENCE W/
AUXILIARY WATER SUPPLY

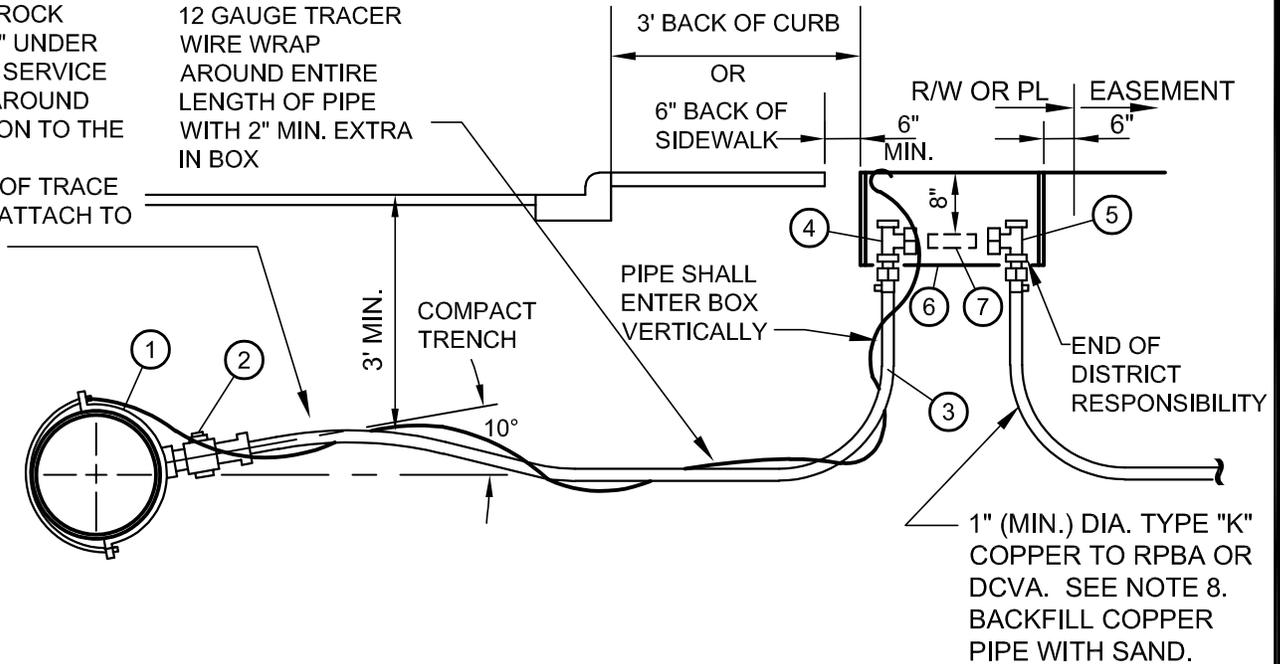


WATER STD.
PLAN NO. 15

REVISION DATE
04/25

PLACE SAND OR $\frac{5}{8}$ " CRUSHED ROCK BEDDING 6" UNDER AND OVER SERVICE LINE AND AROUND CONNECTION TO THE MAIN. BARE END OF TRACE WIRE AND ATTACH TO SADDLE.

12 GAUGE TRACER WIRE WRAP AROUND ENTIRE LENGTH OF PIPE WITH 2" MIN. EXTRA IN BOX



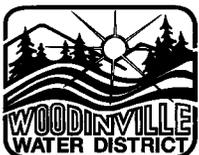
SEE STANDARD PLAN 13B FOR MATERIAL LIST

NOTE - CIRCLED NUMBERS ABOVE REFER TO MATERIALS LISTED ON STD PLAN 13B.

NOTES:

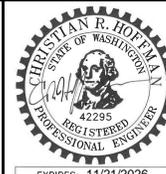
1. CONTRACTOR TO PROVIDE ALL MATERIALS.
2. TRACE WIRE MUST BE VISIBLE IN THE METER BOX.
3. NO SPLICES ALLOWED IN SERVICE LINES.
4. CORP STOP LOCATION SHALL BE OFFSET PRECISELY FOR GPS SURVEY.
5. LOCATE METER BOX OUT OF PAVING OR SIDEWALKS. METER BOX SHALL BE PERPENDICULAR TO THE SIDEWALK OR AS DIRECTED BY THE DISTRICT.
6. CONTRACTOR SHALL SCHEDULE SERVICE FLUSH WITH THE DISTRICT'S INSPECTOR. TAPPING COUPON TO BE PRESENTED TO THE DISTRICT INSPECTOR. SERVICES TO BE TESTED UNDER MAINLINE PRESSURE.
7. METER INSTALLATION BY THE DISTRICT. METER WILL NOT BE SET UNTIL PROJECT ACCEPTED.
8. THE BACKSIDE OF ALL SERVICES SHALL BE PLUMBED IN TYPE "K" COPPER AND HAVE BACKFLOW PROTECTION. DOMESTIC WATER SHALL CONNECT TO A RPBA PER STD. PLAN 19, 19A, 19B, AND STANDARD PLAN 20 (IF APPLICABLE).
9. IF FIRE OR IRRIGATION SERVICE IS REQUIRED, IT SHALL BE A SEPARATE DEDICATED SERVICE. IRRIGATION AND FIRE METERS SHALL CONNECT TO A DCVA PER STD PLAN 21 AND STANDARD PLAN 20 (IF APPLICABLE).
10. FIRE SERVICE SHALL BE SIZED ACCORDING TO FLOW REQUIREMENTS NEEDED.

NOTE: ALL BRASS COMPONENTS SHALL CONFORM TO THE LATEST VERSIONS OF NSF 61 AND ANSI/AWWA STANDARD C800 AND SHALL BE STAMPED/ EMBOSSED TO SHOW THE PRODUCT IS MADE FROM A NO LEAD ALLOY.



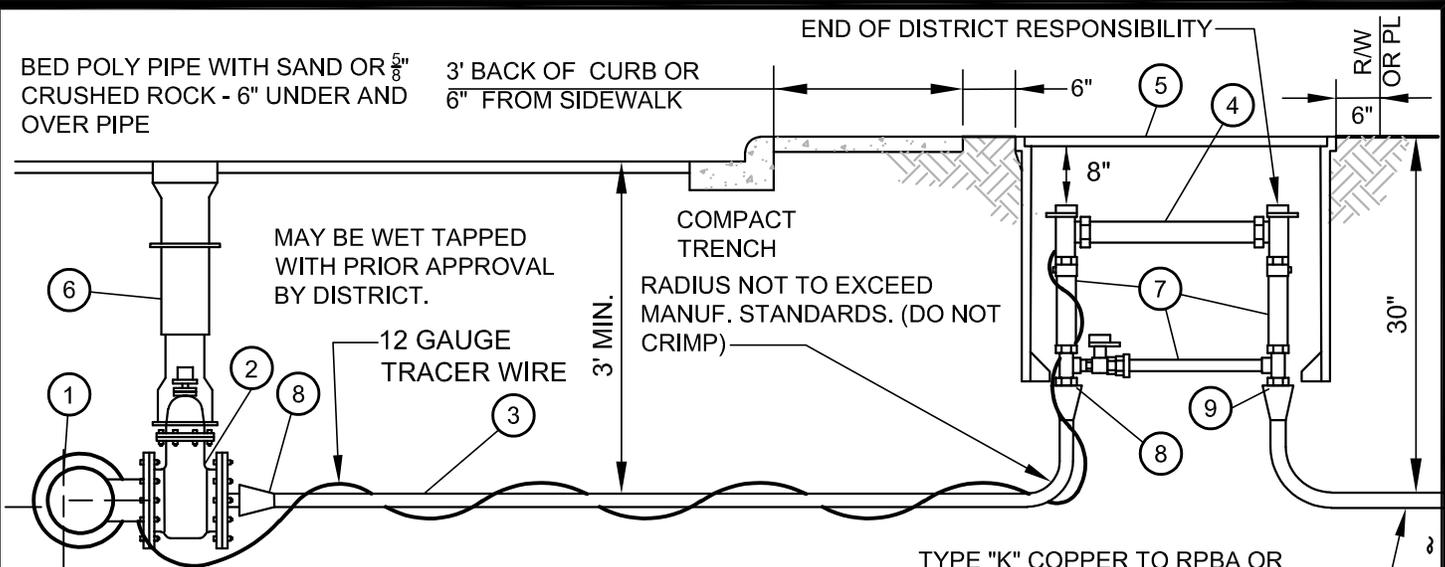
Woodinville
Water District

1" COMMERCIAL
SERVICE CONNECTION



WATER STD.
PLAN NO. 16

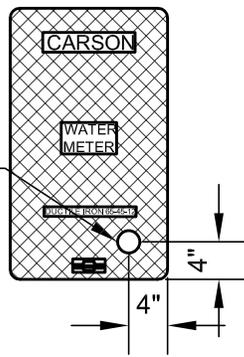
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04/25



MATERIAL LIST

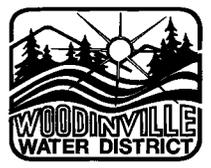
- ① DIA. x 4" TEE, MJ x FL
- ② 4" RESILIENT SEATED GATE VALVE WITH 4" BLIND FLANGE AND 1 1/2" OR 2" TAP (SEE GATE VALVES).
- ③ 1.5" OR 2" DRISCOPIPE ULTRA LINE 5100 HIGH DENSITY POLYETHYLENE SERVICE PIPE MEETING AWWA C901 REQUIREMENTS; PE 3408 MATERIAL, SDR7, PRESSURE CLASS 250 PSI, I.P.S. OR APPROVED EQUAL.
- ④ METER IDLER FURNISHED BY WWD
- ⑤ OLD CASTLE 1730BCF-18 ENCLOSURE WITH DUCTILE IRON LID (H2O LOADING) & 1 7/8" DIAM AMR HOLE AT LOCATION SHOWN. NO READER FLAP. NICOR POLYMER LID WITH SENSUS AMR ADAPTABILITY.
- ⑥ VALVE BOX - SEE STANDARD PLAN NO. 6
- ⑦ METER SETTER WITH VERTICAL BALL VALVE INLET AND OUTLET - WITH BYPASS
 1.5" FORD NO. VBB 86-12B-11-66-NL 2" FORD NO. VBB 87-12B-11-77-NL 2"
 1.5" MUELLER B-2427N X 12 MUELLER B-2427N X 12
- ⑧ 1.5" OR 2" PACK JOINT w/ FIP THREADS x 1.5" OR 2" IP POLY
 1.5" FORD C86-66-IDR7 W/ STIFFENER 2" FORD C86-77-IDR7 W/ STIFFENER
 1.5" MUELLER P-15428N W/ STIFFENER 2" MUELLER P-15428N W/ STIFFENER
 1.5" AY McDONALD 74753-33 W/ STIFFENER 2" AY McDONALD 74753-33 W/ STIFFENER
- ⑨ MUELLER 110 COMPRESSION OR APPROVED EQUAL

TYPE "K" COPPER TO RPBA OR DCVA. MIN. DIA. TO MATCH METER SIZE. SEE NOTE 7. BACKFILL COPPER PIPE WITH SAND.



NOTES:

- 1. CONTRACTOR TO PROVIDE ALL MATERIALS.
- 2. NO SPLICES ALLOWED IN SERVICE LINE.
- 3. LOCATE METERS OUT OF ASPHALT OR SIDEWALKS.
- 4. CONTRACTOR SHALL SCHEDULE SERVICE FLUSH WITH THE DISTRICT'S INSPECTOR. TAPPING COUPON (IF APPLICABLE) TO BE PRESENTED TO DISTRICT INSPECTOR. SERVICE TO BE TESTED IN SAME MANNER AS MAINLINE.
- 5. METER INSTALLATION BY THE DISTRICT. METER WILL NOT BE SET UNTIL PROJECT ACCEPTED.
- 6. TRACE WIRES MUST BE VISIBLE IN METER BOX.
- 7. THE BACKSIDE OF ALL SERVICES TO A RPBA PER WATER STANDARD. PLAN 19, 19A, 19B, AND STANDARD PLAN 20 (IF APPLICABLE). IRRIGATION AND FIRE METERS SHALL CONNECT TO A DCVA PER WATER STANDARD. PLAN 21 AND STANDARD PLAN 20 (IF APPLICABLE).
- 8. ALL BRASS COMPONENTS SHALL CONFORM TO THE LATEST VERSION OF NSF 61 AND ANSI/AWWA STANDARD C800 AND SHALL BE STAMPED/ EMBOSSED TO SHOW THE PRODUCT IS MADE FROM A NO LEAD ALLOY.



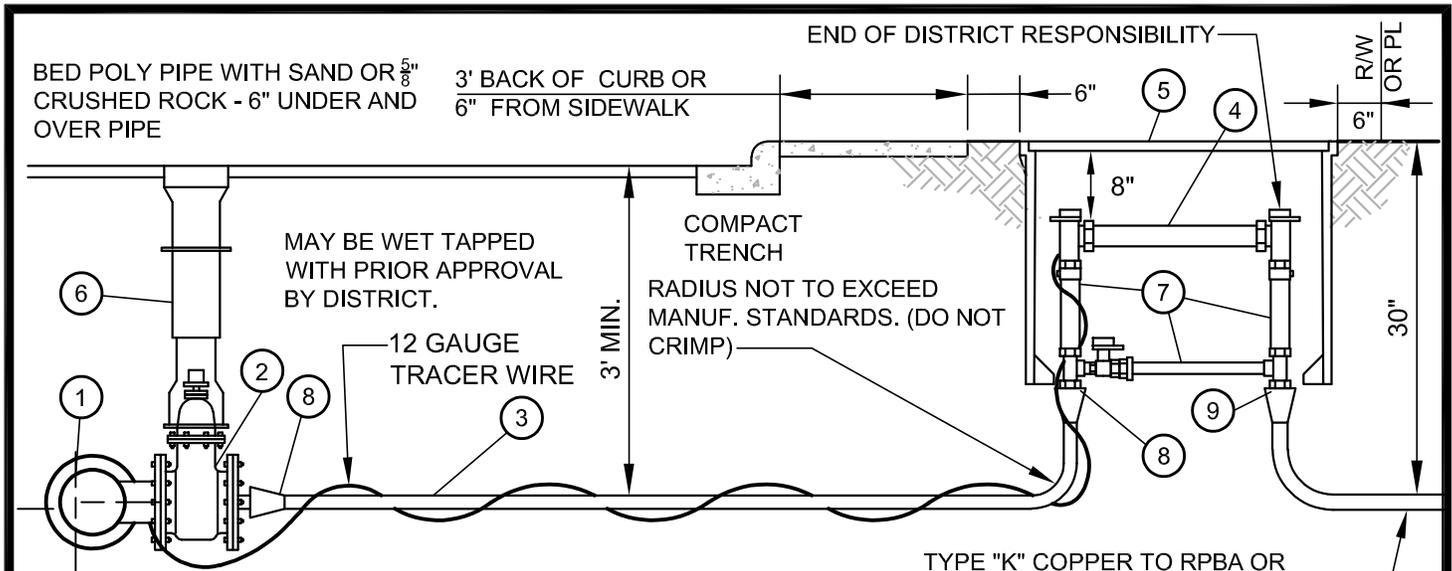
**Woodinville
Water District**

**1 1/2" AND 2" COMMERCIAL
SERVICE CONNECTION**



**WATER STD.
PLAN NO. 17**

REVISION DATE
04/25

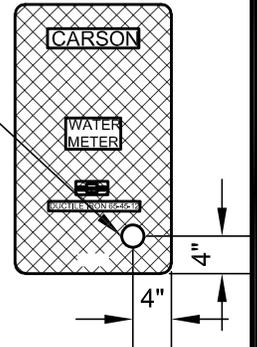


MATERIAL LIST

- ① DIA. x 4" TEE, MJ x FL
- ② 4" RESILIENT SEATED GATE VALVE WITH 4" BLIND FLANGE AND 1 1/2" TAP (SEE GATE VALVES).
- ③ 1.5" DRISCOPIPE ULTRA LINE 5100 HIGH DENSITY POLYETHYLENE SERVICE PIPE MEETING AWWA C901 REQUIREMENTS; PE 3408 MATERIAL, SDR7, PRESSURE CLASS 250 PSI, I.P.S. OR APPROVED EQUAL.
- ④ METER IDLER FURNISHED BY WWD
- ⑤ OLD CASTLE 1730BCF-18 ENCLOSURE WITH DUCTILE IRON LID (H2O LOADING) & 1 7/8" DIAM AMR HOLE AT LOCATION SHOWN. NO READER FLAP. NICOR POLYMER LID WITH SENSUS AMR ADAPTABILITY.
- ⑥ VALVE BOX - SEE STANDARD PLAN NO. 6
- ⑦ METER SETTER WITH VERTICAL BALL VALVE INLET AND OUTLET
1.5" MUELLER B-2426-00N X 12 OR APPROVED EQUAL. NO BYPASS ALLOWED.
- ⑧ 1.5" PACK JOINT w/ FIP THREADS x 1.5" IP POLY
1.5" FORD C86-66-IDR7 W/ STIFFENER 1.5" AY McDONALD 74753-33 W/ STIFFENER
1.5" MUELLER P-15428N W/ STIFFENER
- ⑨ MUELLER 110 COMPRESSION OR APPROVED EQUAL

TYPE "K" COPPER TO RPBA OR DCVA. MIN. DIA. TO MATCH METER SIZE. SEE NOTE 7. BACKFILL COPPER PIPE WITH SAND.

1 7/8" DIAM AMR HOLE



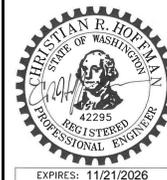
NOTES:

- 1. CONTRACTOR TO PROVIDE ALL MATERIALS.
- 2. NO SPLICES ALLOWED IN SERVICE LINE.
- 3. LOCATE METERS OUT OF ASPHALT OR SIDEWALKS.
- 4. CONTRACTOR SHALL SCHEDULE SERVICE FLUSH WITH THE DISTRICT'S INSPECTOR. TAPPING COUPON (IF APPLICABLE) TO BE PRESENTED TO DISTRICT INSPECTOR. SERVICE TO BE TESTED IN SAME MANNER AS MAINLINE.
- 5. METER INSTALLATION BY THE DISTRICT. METER WILL NOT BE SET UNTIL PROJECT ACCEPTED.
- 6. TRACE WIRES MUST BE VISIBLE IN METER BOX.
- 7. THE BACKSIDE OF ALL SERVICES TO A RPBA PER WATER STANDARD PLAN 19 AND 19A. IRRIGATION AND FIRE METERS SHALL CONNECT TO A DCVA PER WATER STANDARD PLAN 21.
- 8. ALL BRASS COMPONENTS SHALL CONFORM TO THE LATEST VERSION OF NSF 61 AND ANSI/AWWA STANDARD C800 AND SHALL BE STAMPED/ EMBOSSED TO SHOW THE PRODUCT IS MADE FROM A NO LEAD ALLOY.



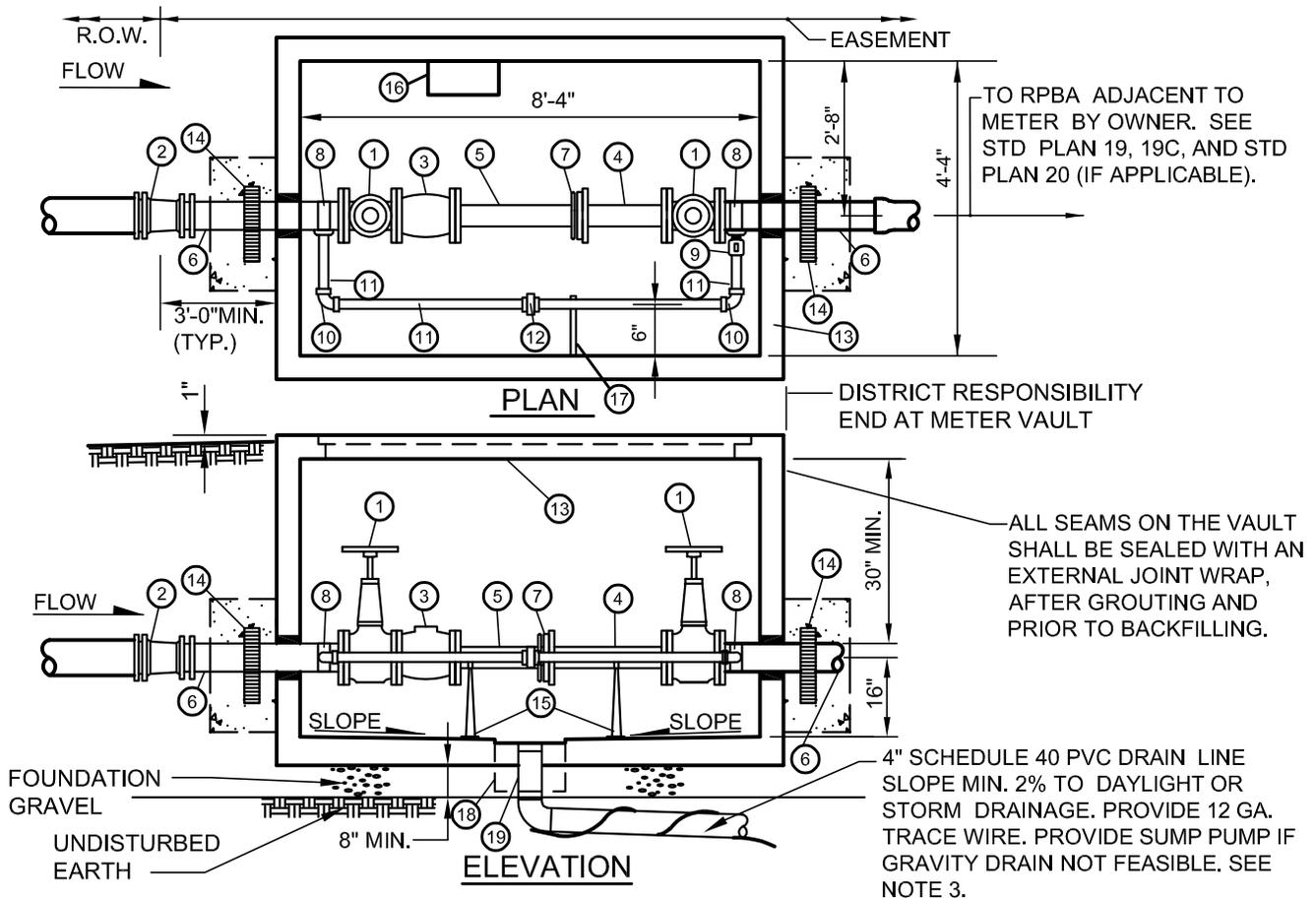
Woodinville
Water District

SINGLE FAMILY
1 1/2" DIAMETER
SERVICE INSTALLATION



WATER STD.
PLAN NO. 17A

REVISION DATE
04/25

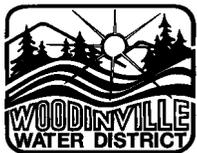


MATERIAL LIST FOR 3" AND 4" METER

- | | |
|---|--|
| <ol style="list-style-type: none"> 1. 4"x3" G.V., FLxFL 2. 4"x3" REDUCER, MJxMJ (INSTALL FOR 3") 3. BADGER PLATE STRAINER 4. METER IDLER-PROVIDED BY DISTRICT
SEE NOTES 4 & 5 5. FLxPE SPOOL (LENGTH TO FIT) 6. FLxPE SPOOL 7. EBBA IRON SERIES 2100 MEG-A-FLANGE 8. FORD 202BS OR APPROVED EQUAL 1.5" SADDLE 9. 1.5" BALL VALVE W/ LOCK CAP (MIPxFIP) FOR B81-666-W OR APPROVED EQUAL 10. 1.5"x90° BEND W/ I.P. THREADS 11. 1.5" BRASS PIPING 12. 1.5" BRASS UNION | <ol style="list-style-type: none"> 13. UTILITY VAULT 44840LA W/ DUAL LOCKING STEEL COVERS 4484-TL-2-332P W/ RECESSED PADLOCK HASP OR APPROVED EQUAL. CONTRACTOR SHALL VERIFY INTERIOR VAULT DIMENSIONS WILL ACCOMMODATE ACTUAL MATERIALS USED. DRILL 1 7/8" FOR AMR IN LID AT LOCATION DESIGNATED BY THE DISTRICT. 14. 2'x2'x8" THICK FORMED CONCRETE BLOCKING WITH LOCKING FOLLOWER RING. 15. ADJUSTABLE PIPE SUPPORT 16. ACCESS LADDER 17. PIPE BRACKET 18. PROVIDE 12" DEEP SUMP FOR PUMP IF GRAVITY DRAIN UNAVAILABLE. GRAVITY DRAINS SHALL HAVE A SUMP SCREEN. 19. PROVIDE SUMP PUMP IF GRAVITY DRAIN UNAVAILABLE. |
|---|--|

NOTES:

1. VAULT LOCATION SHOWN IS IN A LANDSCAPED OR UNIMPROVED AREA. INSTALLATION IN ASPHALT AREAS WILL NOT BE ALLOWED WITHOUT DISTRICT APPROVAL.
2. ALL MJ JOINTS SHALL BE MEG-A-LUGED.
3. INSTALL SUMP PUMP WITH ELECTRIC SERVICE AND DISCHARGE PIPING AS SHOWN IN STANDARD DETAIL 25 (FIRE SPRINKLER SERVICE CONNECTION) IF GRAVITY DRAIN UNAVAILABLE.
4. 60 DAY LEAD TIME NEEDED TO ORDER A 3" AND LARGER METER.
5. AFTER BOARD ACCEPTANCE, THE DEVELOPER CONTRACTOR SHALL PICK UP THE METER AT THE DISTRICT TO INSTALL IT.
6. CLEAN ALL CONSTRUCTION DEBRIS FROM THE VAULT FLOOR, WALLS, LID, AND INSTALLED MATERIALS.



**Woodinville
Water District**

**3" AND 4" WATER
METER INSTALLATIONS**

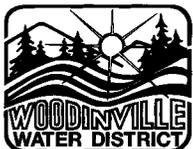


**WATER STD.
PLAN NO. 18**

REVISION DATE
04/25

RPBA/RPDA INSTALLATION REQUIREMENTS:

1. ALL NOTES FROM WATER STANDARD PLAN 19 ARE APPLICABLE TO STD PLANS 19A, 19B, AND 19C.
2. RPBA/RPDA SHALL BE STATE APPROVED ASSEMBLIES DESIGNED FOR PREVENTION OF BACK SIPHONAGE AND BACK PRESSURE.
3. BACKFLOW SIZE AND FLOW REQUIREMENTS SHALL BE DETERMINED BY THE DEVELOPER'S ENGINEER PRIOR TO ISSUANCE OF APPROVED FOR CONSTRUCTION PLANS.
4. LOCATION SHALL BE AS SHOWN ON THE APPROVED PLANS OR AS DIRECTED BY THE DISTRICT.
5. OWNER SHALL FURNISH, INSTALL, AND MAINTAIN THE RPBA/RPDA AND ALL OTHER APPURTENANCES.
6. DISTRICT WILL INSPECT BACKFLOW ASSEMBLY INSTALLATION. INITIAL TEST OF THE RPBA/RPDA ASSEMBLIES IS REQUIRED PRIOR TO ESTABLISHMENT OF WATER SERVICE. TEST RESULTS SHALL BE SENT TO WOODINVILLE WATER DISTRICT.
7. ANNUAL TESTING OF RPBA/RPDA BY A CERTIFIED BACKFLOW ASSEMBLY TESTER REQUIRED BY OWNER. TEST RESULTS SHALL BE SUBMITTED TO THE WOODINVILLE WATER DISTRICT.
8. PROVIDE DISTRICT APPROVED JACK SCREW TYPE SUPPORTS FOR ASSEMBLIES GREATER THAN 1" DIAMETER.
9. RPBA/RPDA SHALL BE INSTALLED HORIZONTAL ONLY. CENTER BACKFLOW ASSEMBLY IN BOTH DIRECTIONS OF THE BOX.
10. WATERLINE SHALL BE DISINFECTED, FLUSHED, AND PRESSURE TESTED PRIOR TO INSTALLING BACKFLOW ASSEMBLY.
11. BACKFLOW ASSEMBLY SHALL BE PROTECTED FROM FREEZING AND FLOODING.
12. ALL DI FITTINGS BELOW FINISH GRADE SHALL BE RESTRAINED. ALL DI FITTINGS ABOVE FINISH GRADE SHALL BE FLANGED.
13. "HOT BOX" ENCLOSURE OR APPROVED EQUAL INSTALLATION IS REQUIRED. DEVELOPER/CONTRACTOR TO VERIFY/PROVIDE REQUIRED SIZE BASED ON THE CLEARANCES PROVIDED ON THE STANDARD PLANS.
14. THE ENCLOSURE SHALL HAVE A MINIMUM CLEAR DISTANCE OF 3' FROM ALL OTHER STRUCTURES AND SHALL NOT BE SET IN HARDSCAPES.
15. UNDERGROUND POWER CONDUIT SHALL BE INSTALLED FROM OWNERS ELECTRICAL PANEL TO THE ENCLOSURE LOCATION PER ELECTRICAL PERMIT REQUIREMENTS AND PRIOR TO POURING THE CONCRETE PAD.
16. ENCLOSURE SHALL BE SET ON A 4" THICK CONCRETE SLAB (3000PSI MIN AND RATED FOR OUTDOOR USE). PAD SHALL EXTEND 5" BEYOND ENCLOSURE (IN ALL DIRECTIONS) AND 2" ABOVE FINISH GRADE. CONCRETE SLAB MUST SLOPE TOWARDS ENCLOSURE DRAIN.
17. CONCRETE PAD SHALL BE REINFORCED WITH 6"x6" W2.9xW2.9 WELDED WIRE FABRIC (WWF).
18. PVC SLEEVES SHALL BE INSTALLED PRIOR TO POURING THE CONCRETE PAD.
19. CONTRACTOR SHALL CONNECT THE FOUR CORNERS OF THE ENCLOSURE INTO THE CONCRETE SLAB USING 3/8"x2" EXPANSION ANCHORS.
20. DRAIN SIZE SHALL BE SIZED IN ACCORDANCE WITH AWWA CROSS CONNECTION CONTROL MANUAL FIGURE 6-8.
21. RPBA/RPDA SHALL NOT BE INSTALLED INSIDE BUILDINGS UNLESS SPECIAL PERMISSION IS GIVEN BY THE DISTRICT.
22. DUAL RPBA REQUIRED FOR MULTI FAMILY HOUSING WITH 5 OR MORE UNITS, ANY COMMERCIAL BUILDING REQUIRING 24-HOUR WATER SERVICE, AND CRITICAL INFRASTRUCTURE BUILDINGS (HOSPITALS, EMERGENCY RESPONSE ORGANIZATIONS, ETC.)



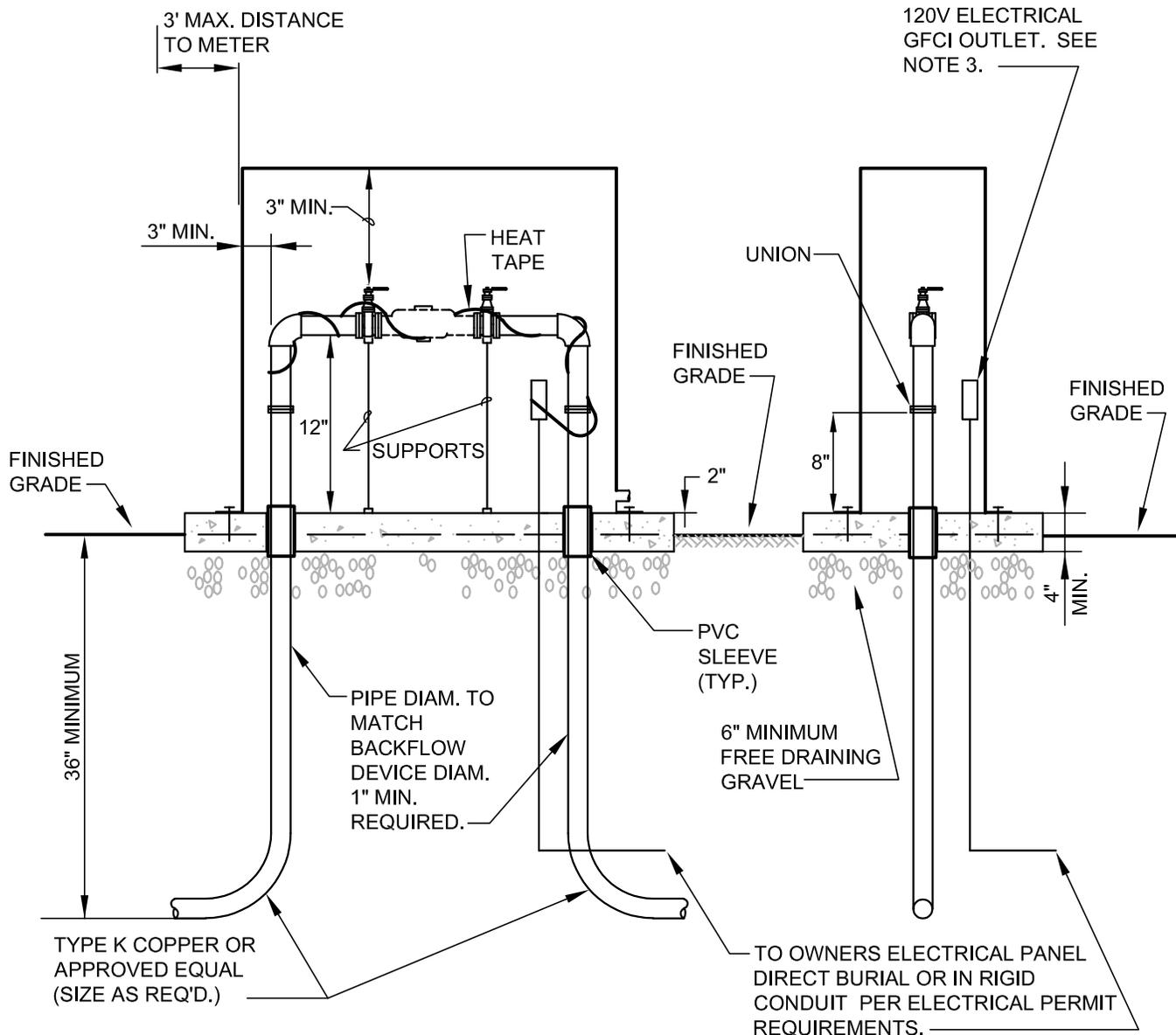
**Woodinville
Water District**

RPBA/RPDA
GENERAL NOTES



WATER STD.
PLAN NO. (19)

REVISION DATE
04/25



NOTES:

1. ALL NOTES FROM WATER STANDARD PLAN 19 APPLY TO THIS DETAIL.
2. RPBA/RPDA MUST CONNECT IMMEDIATELY ADJACENT TO WATER METER.
3. 120V ELECTRICAL GFCI OUTLET FOR HEAT TAPE REQUIRED. INSTALL AWAY FROM RPBA/RPDA DISCHARGE. INSTALL HEAT TAPE FOR FREEZE PROTECTION.
4. ALL FITTINGS AND BRASS COMPONENTS SHALL CONFORM TO THE LATEST VERSION OF NSF 61 AND ANSI/AWWA STANDARD C800 AND SHALL BE STAMPED/EMBOSSED TO SHOW THE PRODUCT IS MADE FROM A NO LEAD ALLOY.



**Woodinville
Water District**

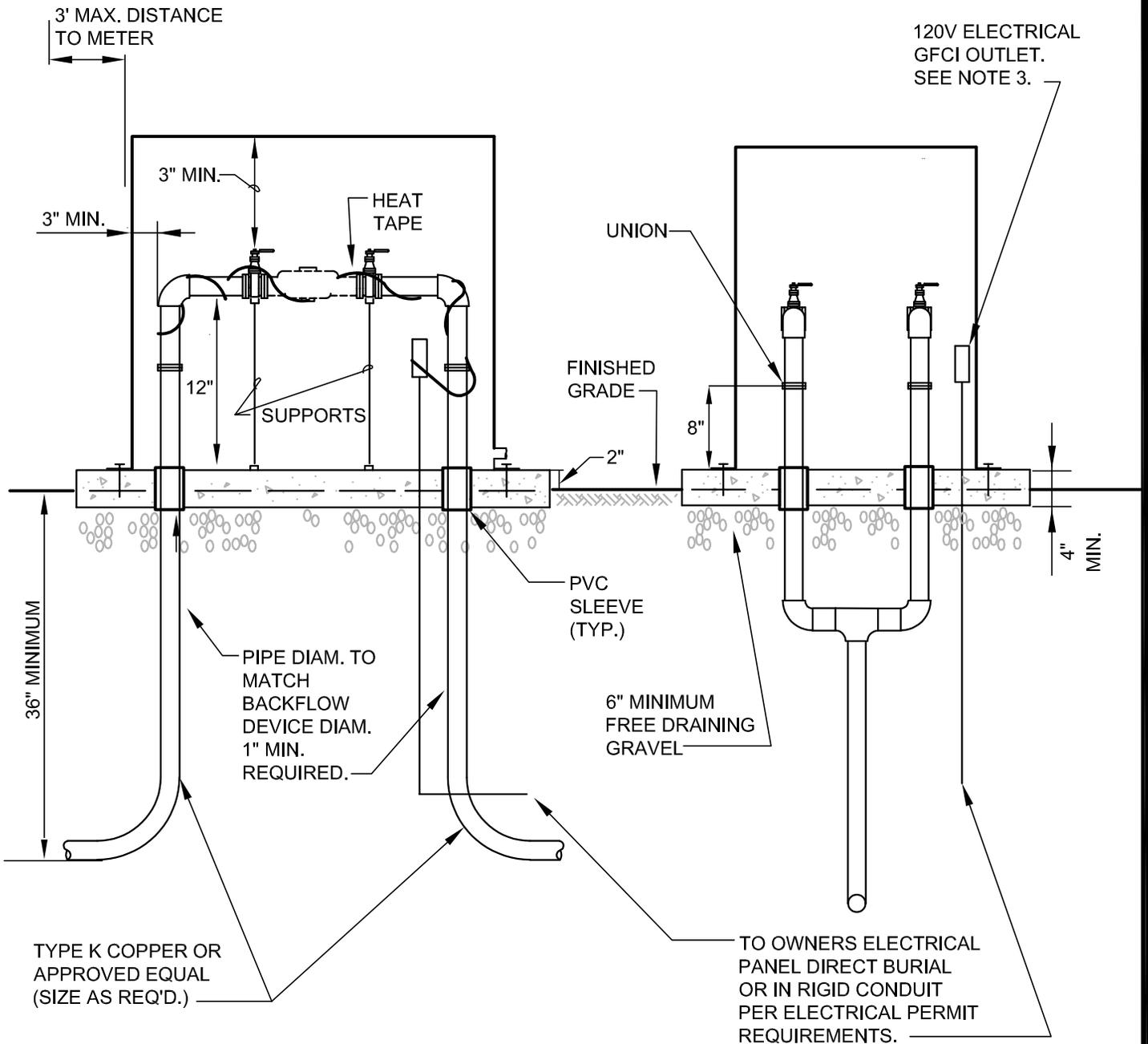
**2" AND SMALLER
REDUCED PRESSURE
BACKFLOW ASSEMBLY**



EXPIRES: 11/21/2026

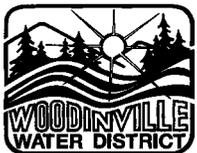
**WATER STD.
PLAN NO. 19A**

REVISION DATE
04/25



NOTES:

1. ALL NOTES FROM WATER STANDARD PLAN 19 AND 19A APPLY TO THIS DETAIL.
2. RPBA/RPDA MUST CONNECT IMMEDIATELY ADJACENT TO WATER METER.
3. 120V ELECTRICAL GFCI OUTLET FOR HEAT TAPE REQUIRED. INSTALL AWAY FROM RPBA/RPDA DISCHARGE. INSTALL HEAT TAPE FOR FREEZE PROTECTION.
4. ALL FITTINGS AND BRASS COMPONENTS SHALL CONFORM TO THE LATEST VERSION OF NSF 61 AND ANSI/AWWA STANDARD C800 AND SHALL BE STAMPED/EMBOSSED TO SHOW THE PRODUCT IS MADE FROM A NO LEAD ALLOY.



Woodinville
Water District

2" AND SMALLER DUAL
REDUCED PRESSURE
BACKFLOW ASSEMBLY



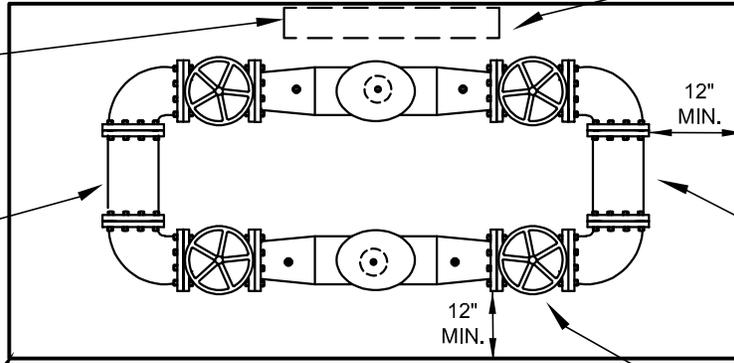
WATER STD
PLAN NO. 19B

REVISION DATE
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DUAL INSTALLATION-PLAN VIEW

1500W 120V HEATER

3" OR 4" DI
TEE (FL)



UNDERGROUND
POWER
CONDUIT
PROVIDED BY
THE
DEVELOPER.

SEE NOTE 4

SINGLE INSTALLATION-PROFILE VIEW

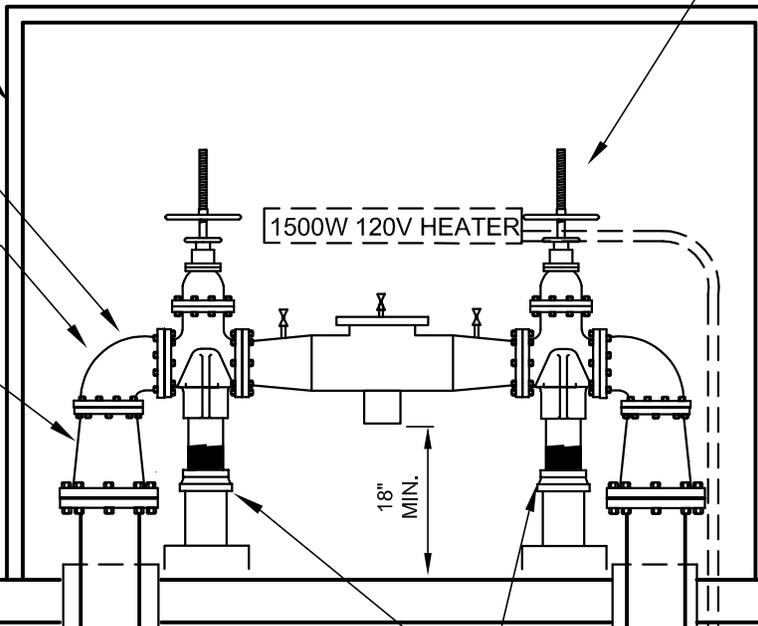
"HOT BOX"
ENCLOSURE

RESILIENT WEDGE
OS&Y GATE VALVES
REQUIRED.

SEE NOTE 4

3" OR 4" 90° BEND (FL)

4"x3" REDUCER
FOR 3"
INSTALLATIONS.



UNDERGROUND
POWER
CONDUIT
PROVIDED BY
THE
DEVELOPER.

4" D.I. CL 52 FROM
METER VAULT.

JACK SCREW
PIPE SUPPORTS

PROVIDE 6" PVC
SLEEVE THROUGH
SLAB

TO
BLDG.

4" 90° BEND (MJ)

1. ALL APPLICABLE NOTES FROM STD PLAN 19 APPLY TO 2.5" AND LARGER SINGLE/DUAL RPBA/RPDA INSTALLATION.
2. DUAL RPBA SIZING BASED ON FLOW REQUIREMENTS DETERMINED BY THE DEVELOPER'S ENGINEER.
3. INSTALLATION CLEARANCES APPLY FOR SINGLE AND DUAL RPBA. DEVELOPER REQUIRED TO SIZE HOT BOX ACCORDINGLY.
4. ALL ABOVE GROUND FITTINGS REQUIRED TO BE FLANGED.



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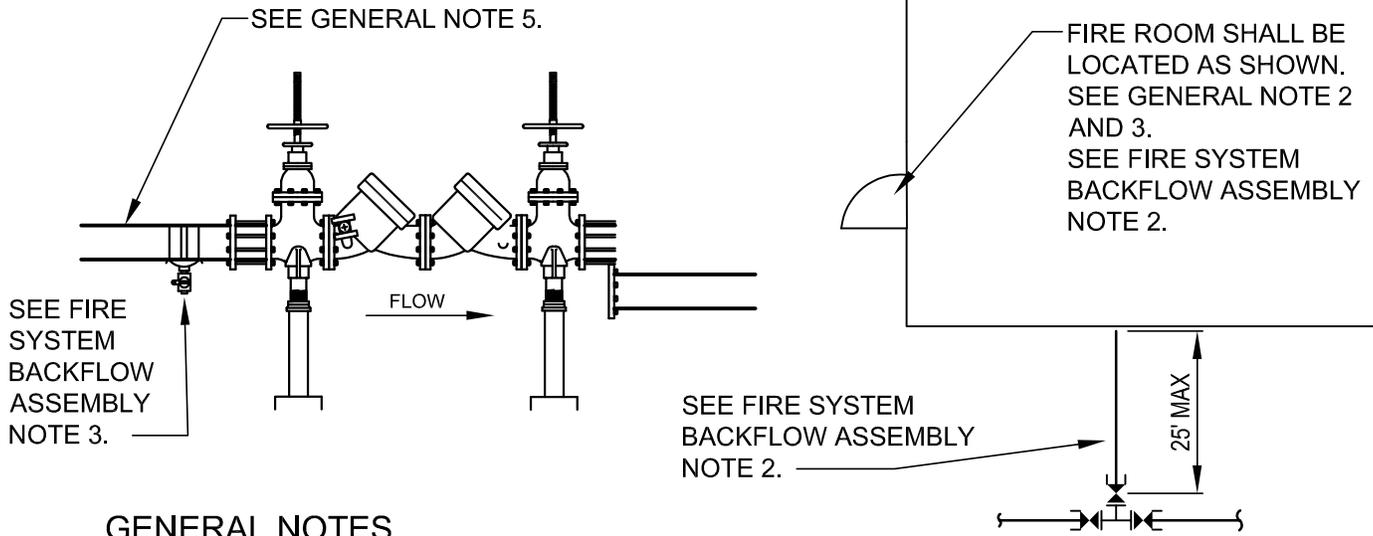
2.5" AND LARGER
SINGLE/DUAL
REDUCED PRESSURE
BACKFLOW ASSEMBLY



**WATER STD
PLAN NO. 19C**

REVISION DATE
04/25

EXPIRES: 11/21/2026



GENERAL NOTES

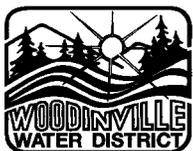
1. BACKFLOW ASSEMBLIES **ALLOWED INSIDE A BUILDING ONLY WITH SPECIAL PERMISSION** FROM THE WOODINVILLE WATER DISTRICT.
2. DISTRICT REQUIRES 24-HOUR ACCESS TO BACKFLOW ASSEMBLIES INSTALLED INSIDE A BUILDING. INDEMNITY AND RELEASE FOR RESTRICTED ACCESS TO BACKFLOW ASSEMBLIES SHALL BE COMPLETED PRIOR TO CONSTRUCTION.
3. BACKFLOW ASSEMBLIES SHALL BE ACCESSIBLE FROM THE OUTSIDE GROUND LEVEL OF THE BUILDING. BASEMENTS AND/OR SUBTERRANEAN PARKING GARAGES ARE NOT AN ACCEPTABLE LOCATION.
4. INITIAL TEST OF THE BACKFLOW ASSEMBLY IS REQUIRED PRIOR TO ESTABLISHMENT OF WATER SERVICE. TEST RESULTS SHALL BE SENT TO WOODINVILLE WATER DISTRICT. ANNUAL TESTING OF BACKFLOW ASSEMBLIES BY A CERTIFIED BACKFLOW ASSEMBLY TESTER REQUIRED BY OWNER. TEST RESULTS SHALL BE SENT TO THE WOODINVILLE WATER DISTRICT.
5. ALL PIPES LOCATED INSIDE THE BUILDING SHALL BE LABELED. LABELING SHALL INCLUDE DIRECTION OF FLOW AND TYPE OF SERVICE (COMMERCIAL/RESIDENTIAL/FIRE). LABEL SHALL BE PERMANENTLY ATTACHED TO THE PIPING, PRIOR TO THE BACKFLOW ASSEMBLY.

FIRE SYSTEM BACKFLOW ASSEMBLY

1. ALL APPLICABLE DETAILS FROM STANDARD PLANS 21, 22, 25 AND 25A APPLY TO FIRE SYSTEM BACKFLOW ASSEMBLY INSTALLATIONS INSIDE A BUILDING.
2. MAXIMUM DISTANCE FROM MAINLINE TEE TO THE BUILDING IS 25'. ANY DISTANCE OVER 25' MUST RECEIVE SPECIAL PERMISSION FROM WOODINVILLE WATER DISTRICT.
3. FIRE SYSTEM BACKFLOW ASSEMBLIES SHALL HAVE A FLUSHING PORT. FLUSHING PORT SHALL BE INSTALLED IN THE BUILDING, BEFORE THE BACKFLOW ASSEMBLY. FLUSHING PORT SHALL BE ROMAC 202S STAINLESS STEEL DOUBLE STRAP WITH A 2" CURB STOP WITH LOCKING HASP TAPPED ON THE BOTTOM OF THE PIPE FOR FLUSHING.

RPBA ASSEMBLY

1. ALL APPLICABLE DETAILS FROM STANDARD PLAN 19, 19A, 19B, AND 19C APPLY TO RPBA INSTALLATION INSIDE A BUILDING.
2. RPBA/RPDA SIZING SHALL BE BASED ON FLOW REQUIREMENTS DETERMINED BY THE DEVELOPER'S ENGINEER.
3. FLOOR DRAINS SHALL BE SIZED ADEQUATELY TO PREVENT FLOODING.



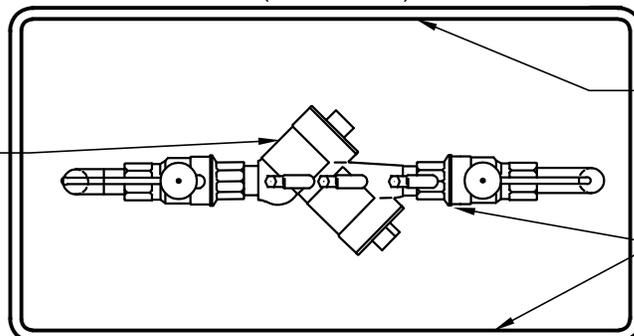
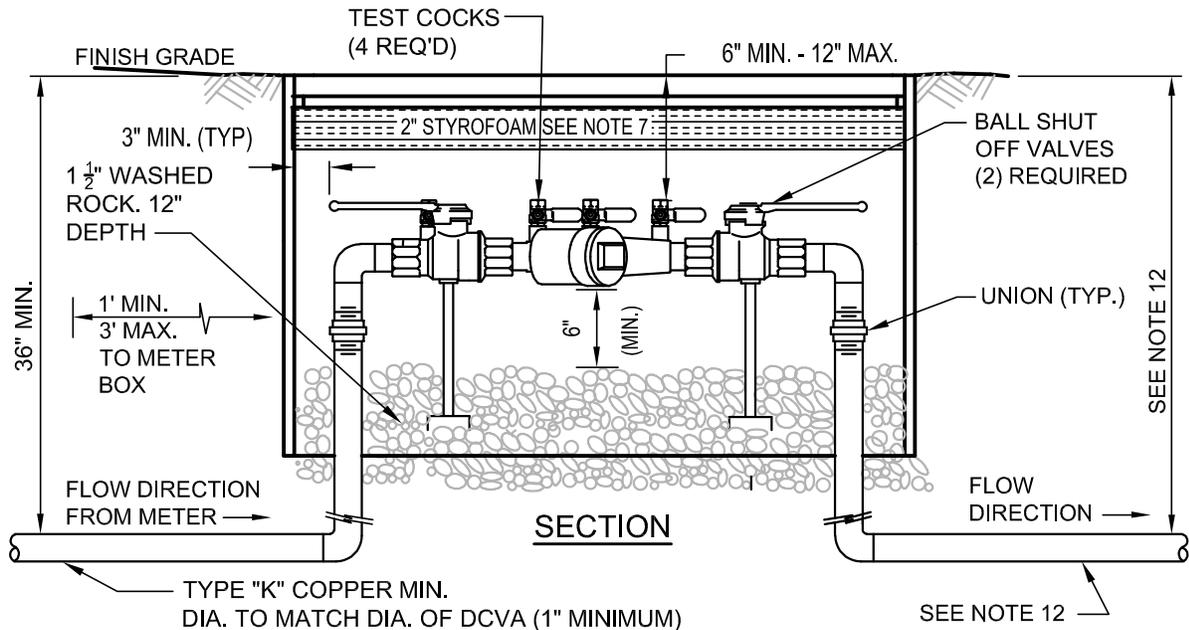
Woodinville
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BACKFLOW ASSEMBLY
INSIDE BUILDING



WATER STD.
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NOTES:

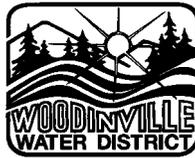
PLAN

1. APPROVED DOUBLE CHECK VALVE ASSEMBLY TO BE INSTALLED HORIZONTAL WITH THE GROUND.
2. DESIGNED FOR BACK SIPHONAGE, BACK PRESSURE AND LOW HEALTH HAZARDS.
3. SERIAL NUMBER PLATE SHALL BE INSTALLED FACING UPWARD. TEST COCKS TO FACE OUTWARDS OR UPWARDS FROM ASSEMBLY.
4. THE DCVA MAYBE INSTALLED BELOW GROUND PROVIDED ALL OF THE CLEARANCES ARE MET.
5. DO NOT INSTALL IN AN AREA SUBJECT TO FLOODING.
6. DCVA MUST BE ACCESSIBLE.
7. DCVA MUST BE PROTECTED FROM FREEZING CONDITIONS. FORM FIT 2" BELOW GRADE QUALITY STYROFOAM BELOW LID.
8. THE BACKFLOW ASSEMBLY MUST BE A WA. STATE APPROVED MODEL.
9. THE DISTRICT WILL INSPECT THE DCVA INSTALLATION. INITIAL TEST OF THE DCVA IS REQUIRED PRIOR TO ESTABLISHMENT OF WATER SERVICE. TEST RESULTS SHALL BE SENT TO THE WOODINVILLE WATER DISTRICT. ANNUAL TESTING OF THE DCVA BY A CERTIFIED BACKFLOW TESTER IS REQUIRED BY THE OWNER. TEST RESULTS SHALL BE SUBMITTED TO THE WOODINVILLE WATER DISTRICT.
10. FLUSH LINES PRIOR TO INSTALLATION OF BACKFLOW PREVENTER.
11. SUPPORTS REQUIRED ON 2" AND LARGER DCVA ASSEMBLIES.
12. COVER & TYPE OF PIPE FOR FIRELINES SHALL BE AS REQUIRED BY THE JURISDICTIONAL FIRE AUTHORITY.

WATER BOX REQUIREMENTS	
DCVA SIZE	OLD CASTLE ENCLOSURE NO.
1"	1324BCF W/ DI LID
1.5"	1527BCF W/ DI LID
2"	1730BCF W/ DI LID

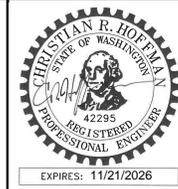
WATER BOX NOTES

1. CLEARANCES SHOWN ABOVE MUST BE MET OR BOX WILL NEED TO BE UP-SIZED.
2. BOXES & LIDS SHALL BE EQUIPPED WITH THE BOLT DOWN FEATURE. DO NOT INSTALL READER FLAP.



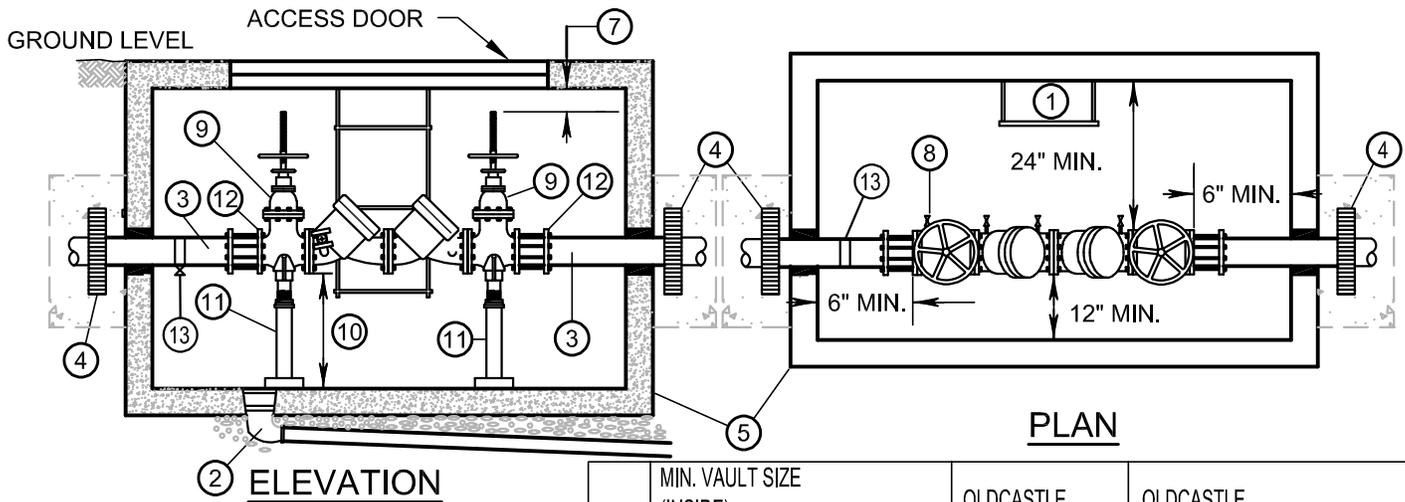
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**DOUBLE CHECK VALVE
ASSEMBLY 2" AND SMALLER**



**WATER STD.
PLAN NO. (21)**

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SIZE	MIN. VAULT SIZE (INSIDE)			OLDCASTLE CO. MODEL	OLDCASTLE COVER
	W	L	H		
3"	3'-8"	4'-8"	3'-3"	644-LA	64-2-332P
4"	3'-10"	5'-3"	3'-8"	575-LA	57TL-2-332P
6"	4'-0"	6'-6"	4'-5"	577-LA	57TL-20332P
8"	4'-5"	7'-8"	5'-3"	4484-LA	4484-TL2-332P
10"	4'-8"	8'-8"	6'-1"	5106-LA	5106-TL3-332

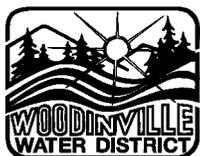
LEGEND

CONTRACTOR TO VERIFY VAULT SIZE IS ADEQUATE.

- ① ONE GALVANIZED STEEL LADDER TO BE SECURED TO VAULT.
- ② 4" SCHD 40 PVC DRAIN 2% MIN. SLOPE TO STORM BASIN. PROVIDE 12 GAUGE TRACE WIRE. SUMP PUMP REQUIRED IF DRAIN NOT FEASIBLE.
- ③ CLASS 52 DUCTILE IRON PIPE REQUIRED. SIZE AS REQUIRED (4" DIA. MIN.). FOR 3", PLACE REDUCER OUTSIDE OF VAULT. ALL PIPE AND FITTINGS SHALL BE RESTRAINED.
- ④ 2' x 2' x 8" THICK FORMED CONCRETE BLOCKING WITH LOCKING FOLLOWER RING.
- ⑤ PRECAST CONCRETE VAULT WITH A MINIMUM OF TWO, 3'x3' DIAMOND PLATE DOORS RATED FOR H2O LOADING. MARKED "WATER". VAULT SHALL BE EQUAL TO OLDCASTLE MODEL LISTED IN TABLE ABOVE.
- ⑥ TRAFFIC RATED NON-SHRINK GROUT SHALL BE USED IN ALL VAULT PENETRATIONS. EXTERIOR SEAMS TO BE SEALED WITH EXTERIOR JOINT WRAP, AFTER GROUTING AND PRIOR TO BACKFILL.
- ⑦ A MINIMUM OF 3" BETWEEN THE UNDERSIDE OF THE LID, OR VAULT, AT THE HIGHEST POINT OF VALVING AND ASSEMBLY IS REQUIRED.
- ⑧ THE DCVA MUST BE EQUIPPED WITH (4) RESILIENT SEATED TEST COCKS WITH PLUGS INSTALLED.
- ⑨ THE DCVA MUST ALSO BE EQUIPPED WITH (2) RESILIENT WEDGE O.S.&Y. SHUT OFF GATE VALVES WITH HAND WHEELS. GATE VALVES SHALL CONFORM TO AWWA C-509 OR C-515.
- ⑩ A MINIMUM OF A 12" CLEARANCE IS REQUIRED BETWEEN THE LOWEST POINT OF THE DEVICE AND TO THE BOTTOM OF THE VAULT.
- ⑪ TWO ADJUSTABLE PIPE STANCHIONS REQUIRED AND SIZED APPROPRIATELY.
- ⑫ EBBA IRON SERIES 2100 MEG-A-FLANGE
- ⑬ 3" OR 4" X 2" DOUBLE STRAP STAINLESS STEEL SADDLE, 2" CURB STOP W/ LOCKING WING FOR FLUSHING. PLACE CURB STOP ON ON BOTTOM OF PIPE.

NOTES:

- 1. TEE AND GATE VALVE REQUIRED ON CONNECTION TO MAINLINE.
- 2. THE DCVA CHOSEN MUST BE ON THE MOST RECENT WA. STATE APPROVAL LISTING.
- 3. SCHEDULE THOROUGH FLUSH OF THE SERVICE PRIOR TO CONNECTION OF THE BACKFLOW DEVICE.
- 4. THE DISTRICT WILL INSPECT THE DCVA INSTALLATION. INITIAL TEST OF THE DCVA IS REQUIRED PRIOR TO ESTABLISHMENT OF WATER SERVICE. TEST RESULTS SHALL BE SENT TO THE WOODINVILLE WATER DISTRICT. ANNUAL TESTING OF THE DCVA BY A CERTIFIED BACKFLOW TESTER IS REQUIRED BY THE OWNER. TEST RESULTS SHALL BE SUBMITTED TO THE WOODINVILLE WATER DISTRICT.



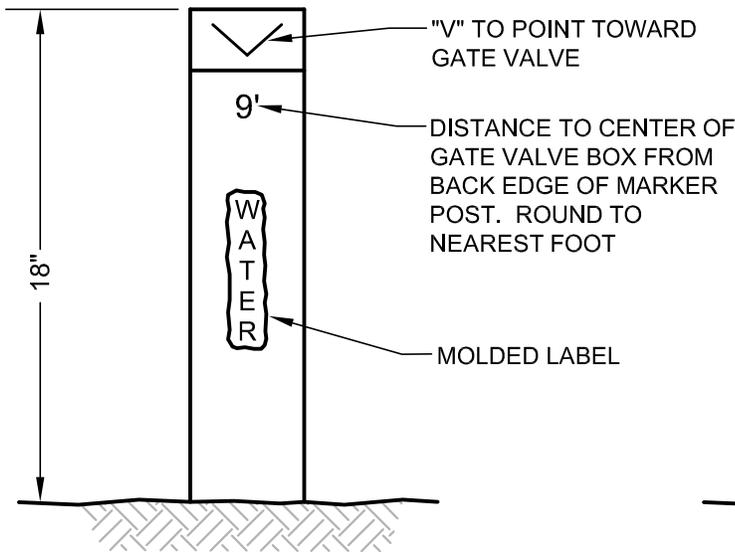
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2.5" AND LARGER DOUBLE
CHECK VALVE ASSEMBLY



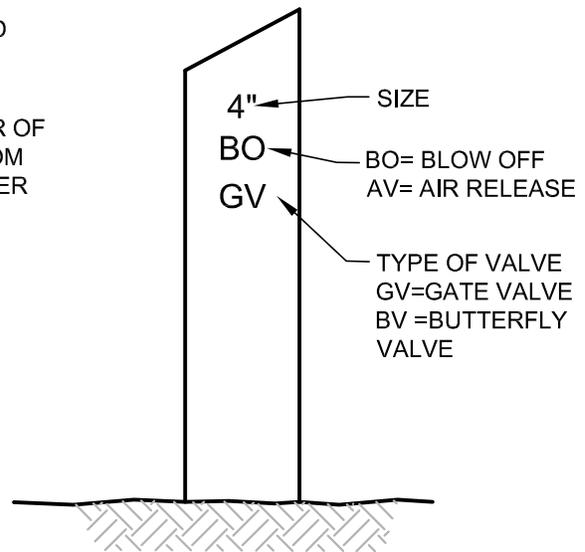
WATER STD.
PLAN NO. 22

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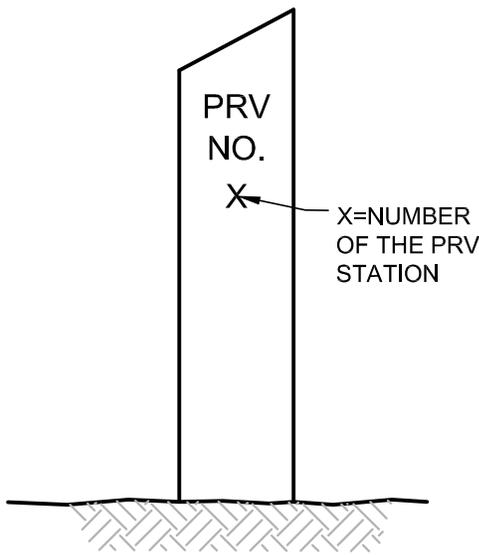


FRONT

VALVE MARKER POST

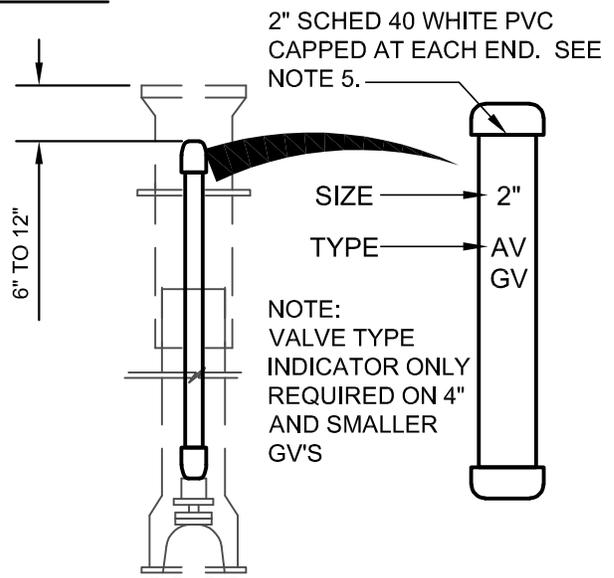


SIDE



SIDE

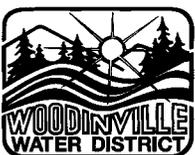
PRV STATION MARKER POST



VALVE SIZE AND TYPE INDICATOR

NOTES:

1. ALL MARKER POSTS TO BE PAINTED (2) COATS SHERWIN WILLIAMS INDUSTRIAL URETHANCE ALKYD B54Y157 SAFETY YELLOW.
2. 2" BLACK DIE CUT STICK ON LETTERS SHALL BE USED TO LETTER MARKERS. PAINTING STENCILS IS NOT ALLOWED. SEE MW-14 FOR MORE INFORMATION.
3. LETTER THE SIDE OF BLOW-OFF, AIR RELEASE AND PRV MARKERS AS SHOWN. LETTER DISTANCE FROM BACK EDGE OF POST TO CENTER OF GATE VALVE BOX OR HATCH ON PRV.
4. CONSIDERATION SHALL BE GIVEN IN LOCATING VALVE MARKER TO SAFETY, AESTHETICS AND MAINTENANCE SURROUNDING AREA. WHENEVER POSSIBLE, LOCATE MARKER TO THE EVEN FOOT.
5. PLACE VALVE TYPE AND SIZE INDICATOR IN VALVE CHAMBER W/ 6" CLEARANCE AT TOP. USE WATERPROOF MARKER FOR NOTATIONS.



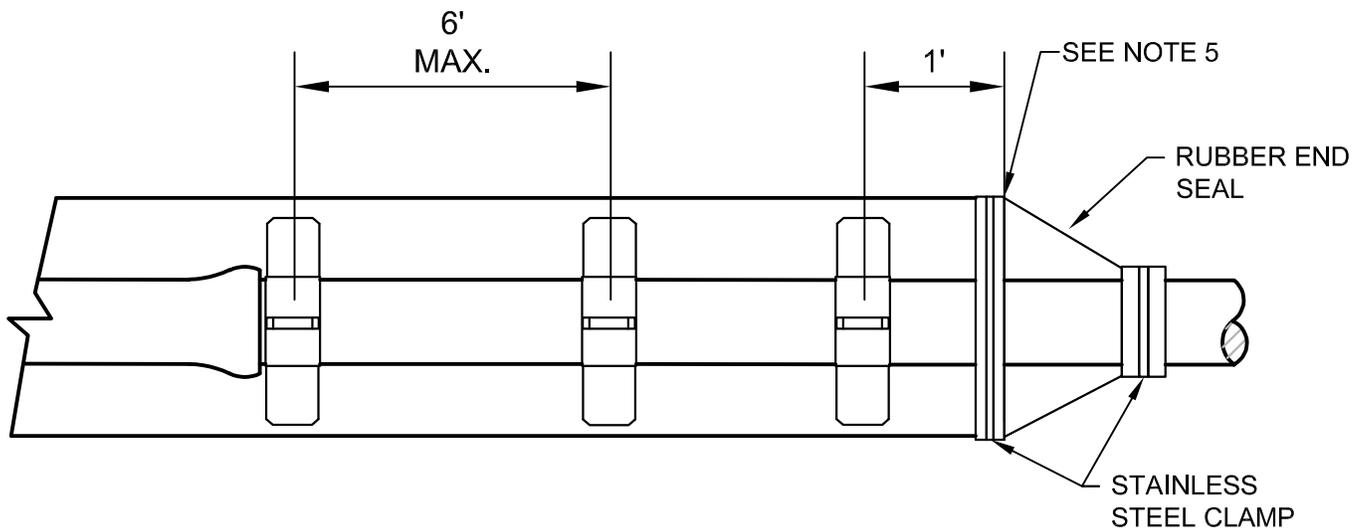
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VALVE
MARKER POSTS



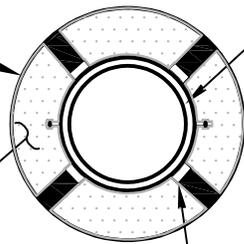
WATER STD.
PLAN NO. (23)

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MIN. .375 INCH STEEL CASING CONTINUOUSLY WELDED AT JOINTS. DIAMETER ON DRAWINGS.

FILL ALL VOIDS WITH SAND. SEE NOTE 2.



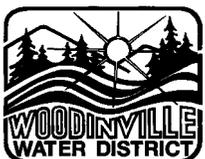
RESTRAINED JOINT DUCTILE IRON WATER MAIN

CENTERED AND RESTRAINT TYPE CASING SPACER

MIN. CASING DIAMETER	
PIPE DIA.	CASING DIA.
6"	12"
8"	15"
10"	18"
12"	20"
15"	24"
>15"	AS SPECIFIED

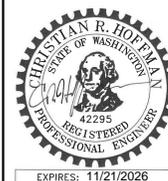
NOTES:

1. RESTRAINED JOINT DUCTILE IRON CL 52 REQUIRED IN CASINGS. SIZE CASING TO ACCOMODATE THE RESTRAINED JOINT PIPE.
2. THE INTERSTITIAL SPACE BETWEEN THE PIPE AND CASING SHALL BE COMPLETELY FILLED WITH DRY SAND AFTER PRESSURE AND PURITY TESTS HAVE PASSED. METHOD OF FILLING SAND SHALL BE APPROVED BY THE DISTRICT.
3. CASING LOCATIONS SHALL BE AS SHOWN ON THE PLANS OR IDENTIFIED IN THE FIELD.
4. MAXIMUM SPACING BETWEEN CASING SPACERS IS 6' O.C. END CASING SPACER MAX. 1' FROM END OF CASING PIPE.
5. CASING SPACER SHALL BE CENTERED RESTRAINT TYPE.
6. CASING SPACERS SHALL BE MANUFACTURED BY ADVANCED PRODUCTS & SYSTEMS MODEL SSI, CASCADE WATERWORKS MFG. MODEL CCS, OR DISTRICT APPROVED EQUAL.
7. ONE CASING SPACER SHALL BE SET ON THE SPIGOT END OF EACH SEGMENT OF THE CARRIER PIPE. WHEN JOINT IS COMPLETE THE SPACER SHALL BE IN CONTACT WITH THE BELL OF THE JOINT.



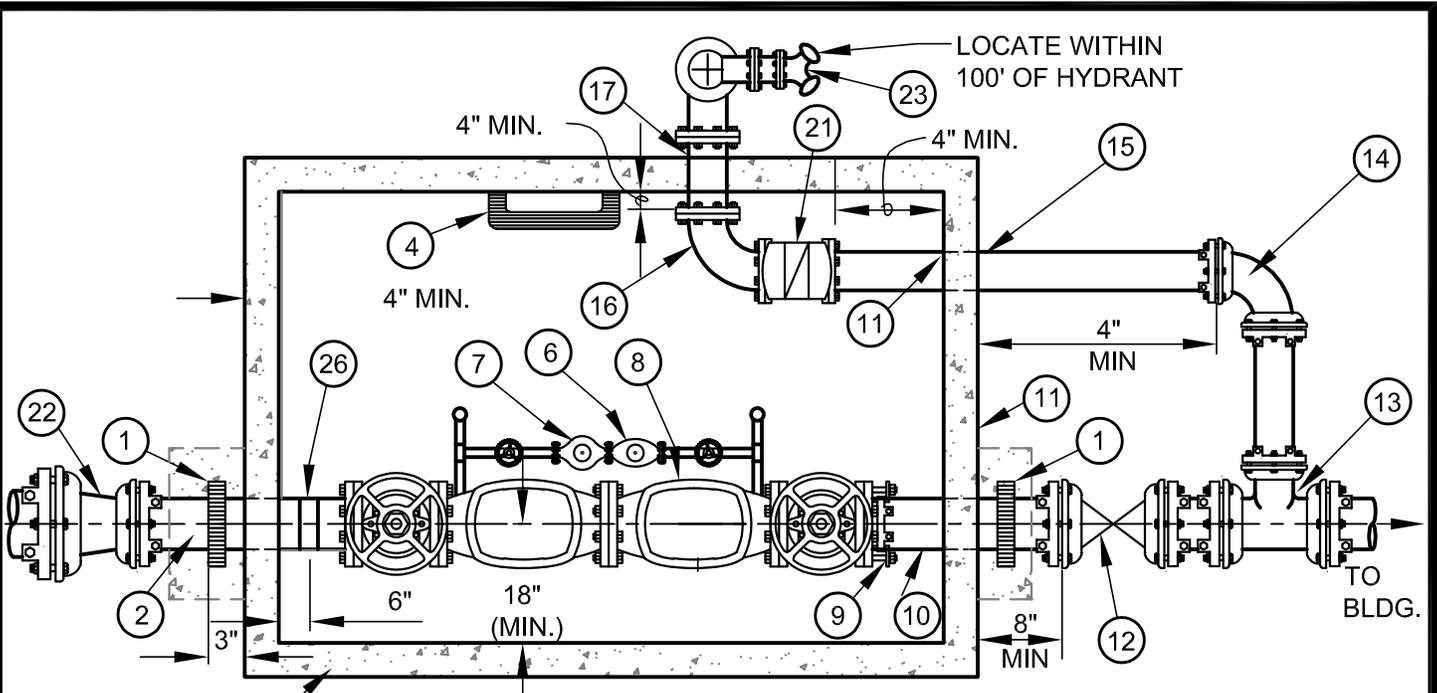
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CASING DETAILS
AND REQUIREMENTS



WATER STD.
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PLAN VIEW
NOT TO SCALE

IF SUMP PUMP IS NECESSARY-INSTALL WEATHERPROOF GFCI OUTLET INSIDE VAULT (OWNER TO PROVIDE ELECTRICAL SERVICE)

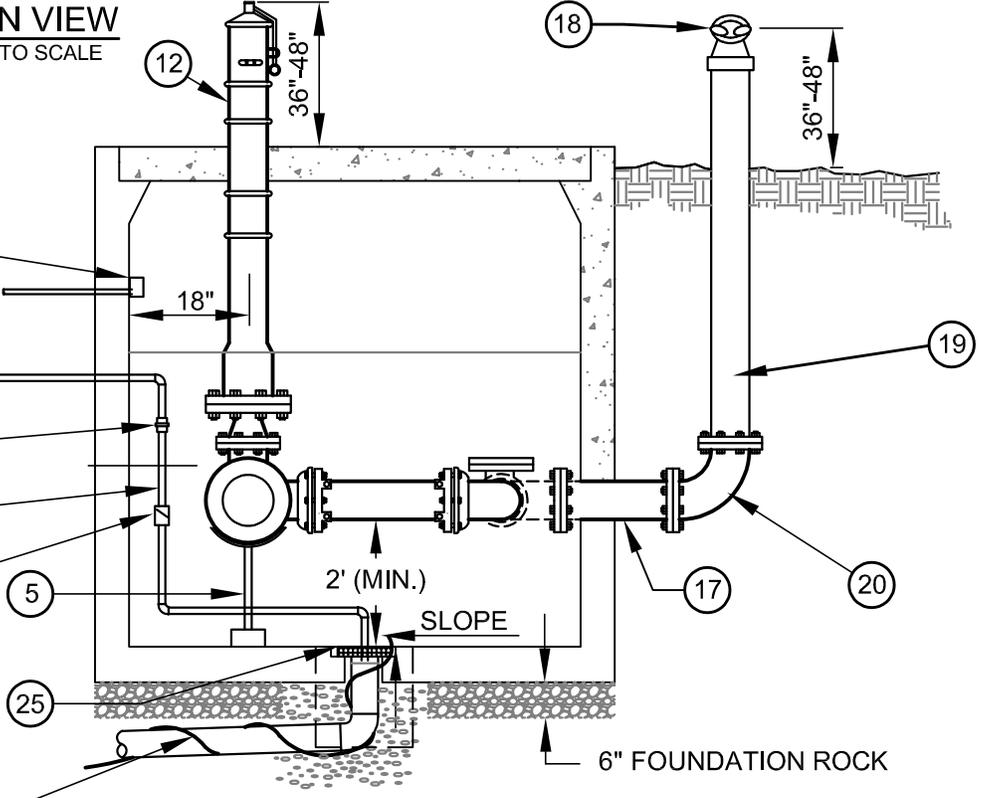
TERMINATE SUMP PUMP PIPING IN CATCH BASIN

1 1/2" PVC UNION

1 1/2" SCHEDULE 40 PVC

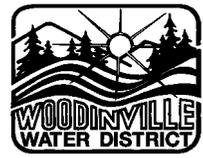
1 1/2" PVC SINGLE CHECK

4" SCH. 40 PVC W/ 12GA. (EXTEND INTO VAULT) TRACER WIRE. 2% MIN. SLOPE. PROVIDE SUMP PUMP IF GRAVITY DRAIN NOT FEASIBLE



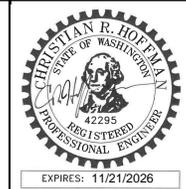
END VIEW
NOT TO SCALE

1. DESIGN FOR 4" THRU 10" DOUBLE DETECTOR CHECK VALVE
2. SEE STANDARD PLAN 25A FOR MATERIAL LIST AND NOTES.



Woodinville
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FIRE SPRINKLER
SERVICE CONNECTION



WATER STD.
PLAN NO. **25**

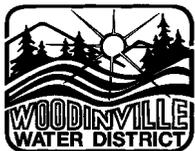
REVISION DATE
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MATERIAL LISTING

- | | |
|---|---|
| <p>① 2'x2'x8" THICK FORMED CONCRETE BLOCKING WITH LOCKING FOLLOWER RING (EBBA IRON MEG-A-LUG OR EQUAL)</p> <p>② CL 53 SPOOL, PExFL</p> <p>③ PRECAST CONCRETE VAULT WITH DOUBLE HINGED STEEL PLATE DOORS WITH SUPPORT ARMS, DIMENSION TO VARY WITH SIZE OF ASSEMBLY</p> <p>④ O.S.H.A. APPROVED LADDER</p> <p>⑤ PIPE SUPPORT STAND UNDER DCDA</p> <p>⑥ COPPER OR BRASS BYPASS WITH AN APPROVED DCVA. PLUMB TO INSIDE OF VAULT.</p> <p>⑦ ¾" METER SUPPLIED WITH DCDA UNIT</p> <p>⑧ WASHINGTON STATE DEPARTMENT OF HEALTH DCDA IN MAIN LINE WITH TWO O.S. & Y. RESILIENT SEATED SHUTOFF VALVES AND TEST COCKS. SEE SPECIFICATIONS FOR APPROVED GATE VALVES.</p> <p>⑨ EBAA IRON SERIES 2100 MEG-A-FLANGE</p> <p>⑩ CLASS 52 PIPE LENGTH TO FIT</p> <p>⑪ GROUT INTERIOR AND EXTERIOR ALL AROUND PIPE AND ALL WALL PENETRATIONS USING NON-SHRINK GROUT.</p> <p>⑫ GATE VALVE MJxMJ WITH POST INDICATOR VALVE (PIV)</p> <p>⑬ MJ TEE ASSEMBLY SIZED ACCORDINGLY</p> <p>⑭ 90° BEND (MJ)</p> | <p>⑮ CL 53 SPOOL PExFL</p> <p>⑯ 90° BEND, FL</p> <p>⑰ CL 53 SPOOL FLxFL</p> <p>⑱ UL LISTED F.D. CONNECTION AND UL LISTED BREAKAWAY CAPS</p> <p>⑲ SCHEDULE 40 GALVANIZED PIPE SPOOL FLxTHREAD WITH 20 MIL PIPE WRAP BELOW GRADE. PAINT PER FIRE MARSHAL REQUIREMENTS.</p> <p>⑳ 90° BEND, FL</p> <p>㉑ SWING TYPE GRAVITY OPERATED CHECK VALVE WITH BALL DRIP VALVE TO BE INSTALLED HORIZONTALLY.</p> <p>㉒ REDUCER (IF REQUIRED) OR SLEEVE COUPLING OUTSIDE OF VAULT.</p> <p>㉓ NOT USED.</p> <p>㉔ NOT USED.</p> <p>㉕ PROVIDE ZOELLER CO. SUMP PUMP. PART NO. 53-0001, MODEL NO. M-53-D. IF GRAVITY DRAIN NOT FEASIBLE.</p> <p>㉖ 2" DOUBLE STRAP SADDLE ROMAC 202S OR APPROVED EQUAL W/ 2" CURB STOP WITH LOCKING HASP. TAP ON BOTTOM OF PIPE FOR FLUSHING.</p> |
|---|---|

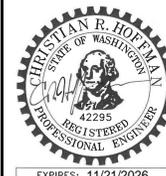
DOUBLE DETECTOR CHECK AND VAULT ASSEMBLY NOTES:

1. OWNER SHALL FURNISH, AND INSTALL THE DCDA AND ALL PIPING AND APPURTANCES SHOWN ON THIS PLAN.
2. DOUBLE DETECTOR BACKFLOW PREVENTORS SHALL BE FEBCO OR STATE APPROVED EQUAL. (SUBMITTAL REQUIRED). NOTE: DO NOT ALTER BACKFLOW UNIT IN ANY MANNER OR IT WILL LOSE THE STATE APPROVAL.
3. DEVELOPER SHALL PROVIDE INITIAL TEST OF THE DCDA PRIOR TO ESTABLISHMENT OF WATER SERVICE.
4. IT SHALL BE THE OWNERS RESPONSIBILITY TO SIZE THE FIRE SPRINKLER SERVICE LINE, OBTAIN AND COORDINATE FIRE PERMIT AND ELECTRICAL PERMIT (IF REQUIRED).
5. ALL PIPING, VALVES & FITTINGS DOWNSTREAM OF THE VAULT IS SHOWN & CALLED OUT GENERICALLY. A SEPARATE DETAIL PLAN FOR VAULT INSTALLATION AND SPRINKLER LINE MUST BE SUBMITTED AND APPROVED BY THE FIRE MARSHAL PRIOR TO INSTALLATION.
6. LADDERS SHALL BE INSTALLED IN COMPLIANCE TO O.S.H.A. REQUIREMENTS.
7. NO CHEMICALS ARE ALLOWED IN THE FIRE SPRINKLER PIPING SYSTEM.
8. LOCATE VAULT IN PLANTING AREA AND NOT IN PAVING AREA UNLESS APPROVED BY THE DISTRICT.
9. PIPING SHALL BE CL 52 AND CEMENT LINED. (EXCEPT AS SHOWN)
10. A SUMP PUMP SHALL BE INSTALLED W/ POWER CONDUIT AT THE OWNERS EXPENSE IF GRAVITY DRAIN IS NOT FEASIBLE. 1 ½" DIA. SCHEDULE 40 PVC SHALL BE USED FOR DISCHARGE PIPING. INSTALL SINGLE CHECK AND UNION IN-LINE DOWNSTREAM OF PUMP ANCHOR PIPING TO WALL.
11. TEMPORARY SUPPORT SHALL BE PROVIDED UNDER VALVES AT THE TIME OF INSTALLATION. AFTER COMPLETE INSTALLATION INSTALL PERMANENT PIPE SUPPORT STAND.
12. SIZE VAULT BASED ON SIZE OF APPARATUS AND MEETING MINIMUM CLEARANCES. (VAULT SUBMITTAL REQUIRED)
13. MINIMUM APPARATUS SIZE SHALL BE 4".
14. INSIDE VAULT SEAMS AND PIPE PENETRATIONS ARE TO BE SEALED WITH TRAFFIC RATED NON-SHRINK GROUT TO PREVENT WATER INFILTRATION. EXTERIOR JOINT WRAP IS REQUIRED ON ALL SEAMS, INSTALL AFTER GROUTING AND PRIOR TO BACKFILLING.
15. ALL MJ JOINTS TO BE RESTRAINED WITH A MEG-A-LUG OR EQUAL.



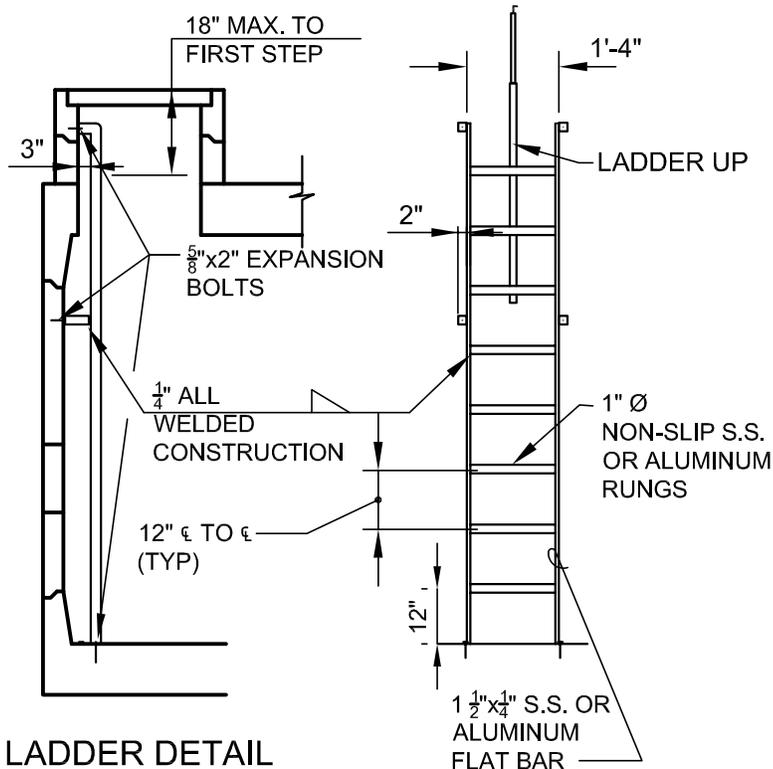
**Woodinville
Water District**

**FIRE SPRINKLER
SERVICE CONNECTION
MATERIAL LIST**

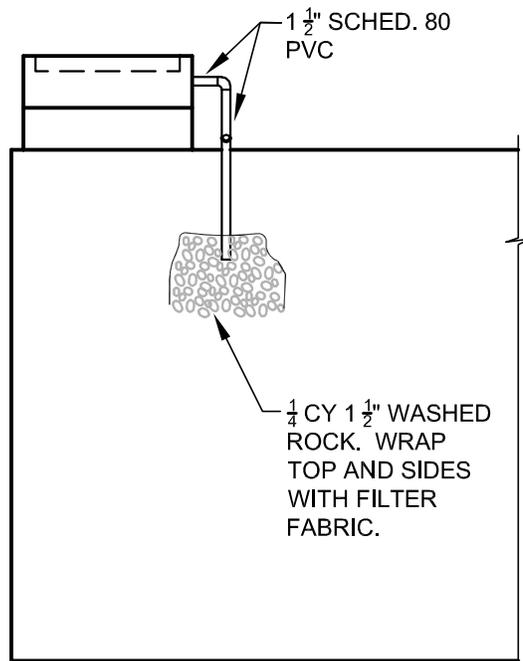


**WATER STD.
PLAN NO. 25A**

REVISION DATE
04/25



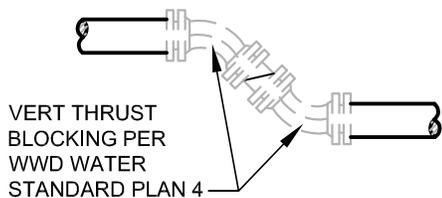
LADDER DETAIL



LID GUTTER DETAIL

NOTES:

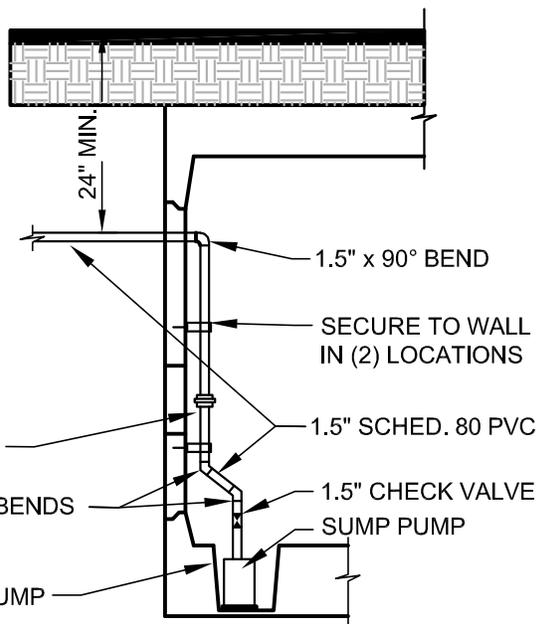
1. STAINLESS STEEL OR ALUMINUM LADDER WITH LADDER UP - LW PRODUCTS OR APPROVED EQUAL. SUBMITTAL REQUIRED.



CONNECTION TO EXISTING

NOTES:

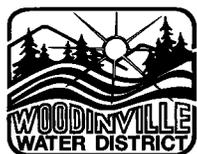
1. INSTALL VERTICAL BENDS AS NEEDED TO MATCH EXISTING WATER MAIN ELEVATIONS
2. MAX VERT BEND 45° (TYP)



SUMP PUMP DETAIL

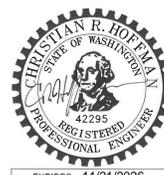
NOTES:

1. TERMINATE SUMP PUMP DISCHARGE LINE IN CATCH BASIN OR DAYLIGHT IN LOCATION PROVIDED BY THE DISTRICT
2. PROVIDE ZOELLER CO. SUMP PUMP - PART NO. 54-0001, MODEL NO. M-53-D.



**Woodinville
Water District**

**PRESSURE REDUCING
VALVE STATION
DETAILS**



**WATER STD.
PLAN NO. 26A**

REVISION DATE
04/25

MATERIAL LISTING

- | | |
|--|---|
| 1. OLDCASTLE VAULT 612LA | 20. NOT USED |
| 2. LW PRODUCTS, 30" SQUARE MIN. OR AS SHOWN ON DWG. (DWG. GOVERNS) | 21. 4" SPOOL (PExPE) LENGTH AS REQUIRED |
| 3. STAINLESS STEEL OR ALUMINUM LADDER W/ "LADDER UP" (SEE DETAIL STD PLAN 26B) | 22. 4" 90° BEND (MJxMJ) |
| 4. NOT USED | 23. 4" RESTRAINED FLANGED COUPLING ADAPTER (RFCA) |
| 5. 6" SPOOL (FLxPE) LENGTH AS REQUIRED | 24. 4"x2" REDUCER (FL) |
| 6. 6" H STYLE STRAINER (FLxFL) CLA-VAL X43H | 25. 2" REDUCED PORT PRESSURE REDUCING VALVE (FLxFL) MODEL NO. 690G-01 BCSYKCx101 W/ STAINLESS TRIM. SPRINGS RATING OF 20-105 PSI. |
| 7. 6" SPOOL x 18" LONG (FLxFL) | 26. 4"x2" LONG SPOOL (FLxFL) |
| 8. 6" GATE VALVE W/ HAND WHEEL (FLxFL) | 27. 4" 90° BEND (MJxMJ) |
| 9. 6" PRESSURE REDUCING VALVE (FLxFL) MODEL NO. 90G-01 BCSYKCX101 W/ STAINLESS TRIM & COVER BOLTS. SPRINGS RATING OF 20-105 PSI | 28. REMOVABLE SUMP DRAIN (W/ 1: LIP) |
| 10. 6" RESTRAINED FLANGE COUPLING ADAPTER (RFCA) | 29. 3/4" ROMAC 101S SADDLE, 3/4" BALL CORP STOP W/ HOSE BIB. |
| 11. ADJUSTABLE PIPE SUPPORT | 30. 3D PRESSURE GAUGE 0-200 PSI INSTALLED ON 3/4" ROMAC 101S SADDLE W/ 1/4" BALL VALVE. |
| 12. 4" D.I. (RJ) EXTEND TO DRAINAGE COURSE PER PLAN OR AS DIRECTED. INSTALL BENDS (RJ) AS NEEDED. | 31. 4" CAP MJ - MEG-A-LUG W/ 3" TAP |
| 13. 4" REDUCED PORT PRESSURE RELEASE VALVE MODEL NO. 650G-01BSKC/x101/STAINLESS TRIM AND COVER BOLTS. SPRINGS RATING OF 20-105 PSI | 32. GALVANIZED GRATING (2 PIECES) |
| 14. 4" GATE VALVE W/ WHEEL (FLxFL) | 33. 4" H STYLE STRAINER (FLxFL) CLA-VAL X43H |
| 15. 3D PRESSURE GAUGE 0-100 PSI INSTALLED ON 3/4" ROMAC 101S SADDLE W/ 1/4" BALL VALVE. | 34. 2'x2'x8" THICK FORMED CONCRETE BLOCKING WITH LOCKING FOLLOWER RING |
| 16. 6"x4" TEE (FLxFL) | 35. 4" TEE, FL 2/ TAPPED BLIND FLANGE |
| 17. 6"x4" TEE (MJxMJ) | 36. 1/2" AIR RELEASE APCO#55 |
| 18. NOT USED | 37. NOT USED |
| 19. 4" SPOOL (FLxPE) LENGTH AS REQUIRED | 38. ADAPTER (FLxMJ) |
| | 39. MAINLINE DIA. TEE (FL) OR FLxMJ AND GATE VALVE (FLxMJ) |
| | 40. ZONE VALVE - NORMALLY CLOSED |
| | 41. AIR VAC ASSEMBLY PER STD. PLAN 11 (TEE FL) |
| | 42. 2" BLOW-OFF PER STD. PLAN 12 (TEE MJxFL) |

NOTES:

- THIS IS A GENERIC MATERIAL LIST. FITTINGS, VALVE SIZES, AND VALVE TYPES MAY DIFFER AND ARE SHOWN ON THE PLANS.
- ALL MECHANICAL JOINT FITTINGS (IN OR OUT OF THE VAULT) SHALL BE MEG-A-LUGGED.
- SUMP PUMP REQUIRED. GRAVITY DRAIN ONLY ALLOWED WITH SPECIAL PERMISSION FROM THE DISTRICT.
- VAULT OPENINGS SHALL BE CORED. CORED OPENINGS SHALL BE SIZED TO ACCOMMODATE LINK SEAL. LINK SEAL SHALL BE GROUTED INSIDE AND OUT WITH AN APPROVED TRAFFIC RATED NON-SHRINK GROUT.
- EXTERIOR VAULT JOINTS SHALL BE SEALED WITH 6" WIDE W/ RAPID SEAL BY CANUSA-CPS OR NPC EXTERNAL JOINT WRAP BY TRELLEBORG ENGINEERING SYSTEMS.
- WATERLINE SHALL BE RESTRAINED (MIN.) 50' UPSTREAM AND 40' DOWNSTREAM OF VAULT.
- STAINLESS STEEL BOLTS W/ SILICON BRONZE NUTS SHALL BE USED ON ALL FLANGED FITTINGS.
- ELECTRICAL SERVICE SHALL BE PROVIDED. SEE STANDARD SPECIFICATIONS FOR REQUIREMENTS.
- CONTRACTOR RESPONSIBLE TO SET VAULT SO TOP SLAB IS MIN. 12" LOWER THAN ADJACENT OR FUTURE ROADS TO ACCOMMODATE WIDENING OR PAVING WITHOUT CONFLICT.
- INSTALL PILOT CONTROL PACKAGE TOWARDS INSIDE OF VAULT ON 6" AND 2" PRV.



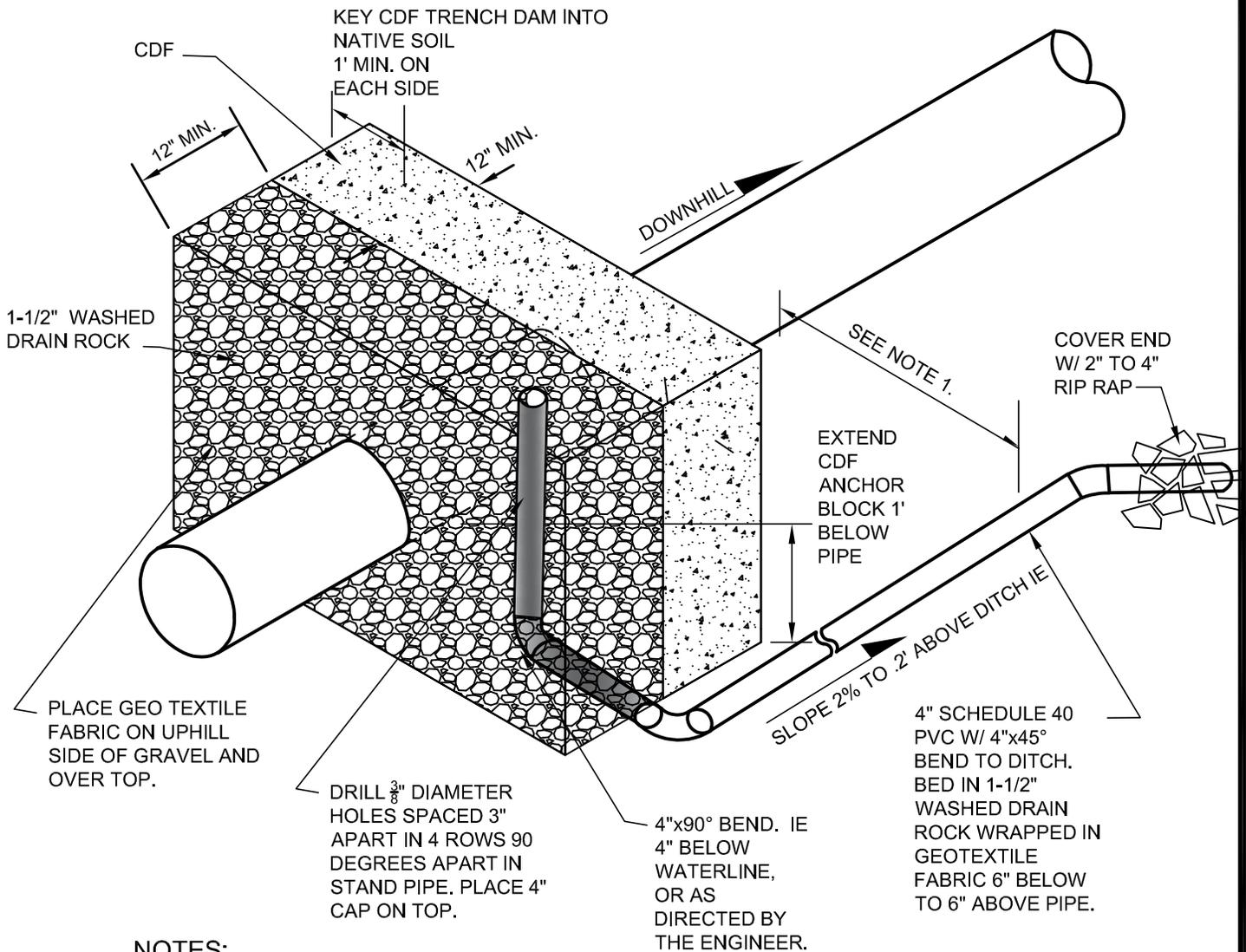
Woodinville
Water District

PRESSURE REDUCING
VALVE STATION MATERIAL
LIST AND NOTES



WATER STD.
PLAN NO. 26B

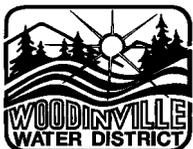
REVISION DATE
04/25



NOTES:

1. 4" PVC DRAIN TO PARALLEL WATERLINE W/ OFFSET BETWEEN PIPES DETERMINED BY THE ENGINEER.
2. PAVEMENT RESTORATION PER CONTRACT DOCUMENTS.
3. GEO TEXTILE FABRIC TO BE WATER PERMEABLE.

TRENCH DAM DETAIL



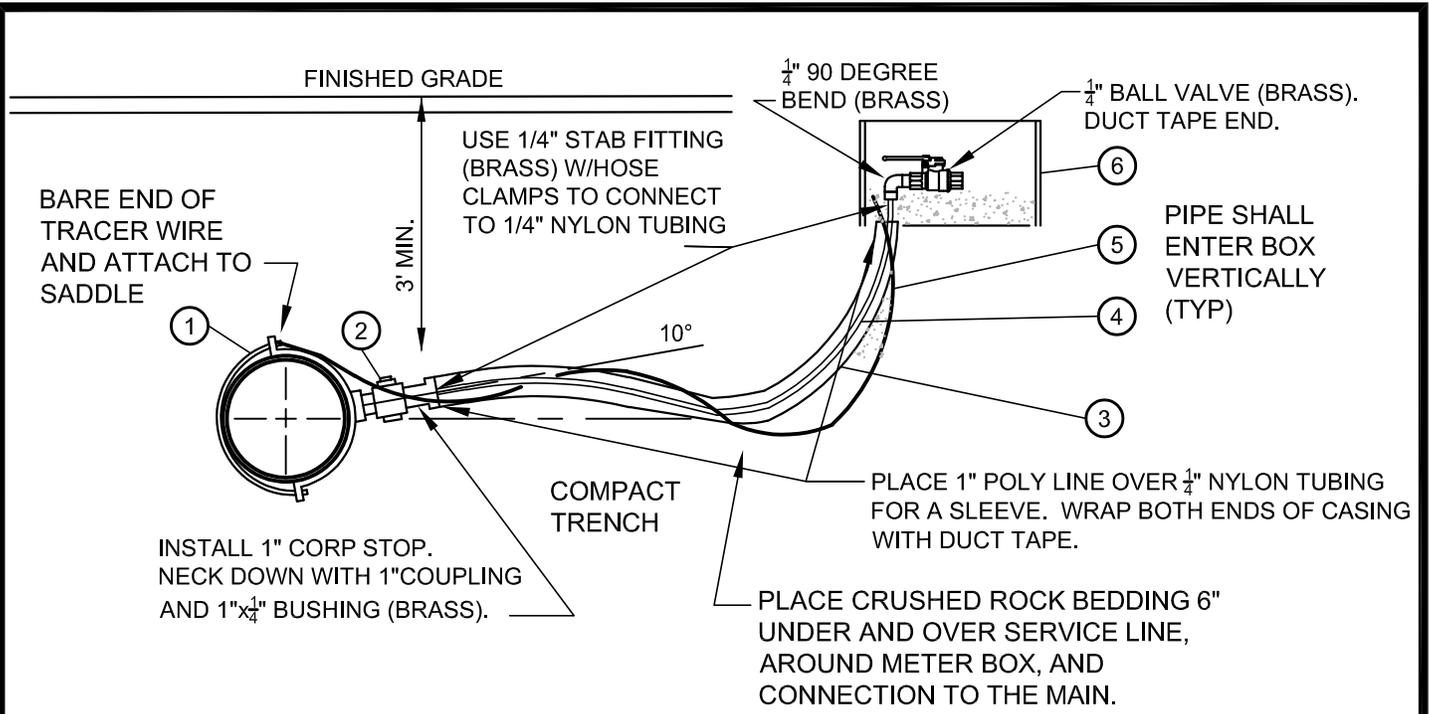
Woodinville
Water District

WATER TRENCH
DAM DETAIL



WATER STD.
PLAN NO. (27)

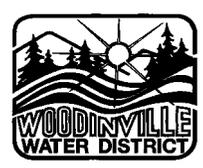
REVISION DATE
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- ① SERVICE SADDLE
ROMAC 101-S, FORD FS101 W/ I.P. THREADS & STAINLESS STEEL STRAP
- ② BALL CORP. STOP (W/ 1" I.P. THREADS)
- ③ CASING PIPE
1" CENTENNIAL PLASTICS INC. CENCORE HIGH DENSITY POLYETHYLENE SERVICE PIPE MEETING AWWA C901 REQUIREMENTS; ASTM D2239, SIDR 7 PRESSURE CLASS 250 PSI, I.P.S. COLOR - BLUE
- ④ NYLON TUBING SERVICE LINE
1/4" KURI TEC CLEARBRAID RF SERIES. MODEL # K3150-04
- ⑤ TRACER WIRE
12 GAUGE TRACER WIRE WRAP THE ENTIRE LENGTH OF PIPE WITH 2' MIN. EXTRA IN THE METER BOX. COLOR BLUE.
- ⑥ METER BOX
OLD CASTLE 1324BCF-18 ENCLOSURE W/ DUCTILE IRON LID (H2O LOADING) & 1 7/8" DIAMETER AMR HOLE PER DIMENSIONS SHOWN TO RIGHT. NO READER FLAP. NICOR POLYMER LID WITH SENSUS AMR ADAPTABILITY.

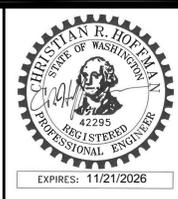
NOTES

1. ALL FITTINGS SHALL COMPLY WITH NSF 61 NOTE: ALL BRASS COMPONENTS SHALL CONFORM TO THE LATEST VERSIONS OF NSF 61 AND ANSI/AWWA STANDARD C800 AND SHALL BE STAMPED/ EMBOSSED TO SHOW THE PRODUCT IS MADE FROM NO LEAD ALLOY.
2. NO SPLICES ALLOWED IN SERVICE LINE OR CASING.
3. TRACE WIRES MUST BE VISIBLE IN METER BOX.
4. METER BOX SHALL BE PERPENDICULAR TO SIDEWALK, PROPERTY LINE OR AS DIRECTED. TOP OF BOX SHALL BE FLUSH WITH FINISH GRADE.
5. CORP STOP LOCATION SHALL BE OFFSET PRECISELY FOR GPS SURVEY.
6. DISTRICT PERSONNEL WILL INSTALL SAMPLE STATION AT A LATER DATE.



Woodinville
Water District

WATER SAMPLE
STAND INSTALLATION



WATER STD.
PLAN NO. (28)
REVISION DATE
04/25